

# Report of the 36<sup>th</sup> Single Antigen, Flow and Virtual Crossmatch Exchange

## December 18, 2025

|       |         |
|-------|---------|
| Cells | 211-212 |
| Serum | 213-216 |

In this study, virtual donor V2 and serum 210 (Patient 2) from Exchange 35 (June 2025) were re-examined as cell 211 and serum 213, respectively. Part 1 compares virtual crossmatch (VXM) predictions (V2 vs. serum 210) with the corresponding physical flow crossmatch (FXM) results (cell 211 vs. serum 213). Part 2 evaluates the Luminex single-antigen bead (SAB) data

for serum samples 213 - 216. Part 3 summarizes the FXM results for cells 211 and 212 tested against the 4 sera. Finally, Part 4 assesses virtual predictions of the physical FXM for three potential donors (V1 – V3) against serum samples 215 and 216.

### Part 1

## Physical Flow Cytometric Crossmatch vs. Virtual Crossmatch

Direct comparisons of VXM predictions with physical FXM outcomes are shown in Tables 1a – 1c. Sixteen laboratories submitted virtual crossmatch predictions, and 12 of these laboratories also reported physical FXM results (Table 1a and 1b).

For the physical T-cell FXM, all 12 laboratories reported a negative re-

sult, consistent with their virtual predictions. No detectable class I DSA were reported by the laboratories. For the physical B-cell FXM, all 12 laboratories reported a positive result, again in agreement with the VXM predictions. Strong class II DSA (>19,000 MFI) were reported by laboratories against cell 211 .

**Table 1a. Summary of Virtual XM predictions vs. Physical Flow XM results - Direct comparison**

| Exchange 035                                |           |       |                   |                   | Exchange 036                                      |           |       |                |                |
|---------------------------------------------|-----------|-------|-------------------|-------------------|---------------------------------------------------|-----------|-------|----------------|----------------|
| Virtual Crossmatch - Donor V2 vs. Serum 210 |           |       |                   |                   | Physical Flow Crossmatch - Cell 211 vs. Serum 213 |           |       |                |                |
| Donor                                       | Serum no. | #Labs | T-cell Prediction | B-cell Prediction | Cell                                              | Serum no. | #Labs | T-cell Results | B-cell Results |
| V2                                          | 210       | 12    | Negative          | Positive          | 211                                               | 213       | 12    | Negative       | Positive       |

**Table 1b. Direct comparison of Physical Flow Crossmatch results vs. Virtual Crossmatch results**

|                                   |   | T-cell Virtual XM (Exchange 35) |    |   |                                   |   | B-cell Virtual XM (Exchange 35) |   |   |
|-----------------------------------|---|---------------------------------|----|---|-----------------------------------|---|---------------------------------|---|---|
|                                   |   | +                               | -  | Ø |                                   |   | +                               | - | Ø |
| Physical T-cell FXM (Exchange 36) | + |                                 |    |   | Physical B-cell FXM (Exchange 36) | + | 12                              |   |   |
|                                   | - |                                 | 12 |   |                                   | - |                                 |   |   |
|                                   | Ø |                                 |    |   |                                   | Ø |                                 |   |   |

+ / - = positive/negative      Ø = borderline/not typed

n = number of labs

The reporting of DSA and DSA strength was consistent across the two studies. In Exchange 36, laboratories identified multiple class II DSA against cell 211: DQ8 (19,387), DR52 (13,670), and DQ4 (5,325). In Ex-

change 35, similar median MFI values were reported for the same DSA: DQ8 (19,361), DR52 (14,474), DQ4 (4,879).

**Table 1c. Individual Physical Flow Crossmatch results vs. Virtual Crossmatch predictions - Direct Comparison**

Cell 211 HLA genotype: A\*01:01:01-A\*30:01:01-B\*07:02:01-B\*42:01:01-C\*07:02:01-C\*17:01:01/DRB1\*03:02:01-DRB1\*04:05:01-DRB3\*01:62:01-DRB4\*01:03:01-DQA1\*03:03:01-DQA1\*04:01:01-DQB1\*03:02:01G-DQB1\*04:02:01-DPA1\*01:03:01-DPA1\*02:02:02-DPB1\*01:01:01G-DPB1\*03:01:01G

| Exchange 035                                            |                           |                  |                           |                                                 | Exchange 036                                      |               |                  |               |                                                                                             |
|---------------------------------------------------------|---------------------------|------------------|---------------------------|-------------------------------------------------|---------------------------------------------------|---------------|------------------|---------------|---------------------------------------------------------------------------------------------|
| Virtual Crossmatch - Donor V2 vs. Serum 210 (Patient 2) |                           |                  |                           |                                                 | Physical Flow Crossmatch - Cell 211 vs. Serum 213 |               |                  |               |                                                                                             |
| Ctr                                                     | Virtual T-cell Prediction | Class I DSA(MFI) | Virtual B-cell Prediction | Class II DSA(MFI)                               | Ctr                                               | T-Cell RESULT | Class I DSA(MFI) | B-Cell RESULT | Class II DSA(MFI)                                                                           |
| 230                                                     | Negative                  | No class I DSA   | Positive                  | DQ4 (7770) DR52 (20328) DQ8 (19928)             | 230                                               | Negative      | No class I DSA   | POSITIVE      | DQ8, DR52, DQ4                                                                              |
| 792                                                     | Negative                  | No class I DSA   | Positive                  | DQ4 (2217) DR52 (10940) DQ8 (19361)             | 792                                               | Negative      | No class I DSA   | POSITIVE      | DQ8 (20675) DR52 (12054) DQ4 (2568)                                                         |
| 793                                                     | Negative                  | No class I DSA   | Positive                  | DQ4 (4676) DR52 (11715) DQ8 (17209)             | 793                                               | Negative      | No class I DSA   | POSITIVE      | DRB3*01 (13540) DQ8 (20474) DQ4 (3376)                                                      |
| 1426                                                    | Negative                  | No class I DSA   | Positive                  | DQ4 (4133) DR52 (14762) DQ8 (19028)             | 1426                                              | Negative      | No class I DSA   | POSITIVE      | DQ4 (3838) DQ8 (21646) DR52 (15883)                                                         |
| 2400                                                    | Negative                  | No class I DSA   | Positive                  | DQ4 (4078) DR52 (12520) DQ8 (17993)             | 2400                                              | Negative      | No class I DSA   | POSITIVE      | DRB3*01 (11929) DQB1*03:02 (17792) DQB1*04:02 (3937)                                        |
| 3632                                                    | Negative                  | No class I DSA   | Positive                  | DQ4 (1819) DR52 (10288) DQ8 (17625)             | 3632                                              | Negative      | No class I DSA   | POSITIVE      | DR52 (9383) DQ4 (1869) DQ8 (17327)                                                          |
| 3753                                                    | Negative                  | No class I DSA   | Positive                  | DQ4 (3620) DQ8 (18593)                          | 3753                                              | Negative      | No class I DSA   | POSITIVE      | DRB3*01 (12229) DQ4 (3487) DQ8 (18531)                                                      |
| 3808                                                    | Negative                  | No class I DSA   | Positive                  | DQ4 (979) DR52 (5536) DQ8 (8533) DQA1*04 (6810) | 3808                                              | Negative      | No class I DSA   | POSITIVE      | DRB3*01:01 (6174) DQB1*03:02 (10210) DQB1*04:02 (1432) DQA1*03:03 (10484) DQA1*04:01 (1432) |
| 3966                                                    | Negative                  | No class I DSA   | Positive                  | DQ4 (5462) DR52 (16732) DQ8 (21577)             | 3966                                              | Negative      |                  | POSITIVE      |                                                                                             |
| 5130                                                    | Negative                  | No class I DSA   | Positive                  | DQ4 (6224) DQA1*03 (14793) DQA1*04 (4235)       | 5130                                              | Negative      | No class I DSA   | POSITIVE      | DQA1*03:03 (14344) DQA1*04:01 (3197)                                                        |
| 8001                                                    | Negative                  | No class I DSA   | Positive                  | DQ4 (5075) DR52 (13910) DQ8 (21930)             | 8001                                              | Negative      | No class I DSA   | POSITIVE      | DQ8 (22829), DQB1*04:02 (6309) DRB3*01:01 (14049)                                           |
| 8083                                                    | Negative                  | No class I DSA   | Positive                  | DR52 (13265) DQ8 (17439)                        | 8083                                              | Negative      | No class I DSA   | POSITIVE      | DR52(01:01)(13126) DQ8(19387)                                                               |

## Part 2

Class I and class II single antigen results for serum samples 213 - 216 are summarized in Tables 12 - 15. Individual listing of results for each par-

ticipating laboratory are listed in Tables 16 – 23. Pretreatment and cutoff values are listed in Table 30.

### Antibody Identification

**Serum 213:** This sample was previously examined as serum 210 in Exchange 35. A comparison of antibody specificities and MFI values reported across the 2 studies are shown in the table below.

| Class I           |        | Class I           |        | Class II          |        | Class II          |        |
|-------------------|--------|-------------------|--------|-------------------|--------|-------------------|--------|
| *** Serum 210 *** |        | *** Serum 213 *** |        | *** Serum 210 *** |        | *** Serum 213 *** |        |
| Antigen           | Median | Antigen           | Median | Antigen           | Median | Antigen           | Median |
| A2                | 27564  | A2                | 27132  | DR7               | 23902  | DR7               | 22785  |
| A68               | 22673  | A68               | 22528  | DQ9               | 20043  | DQ9               | 19512  |
| A69               | 21716  | A69               | 21607  | DQ8               | 19361  | DQ8               | 19387  |
| A32               | 18320  | A32               | 17266  | DQ7               | 19293  | DQ7               | 18952  |
| A24               | 17075  | A24               | 15759  | DR9               | 13768  | DR9               | 14441  |
| A23               | 17764  | A23               | 15381  | DR12              | 13157  | DR12              | 12205  |
| A25               | 14913  | A25               | 14897  | DQ6               | 5237   | DQ6               | 5162   |
| B57               | 23658  | B57               | 23043  | DQ4               | 4879   | DQ4               | 5325   |
| B58               | 21430  | B58               | 20970  | DQ2               | 4413   | DQ2               | 4602   |
| B63               | 16256  | B63               | 14850  | DR52              | 14474  | DR52              | 13670  |
| B38               | 14945  | B38               | 14191  |                   |        |                   |        |
| B59               | 15145  | B59               | 13794  |                   |        |                   |        |
| B53               | 14432  | B53               | 13704  |                   |        |                   |        |
| B49               | 16345  | B49               | 12999  |                   |        |                   |        |
| B51               | 14000  | B51               | 12644  |                   |        |                   |        |

As in the previous study, strong class I and class II reactivity was reported in Exchange 36, with the strongest antibodies (A2, DR7) reported with MFI values of > 22,000 once again.

Anti-DQ8 (19,387) reactivity was reported against cell 211, and anti-DQ6 (5,162) reactivity was reported against cell 212. In addition, laboratories reported anti-DQ4 (5,325) and anti-DR52 (13,670) reactivity against each cell.

\*(median MFI by SAB)

#### Genotypes of cells provided by UCLA

**Cell 211 (Hispanic):** A\*01:01:01-A\*30:01:01-B\*07:02:01-B\*42:01:01-C\*07:02:01-C\*17:01:01/DRB1\*03:02:01-DRB1\*04:05:01-DRB3\*01:62:01-DRB4\*01:03:01-DQA1\*03:03:01-DQA1\*04:01:01-DQB1\*03:02:01G-DQB1\*04:02:01-DPA1\*01:03:01-DPA1\*02:02:02-DPB1\*01:01:01G-DPB1\*03:01:01G

**Serum 214:** Strong (> 15,000 MFI) class I and class II reactivity was detected in this sample. Laboratories reported reactivity to a number of 7C and DR specificities, including anti-B61 (15,951), -B60 (15,205), -B7 (14,633), -B81 (13,404), -B13 (12,225), -B48 (11,893), DR16 (21,848), DQ6 (18,974), DR51 (18,007), DQ5 (17,798), DR11 (17,370), and -DR8 (16,649) reactivity.

Against 211, laboratories reported anti-B7 (14633), -B42 (8437), and -DQ4 (2,470) reactivity. Against cell 212, multiple DSA (A2, B39, DQ6, DR13, DR4, and DQ4) were reported with the strength of the highest DSA reported at a median MFI of > 18,000.

**Serum 215:** Laboratories reported strong class I reactivity in this sample, with several specificities (B57, B58, B63, A11, A1) reported with MFI values of > 20,000. Class II reactivity was also detected, with laboratories reporting reactivity to a number of DR specificities including anti-DR11 (7,880), -DR13 (7,207), -DR14 (6,892), -DR8 (5,474), -DR17 (5,173), -DR12 (4,228), and -DR52 (3,979) reactivity. Each was reported by 100% of labs.

Multiple DSA were reported against cell 211 as laboratories assigned A1 (22,077), A30 (8,140), B42 (2,678), B7 (2,134), DR52 (3,979), and DR18 (6,089) as DSA. Against cell 212, laboratories assigned B44 (16,607), A33 (3,430), DR13 (7,207), and DR52 (3,979) as likely DSA.

**Serum 216:** Strong class I reactivity was detected in this sample, including anti-B45 (23,485), -B76 (22,680), -B44 (20,338), -B82 (19,392), -A1 (17,241), and -A23 (11,183) reactivity. Class II reactivity was also reported, with > 90% of laboratories reporting reactivity to DR13 (6,683), DR11 (6,038), DR14 (5,992), DR17 (5,220), DR8 (4,182), DR12 (3,579), and DR18 (5,858).

Anti-A1 (17,241), -Cw17 (6,496), -DR18 (5,858), and -DR52 (2,848) reactivity was reported against cell 211. Against cell 212, laboratories reported anti-B44 (20,338), -Cw2 (7,876), -DR13 (6,683), and -DR52 (2,848) reactivity. In addition, a few laboratories also reported DQ4 (1,250) and DQ6 (1,535) as possible DSA.

**Cell 212 (Hispanic):** A\*02:01:01-A\*33:01:01-B\*39:11-B\*44:03:01-C\*02:02:02-C\*07:02:01/DRB1\*04:17:02-DRB1\*13:01:01-DRB3\*01:01:02-DRB4\*01:03:02-DQA1\*01:03-DQA1\*03:03-DQB1\*04:02-DQB1\*06:03-DPA1\*01:03-DPB1\*04:01:01G-DPB1\*04:02:01G

Conclusion:

Good agreement (> 90%) was achieved in the reporting of class I and class II antibodies across all 4 serum samples. In each case, class I antibodies of > 15,500 MFI and class II antibodies of > 6,500 MFI were reported.

A total of 17 laboratories submitted single antigen (SAB) data for serum samples 213 - 216. Figures 1 and 2 illustrate the breakdown of pretreatment method and kit type used by laboratories. The majority of laboratories (n = 10) used EDTA as a pretreatment method. Three laboratories used a combination

of FBS with EDTA. DTT treatment was performed by 1 lab and another treated with PreSorb™. The remaining 2 laboratories noted the sera was untreated prior to testing.

For kit type, 13 laboratories used the One Lambda Single Antigen kit. Two laboratories used the One Lambda ExPlex kit, and 2 laboratories used LIFECODES® Single Antigen Assays (LSA).

Figure 1. Sera pretreatment breakdown

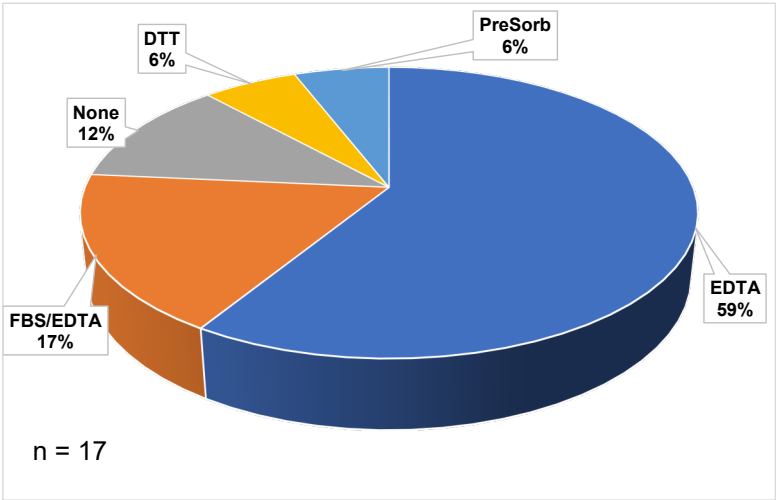
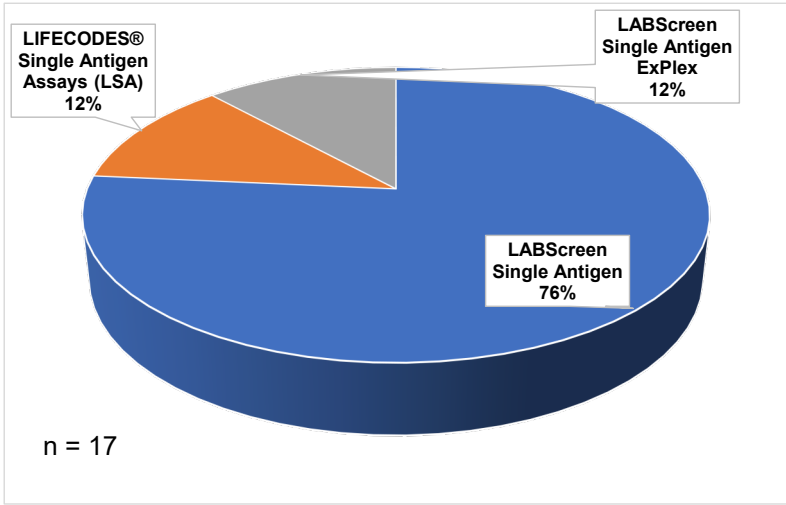


Figure 2. Kit Information breakdown



## Part 3

Flow cytometric crossmatch results for cell 211 and cell 212 against serum samples 213 - 216 are summarized in Table 2. Individual results for

each laboratory, along with reported class I and class II DSA for each serum sample, are listed in tables 4 - 11.

### Flow Cytometric Crossmatch

**Cell 211.** For this cell,  $\geq 80\%$  agreement was achieved across all 8 T- and B-cell FXM against each of the 4 sera. Among the positive FXM, strong ( $> 14,000$  MFI) class I or class II DSA were reported by laboratories.

**Cell 212.** For this cell,  $\geq 80\%$  agreement was also achieved across all 8 T- and B-cell FXM challenges. Each was reported as positive, with laboratories reporting the presence of strong ( $> 8,000$  MFI) class I and class II DSA.

**Table 2. Summary of Flow crossmatch results for Cell #211- #212 vs. Serum #213 - #216**

| Cell no. | Serum no. | #Labs | T-cell Results                  | B-cell Results                  | Cell no. | Serum no. | #Labs | T-cell Results           | B-cell Results |
|----------|-----------|-------|---------------------------------|---------------------------------|----------|-----------|-------|--------------------------|----------------|
| 211      | 213       | 18    | NEG(18)                         | POS(18)                         | 212      | 213       | 18    | POS(18)                  | POS(18)        |
| 211      | 214       | 18    | POS(18)                         | POS(17)<br><i>Borderline(1)</i> | 212      | 214       | 18    | POS(17)<br><i>NEG(1)</i> | POS(18)        |
| 211      | 215       | 18    | POS(17)<br><i>Borderline(1)</i> | POS(18)                         | 212      | 215       | 18    | POS(17)<br><i>NEG(1)</i> | POS(18)        |
| 211      | 216       | 18    | POS(18)                         | POS(18)                         | 212      | 216       | 18    | POS(18)                  | POS(18)        |

### Conclusion:

**T-cell FXM:** Good agreement ( $\geq 80\%$ ) was achieved across all 8 T-cell FXM challenges. Seven challenges were reported as positive with laboratories reporting strong class I DSA ( $> 8000$  MFI). One laboratory accounted for the discrepancies observed in 3 of the challenges in which it reported either the absence of class I DSA or DSA strength of  $< 3,000$  MFI.

**B-cell FXM:** Good agreement ( $\geq 80\%$ ) was achieved across all 8 B-cell FXM challenges as well. Each challenge was reported as positive with laboratories reporting class I or class II DSA of  $> 14,000$  MFI. For cell 211 vs. serum 214, 1 lab reporting class I DSA of  $< 9,000$  MFI, reported borderline results for the cell-serum pair.

## Part 4

Virtual XM predictions for each virtual donor (V1 - V3) against serum samples 215 and 216 are summarized in Table 3 and individual laboratory

predictions are listed in Tables 24 - 29. Fictional donor histories precede each patient-donor summary.

### Virtual Crossmatch Paper Challenge

**Virtual T-cell prediction:** There was good inter-laboratory agreement ( $\geq 80\%$ ) in predicting the expected T-cell flow crossmatch (FXM). Across all six challenges, laboratories predicted that the physical T-cell FXM would be positive. Strong ( $> 8,000$  MFI) class I donor-specific antibodies (DSA) were reported by the participating laboratories.

**Virtual B-cell prediction:** Good agreement was also observed among laboratories in predicting the expected B-cell FXM. In each challenge, laboratories predicted that the physical B-cell FXM would be positive. The presence of class I and class II DSA were reported by participants.

**Table 3. Summary of Virtual Crossmatch Predictions (Serum #215 - #216 vs. Donors V1 - V3)**

| Donor no. | Serum no. | #Labs | T-cell Prediction        | B-cell Prediction        | Donor no. | Serum no. | #Labs | T-cell Prediction | B-cell Prediction        |
|-----------|-----------|-------|--------------------------|--------------------------|-----------|-----------|-------|-------------------|--------------------------|
| V1        | 215       | 19    | POS(17)<br>Borderline(1) | POS(17)<br>Borderline(1) | V2        | 215       | 18    | POS(18)           | POS(17)<br>Borderline(1) |
| V1        | 216       | 18    | POS(18)                  | POS(17)<br>Borderline(1) | V2        | 216       | 18    | POS(18)           | POS(17)<br>Borderline(1) |
|           |           |       |                          |                          |           |           |       |                   |                          |
| Donor no. | Serum no. | #Labs | T-cell Prediction        | B-cell Prediction        |           |           |       |                   |                          |
| V3        | 215       | 18    | POS(17)<br>Borderline(1) | POS(17)<br>Borderline(1) |           |           |       |                   |                          |
| V3        | 216       | 18    | POS(18)                  | POS(17)<br>Borderline(1) |           |           |       |                   |                          |

## DSA Identification

### Patient 1 (Serum 215)

**Patient's fictional case history:** This individual is a 38-year-old female being evaluated for her first transplant. The patient has had 1 prior pregnancy. The HLA type of the child is A\*02:01-A\*23:01-B\*15:01-B\*15:03-C\*01:02-C\*02:02/DRB1\*04:01-DRB1\*07:01-DRB4\*01:03-DQA1\*03:01-DQA1\*02:01-DQB1\*03:02-DQB1\*02:02-DPA1\*01:03-DPA1\*02:01-DPB1\*04:01-DPB1\*11:01.

**Patient 1's HLA type** is as follows:

|                          |                          |                          |                          |            |            |
|--------------------------|--------------------------|--------------------------|--------------------------|------------|------------|
| A*02:01                  | B*15:01<br>B*14:02       | C*01:02<br>C*08:02       |                          |            |            |
| DRB1*04:01<br>DRB1*15:03 | DRB4*01:03<br>DRB5*01:01 | DQA1*03:01<br>DQA1*01:02 | DQB1*03:02<br>DQB1*05:01 | DPA1*01:03 | DPB1*04:01 |

**Donor V1:** DSA reported against donor V1 included A1 (22,077) and B13 (6,531). Each was assigned by all 18 laboratories. In addition, 8 laboratories assigned B52 (2,002) as a DSA as well. In contrast, no consensus was achieved for class II DSA reporting, as 9 laboratories reported weak anti-DR7 (1,164) reactivity against the donor, while the remaining 9 laboratories reported no class II DSA.

For virtual crossmatch predictions, 17 laboratories predicted the expected physical T-cell and B-cell FXM to be positive. One laboratory, reporting DSA of < 3,000 MFI, predicted each to be borderline positive.

**Donor V2:** Multiple DSA were reported against donor V2, with labs reporting anti-B44 (16,607), -A32 (8,270), -B27 (6,199), -DR11 (7,880), -DR13 (7,207), and -DR52 (3,979) reactivity against the donor. Additional anti-Bw4 (13,509) reactivity was also reported by 5 laboratories.

All 18 laboratories predicted the physical T-cell FXM to be positive. For B-cell predictions, 17 laboratories predicted the expected physical B-cell FXM to be positive, and 1 lab predicted a borderline result.

**Donor V3:** Anti-A24 (8,094) and anti-B27 (B27:05) reactivity was reported against donor V3 by all 18 laboratories. In addition, 5 laboratories assigned Bw4 (13,509) as a DSA. For class II antibodies, 16 laboratories (89%) assigned DR52 (3,979) as a DSA, and 15 laboratories (83%) assigned DR14 (6,892) as a DSA. Several laboratories assigning DR14 noted that the donor's DRB1\*14:06 allele was not represented on their single-antigen bead (SAB) panel.

In the presence of multiple DSA, 17 laboratories predicted the expected physical T- and B-cell FXM to be positive. One laboratory citing low class I and class II MFI values for reported DSA, predicted each physical FXM to be borderline positive.

\*(median MFI by SAB)

### Virtual Donors – HLA genotype

**Donor 1 (V1):** A\*01:01:01-A\*02:01:01-B\*13:02:01-B\*52:01:01-C\*06:02:01-C\*12:02:02/DRB1\*07:01:01-DRB1\*15:02:01G-DRB4\*01:03:01-DRB5\*01:02:01-DQA1\*01:03:01-DQA1\*02:01:01-DQB1\*02:01:01G-DQB1\*06:01-DPA1\*01:03:01-DPA1\*02:01:01-DPB1\*04:01:01G-DPB1\*17:01:01

**Donor 2 (V2):** Donor #V2 HLA A\*02:01:01-A\*32:01:01-B\*27:05:02-B\*44:02:01-C\*02:02:02-C\*05:01:01/DRB1\*11:01:01-DRB1\*13:01:01-DRB3\*01:01:02-DRB3\*02:02:01-DQA1\*01:03:01-DQA1\*05:05:01-DQB1\*03:01:01G-DQB1\*06:03-DPA1\*01:03:01-DPB1\*03:01:01G-DPB1\*04:01:01G

**Donor 3 (V3):** Donor #V3 HLA A\*02:02:01-A\*24:02:01-B\*27:05:02-B\*39:06:02-C\*02:02:02-C\*07:02:01/DRB1\*04:04:01-DRB1\*14:06:01-DRB4\*01:03:03-DRB3\*01:01:02-DQA1\*03:01:01-DQA1\*05:03:01-DQB1\*03:01:01-DQB1\*03:02:01-DPA1\*01:03:01-DPB1\*04:01:01G-DPB1\*04:02:01G

## Patient 2 (Serum 216)

**Patient's fictional case history:** This individual is a 50-year-old male being evaluated for his first transplant.

**Patient 2's HLA type** is as follows:

|                          |                    |                          |            |                          |                          |
|--------------------------|--------------------|--------------------------|------------|--------------------------|--------------------------|
| A*02:01<br>A*26:01       | B*27:05<br>B*40:02 | C*01:02<br>C*03:04       |            |                          |                          |
| DRB1*01:03<br>DRB1*09:01 | DRB4*01:03         | DQA1*05:05<br>DQA1*03:02 | DQB1*03:03 | DPA1*01:03<br>DPA1*02:02 | DPB1*02:01<br>DPB1*13:01 |

**Donor V1:** A1 (17,241) and DR15 (2,343) were the reported DSA against donor V1 with each assigned by  $\geq 90\%$  of laboratories. In addition, several laboratories reported anti-Cw6 (5322) and -B52 (1,858) reactivity against the donor.

For virtual predictions, 18 laboratories predicted the expected T-cell FXM to be positive and 17 laboratories predicted the expected B-cell FXM to be positive. One laboratory predicted a borderline B-cell FXM.

**Donor V2:** Multiple DSA were reported against donor V2, with labs reporting anti-B44 (20,338), -Cw2 (7,876), -Cw5 (5094), -DR13 (6,683), -DR11 (6,038), and -DR52 (2,848) reactivity against the donor.

All 18 laboratories predicted the expected T-cell FXM to be positive. For B-cell predictions, 17 laboratories predicted the expected B-cell FXM to be positive and 1 laboratory predicted it to be borderline.

**Donor V3:** Good agreement was achieved among laboratories in the reporting of DSA against donor V3, as  $\geq 90\%$  of laboratories reported anti-A24 (10,483), -Cw2 (7,876), and -DR52 (2,848) reactivity against the donor. Additionally, 14 laboratories assigned DR14 (5,992) as a DSA, with several noting that the donor's DRB1\*14:06 allele was not represented on their single antigen bead (SAB) panel.

Strong agreement was also observed among laboratories in virtual crossmatch predictions. All 18 laboratories predicted a positive T-cell FXM, and 17 laboratories predicted a positive B-cell FXM. One laboratory citing low class II MFI values for reported DSA, predicted the B-cell FXM to be borderline.

## Conclusion

**Serum 215:** All 6 virtual T- and B-cell FXM challenges achieved  $\geq 80\%$  agreement among laboratories for serum 215 against donors V1 - V3. In each challenge, strong class I DSA ( $> 8,000$  MFI) along with class II DSA ( $> 2,000$  MFI) were reported against each donor. Discrepancies in virtual FXM predictions were attributable to a single laboratory reporting lower DSA strength ( $< 3,000$  MFI).

**Serum 216:** Good agreement ( $\geq 80\%$ ) was also achieved among laboratories across all 6 virtual T- and B-cell FXM challenges for this serum against the 3 virtual donors. In each challenge, laboratories reported class I DSA ( $> 7,000$  MFI) and class II DSA ( $> 2,000$  MFI). As with serum 215, discrepancies in virtual FXM predictions were attributable to 1 laboratory predicting the expected B-cell FXM to be borderline against each donor.

**NEXT MAILING DATE: March 18, 2026**

*Arlene Locke, David Gjertson, Qiheng Zhang, and Elaine F. Reed*

## Flow Cytometric Crossmach

**Table 4. Individual Flow crossmatch results and DSA reported for Cell #211 vs. Serum #213**

Cell 211 HLA genotype: A\*01:01:01-A\*30:01:01-B\*07:02:01-B\*42:01:01-C\*07:02:01-C\*17:01:01-DRB1\*03:02:01-DRB1\*04:05:01-DRB3\*01:62:01-DRB4\*01:03:01-DQA1\*03:03:01-DQA1\*04:01:01-DQB1\*03:02:01G-DQB1\*04:02:01-DPA1\*01:03:01-DPA1\*02:02:02-DPB1\*01:01:01G-DPB1\*03:01:01G

| Ctr  | Serum no | T-Cell Pos cutoff | T-Cell MCS | RATIO | MESF | T-Cell RESULT | Class I DSA( ) | B-Cell Pos cutoff | B-cell MCS | RATIO | B-Cell RESULT     | Class II DSA( )                                                                                        | T-Cell NEG Control MC | B-Cell NEG Control MC | Pronase Treated |
|------|----------|-------------------|------------|-------|------|---------------|----------------|-------------------|------------|-------|-------------------|--------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-----------------|
| 230  | 213      | 1.6               | 1.4        |       |      | NEGATIVE      | No Class I DSA | 3                 | 4.4        |       | POSITIVE          | DQ8, DR52, DQ4                                                                                         | 0.6                   | 0.9                   | YES             |
| 615  | 213      | 294               | -54        |       |      | NEGATIVE      | No Class I DSA | 374               | 225        |       | POSITIVE          | DRB4*01:03(564),<br>DRB3*01:01(12910),<br>DQB1*03:02(17762),<br>DQB1*04:02(5467)                       | 241                   | 290                   | YES             |
| 753  | 213      | 650               | -30        |       |      | NEGATIVE      | No Class I DSA | 1200              | 13434      |       | POSITIVE          | 89,302,870,028,439                                                                                     | 399                   | 556                   | YES             |
| 792  | 213      | 57                | 34         |       |      | NEGATIVE      | No Class I DSA | 107               | 347        |       | POSITIVE          | DQ8(20675),<br>DR52(12054),<br>DQ4(2568)                                                               | 209                   | 254                   | YES             |
| 793  | 213      | >70               | 20         |       |      | NEGATIVE      | No Class I DSA | >150              | 325        |       | POSITIVE          | DRB3*01(13,540)<br>DQ8(20,474)<br>DQ4(3,376)                                                           | 88                    | 175                   | YES             |
| 1426 | 213      | 67                | 0          |       |      | NEGATIVE      | No Class I DSA | 82                | 331        |       | POSITIVE          | DQ4(3838),<br>DQ8(21646),<br>DR52(15883)                                                               | 253                   | 262                   | YES             |
| 2400 | 213      | 36                | 21         | NA    | NA   | NEGATIVE      | No Class I DSA | 40                | 357        | NA    | POSITIVE          | DRB3*01(11929)<br>DQB1*03:02(17792)<br>DQB1*04:02(3937)                                                | 281                   | 331                   | YES             |
| 3224 | 213      | 70                |            |       |      | NEGATIVE      | No Class I DSA | 140               | 206        |       | POSITIVE          |                                                                                                        | 172                   | 223                   | YES             |
| 3632 | 213      | 70                | -4         |       |      | NEGATIVE      | No Class I DSA | 100               | 303        |       | POSITIVE          | DR52(9383),<br>DQ4(1869), DQ8(17327)                                                                   | 58                    | 124                   | YES             |
| 3753 | 213      | 50                | 0          |       |      | NEGATIVE      | No Class I DSA | 100               | 292        |       | POSITIVE          | DRB3*01(12229),<br>DQ4(3487), DQ8(18531)                                                               | 265                   | 307                   | YES             |
| 3808 | 213      | 312               | -93        |       |      | NEGATIVE      | No Class I DSA | 440               | 185        |       | POSITIVE Moderate | DRB3*01:01(6174),<br>DQB1*03:02(10210),<br>DQB1*04:02(1432),<br>DQA1*03:03(10484),<br>DQA1*04:01(1432) | 243                   | 328                   | YES             |
| 3966 | 213      | 20                | 5          |       |      | NEGATIVE      |                | 50                | 246        |       | POSITIVE          |                                                                                                        | 146                   | 272                   | NO              |
| 5130 | 213      | 61                | 217        |       |      | NEGATIVE      | No Class I DSA | 77                | 641        |       | POSITIVE          | DQA1*03:03(14344),<br>DQA1*04:01(3197))                                                                | 203                   | 392                   | YES             |
| 5214 | 213      | 700               | 382        |       |      | NEGATIVE      | No Class I DSA | 1500              | 23245      |       | POSITIVE          | DQA03:03, DQA04:01,<br>DQB1*03:02,<br>DQB1*04:02                                                       | 627                   | 794                   | YES             |

**Table 4. Individual Flow crossmatch results and DSA reported for Cell #211 vs. Serum #213**

| Ctr  | Serum no | T-Cell Pos cutoff | T-Cell MCS | RATIO | MESF | T-Cell RESULT | Class I DSA( ) | B-Cell Pos cutoff | B-cell MCS | RATIO | B-Cell RESULT | Class II DSA( )                                       | T-Cell NEG Control MC | B-Cell NEG Control MC | Pronase Treated |
|------|----------|-------------------|------------|-------|------|---------------|----------------|-------------------|------------|-------|---------------|-------------------------------------------------------|-----------------------|-----------------------|-----------------|
| 8001 | 213      | 50                | 25         |       |      | NEGATIVE      | No Class I DSA | 100               | 327        |       | POSITIVE      | DQ8(22829),<br>DQB1*04:02(6309),<br>DRB3*01:01(14049) | 203                   | 271                   | YES             |
| 8083 | 213      | 74                | 0          |       |      | NEGATIVE      | No Class I DSA | 108               | 151        |       | POSITIVE      | DR52(01:01) at 13126;<br>DQ8 at 19387                 | 299                   | 437                   | YES             |
| 8103 | 213      | 430               | 239.2      | 1.2   |      | NEGATIVE      | No Class I DSA | 1961              | 1607.4     | 1.7   | POSITIVE      | DQB1*03:02(7691),<br>DQA1*03:03(7691)                 | 190.8                 | 353.6                 | NO              |
| 8111 | 213      | 76                | -23        |       |      | NEGATIVE      | No Class I DSA | 114               | 835        |       | POSITIVE      | DRB3*01:01(9000),<br>DQ8(13480)                       | 209                   | 243                   | YES             |

**Table 5. Individual Flow crossmatch results and DSA reported for Cell #211 vs. Serum #214**

| Ctr  | Serum no | T-Cell Pos cutoff | T-Cell MCS | RATIO | MESF | T-Cell RESULT | Class I DSA( )                   |      |        |     |            |                                           |       |       |     |
|------|----------|-------------------|------------|-------|------|---------------|----------------------------------|------|--------|-----|------------|-------------------------------------------|-------|-------|-----|
| 230  | 214      | 1.6               | 2.4        |       |      | POSITIVE      | B7,B42                           | 3    | 4.2    |     | POSITIVE   | No Class II DSA                           | 0.6   | 0.9   | YES |
| 615  | 214      | 294               | 264        |       |      | POSITIVE      | B*07:02(13658),<br>B*42:01(8437) | 374  | 222    |     | POSITIVE   | DQB1*04:02(2814)                          | 241   | 290   | YES |
| 753  | 214      | 650               | 10640      |       |      | POSITIVE      | 27350, 16113                     | 1200 | 12425  |     | POSITIVE   | 72,604,005                                | 399   | 556   | YES |
| 792  | 214      | 57                | 276        |       |      | POSITIVE      | B7(12826), B42(7147)             | 107  | 262    |     | POSITIVE   | No Class II DSA                           | 209   | 254   | YES |
| 793  | 214      | >70               | 349        |       |      | POSITIVE      | B7(15,482) B42(9,447)            | >150 | 303    |     | POSITIVE   | DQ4(1,411)                                | 88    | 175   | YES |
| 1426 | 214      | 67                | 280        |       |      | POSITIVE      | B42(10068), B7(16005)            | 82   | 317    |     | POSITIVE   | DQ4(1769)                                 | 253   | 262   | YES |
| 2400 | 214      | 36                | 383        | NA    | NA   | POSITIVE      | B*07:02(12393)<br>B*42:01(7693)  | 40   | 353    | NA  | POSITIVE   | DQB1*04:02(1734)                          | 281   | 331   | YES |
| 3224 | 214      | 70                | 271        |       |      | POSITIVE      |                                  | 140  | 184    |     | POSITIVE   |                                           | 172   | 223   | YES |
| 3632 | 214      | 70                | 345        |       |      | POSITIVE      | B7(12446) and<br>B42(7234).      | 100  | 312    |     | POSITIVE   | No Class II DSA                           | 58    | 124   | YES |
| 3753 | 214      | 50                | 273        |       |      | POSITIVE      | B7(13485),B42(7793)              | 100  | 233    |     | POSITIVE   | DQ4(1558)                                 | 265   | 307   | YES |
| 3808 | 214      | 312               | 245        |       |      | POSITIVE      | B*07:02(7813),<br>B*42:01(3187)  | 440  | 197    |     | POSITIVE   | No Class II DSA                           | 243   | 328   | YES |
| 3966 | 214      | 20                | 259        |       |      | POSITIVE      |                                  | 50   | 236    |     | POSITIVE   |                                           | 146   | 272   | NO  |
| 5130 | 214      | 61                | 639        |       |      | POSITIVE      | B7(15121)                        | 77   | 675    |     | POSITIVE   | Positive due to Class I<br>Antibodies(B7) | 203   | 392   | YES |
| 5214 | 214      | 700               | 18274      |       |      | POSITIVE      | B*07:02, B*42:01                 | 1500 | 26233  |     | POSITIVE   | No Class II DSA                           | 627   | 794   | YES |
| 8001 | 214      | 50                | 393        |       |      | POSITIVE      | B7(15751), B42(8783)             | 100  | 373    |     | POSITIVE   | DRB1*04:02(2897)                          | 203   | 271   | YES |
| 8083 | 214      | 74                | 263        |       |      | POSITIVE      | A30(5024) B7(14633)<br>B42(5790) | 108  | 181    |     | POSITIVE   | No Class II DSA                           | 299   | 437   | YES |
| 8103 | 214      | 430               | 239.2      | 1.2   |      | POSITIVE      | B*07:02(8912),<br>B*42:01(4964)  | 1961 | 1607.4 | 1.7 | Borderline | No Class II DSA                           | 190.8 | 353.6 | NO  |
| 8111 | 214      | 76                | 1964       |       |      | POSITIVE      | B7(5300), B42(2800)              | 114  | 1654   |     | POSITIVE   | DQ4(1400)                                 | 209   | 243   | YES |

**Table 6. Individual Flow crossmatch results and DSA reported for Cell #211 vs. Serum #215**

| Ctr  | Serum no | T-Cell Pos cutoff | T-Cell MCS | RATIO | MESF | T-Cell RESULT      | Class I DSA( )                                                       | B-Cell Pos cutoff | B-cell MCS | RATIO | B-Cell RESULT | Class II DSA( )                                 | T-Cell NEG Control MC | B-Cell NEG Control MC | Pronase Treated |
|------|----------|-------------------|------------|-------|------|--------------------|----------------------------------------------------------------------|-------------------|------------|-------|---------------|-------------------------------------------------|-----------------------|-----------------------|-----------------|
| 230  | 215      | 1.6               | 3.1        |       |      | POSITIVE           | A1,A30,B42                                                           | 3                 | 4.6        |       | POSITIVE      | DR18,DR52                                       | 0.6                   | 0.9                   | YES             |
| 615  | 215      | 294               | 338        |       |      | POSITIVE           | A*01:01(19099),<br>A*30:01(4844),<br>B*07:02(2197),<br>B*42:01(2615) | 374               | 282        |       | POSITIVE      | DRB1*03:02(5116),<br>DRB3*01:01(3905)           | 241                   | 290                   | YES             |
| 753  | 215      | 650               | 19140      |       |      | POSITIVE           | 41,415,132,853,390                                                   | 1200              | 21067      |       | POSITIVE      | 102,607,370                                     | 399                   | 556                   | YES             |
| 792  | 215      | 57                | 395        |       |      | POSITIVE           | A1(16818), A30(4265)                                                 | 107               | 374        |       | POSITIVE      | DR18(6077),<br>DR52(3754)                       | 209                   | 254                   | YES             |
| 793  | 215      | >70               | 418        |       |      | POSITIVE           | A1(24,098) A30(7,539)<br>B7(2,773) B42(3,543)                        | >150              | 340        |       | POSITIVE      | DR18(6,329)<br>DR52(3,948)                      | 88                    | 175                   | YES             |
| 1426 | 215      | 67                | 342        |       |      | POSITIVE           | A1(18512), A30(6856),<br>B42(3585), B7(2381)                         | 82                | 400        |       | POSITIVE      | DR18(6366),<br>DR52(4267)                       | 253                   | 262                   | YES             |
| 2400 | 215      | 36                | 479        | NA    | NA   | POSITIVE           | A*01:01(24394)<br>A*30:01(7379)<br>B*07:02(2436)<br>B*42:01(3302)    | 40                | 427        | NA    | POSITIVE      | DRB1*03:02(5711)<br>DRB3*01(4307)               | 281                   | 331                   | YES             |
| 3224 | 215      | 70                | 378        |       |      | POSITIVE           |                                                                      | 140               | 241        |       | POSITIVE      |                                                 | 172                   | 223                   | YES             |
| 3632 | 215      | 70                | 424        |       |      | POSITIVE           | A1(22077), A30(5241),<br>B7(2071), B42(2667).                        | 100               | 369        |       | POSITIVE      | DR18(5465),<br>DR52(3571)                       | 58                    | 124                   | YES             |
| 3753 | 215      | 50                | 382        |       |      | POSITIVE           | A1(26752),A30(7376),B4<br>2(2178),B7(1222)                           | 100               | 330        |       | POSITIVE      | DR18(5962),<br>DR52(3789)                       | 265                   | 307                   | YES             |
| 3808 | 215      | 312               | 307        |       |      | POSITIVE<br>Strong | A*01:01(18643),<br>A*30:01(2729)                                     | 440               | 247        |       | POSITIVE      | DRB1*03:02(6326),<br>DRB3*01:01(6713)           | 243                   | 328                   | YES             |
| 3966 | 215      | 20                | 369        |       |      | POSITIVE           |                                                                      | 50                | 327        |       | POSITIVE      |                                                 | 146                   | 272                   | NO              |
| 5130 | 215      | 61                | 681        |       |      | POSITIVE           | A1(9428), A30(3930)                                                  | 77                | 694        |       | POSITIVE      | Positive due to Class I<br>Antibodies(A1 & A30) | 203                   | 392                   | YES             |
| 5214 | 215      | 700               | 31398      |       |      | POSITIVE           | A*01:01, A*30:01,<br>B*42:01                                         | 1500              | 42968      |       | POSITIVE      | DRB1*03:02                                      | 627                   | 794                   | YES             |
| 8001 | 215      | 50                | 436        |       |      | POSITIVE           | A1(26131), A30(6239),<br>B42(1923)                                   | 100               | 406        |       | POSITIVE      | DR18(6100),<br>DRB3*01:01(3834)                 | 203                   | 271                   | YES             |
| 8083 | 215      | 74                | 304        |       |      | POSITIVE           | A1(37124)                                                            | 108               | 253        |       | POSITIVE      | DR18(10830)<br>DR52(13752)                      | 299                   | 437                   | YES             |
| 8103 | 215      | 430               | 239.2      | 1.2   |      | Borderline         | A*01:01(2451),<br>A*30:01(2507),<br>B*07:02(976),<br>B*42:01(1237)   | 1961              | 1607.4     | 1.7   | POSITIVE      | DRB1*03:02(3548)<br>DRB1*13:01(3804)            | 190.8                 | 353.6                 | NO              |
| 8111 | 215      | 76                | 1323       |       |      | POSITIVE           | A1(13400), A30(4800),<br>B42(1787), B7(1300)                         | 114               | 822        |       | POSITIVE      | DR18(5000),<br>DR52(3400)                       | 209                   | 243                   | YES             |

**Table 7. Individual Flow crossmatch results and DSA reported for Cell #211 vs. Serum #216**

| Ctr  | Serum no | T-Cell Pos cutoff | T-Cell MCS | RATIO | MESF | T-Cell RESULT | Class I DSA( )                                  | B-Cell Pos cutoff | B-cell MCS | RATIO | B-Cell RESULT | Class II DSA( )                                            | T-Cell NEG Control MC | B-Cell NEG Control MC | Pronase Treated |
|------|----------|-------------------|------------|-------|------|---------------|-------------------------------------------------|-------------------|------------|-------|---------------|------------------------------------------------------------|-----------------------|-----------------------|-----------------|
| 230  | 216      | 1.6               | 2.2        |       |      | POSITIVE      | A1, CW17                                        | 3                 | 3.8        |       | POSITIVE      | Class I, DR18, DR52                                        | 0.6                   | 0.9                   | YES             |
| 615  | 216      | 294               | 221        |       |      | POSITIVE      | A*01:01(13696),<br>C*17:01(4588),               | 374               | 238        |       | POSITIVE      | DRB1*03:02(4620),<br>DQB1*04:02(1137),<br>DRB3*01:01(2284) | 241                   | 290                   | YES             |
| 753  | 216      | 650               | 7034       |       |      | POSITIVE      | 11125                                           | 1200              | 16231      |       | POSITIVE      | 110,002,335                                                | 399                   | 556                   | YES             |
| 792  | 216      | 57                | 277        |       |      | POSITIVE      | A1(15751), Cw17(4533)                           | 107               | 305        |       | POSITIVE      | DR18(5276),<br>DR52(2003)                                  | 209                   | 254                   | YES             |
| 793  | 216      | >70               | 322        |       |      | POSITIVE      | A1(18,778) C*17(6,059)                          | >150              | 331        |       | POSITIVE      | DR18(7,016)<br>DRB3*01(3,118)<br>DQ4(1,794)                | 88                    | 175                   | YES             |
| 1426 | 216      | 67                | 272        |       |      | POSITIVE      | A1(17477), Cw17(6911)                           | 82                | 359        |       | POSITIVE      | DQ4(1565),<br>DR18(6137),<br>DR52(3225)                    | 253                   | 262                   | YES             |
| 2400 | 216      | 36                | 352        | NA    | NA   | POSITIVE      | A*01:01(17133)<br>C*17:01(6145)                 | 40                | 385        | NA    | POSITIVE      | DRB1*03:02(5012)<br>DRB3*01(2582)                          | 281                   | 331                   | YES             |
| 3224 | 216      | 70                | 264        |       |      | POSITIVE      |                                                 | 140               | 210        |       | POSITIVE      |                                                            | 172                   | 223                   | YES             |
| 3632 | 216      | 70                | 314        |       |      | POSITIVE      | Class I DSA to<br>A1(14105), and<br>Cw17(3849). | 100               | 319        |       | POSITIVE      | Class II DSA to<br>DR18(4549) and<br>DR52(1790).           | 58                    | 124                   | YES             |
| 3753 | 216      | 50                | 259        |       |      | POSITIVE      | A1(18567),Cw17(7170)                            | 100               | 312        |       | POSITIVE      | DQ4(1195),DR52(1890),<br>DR18(5603)                        | 265                   | 307                   | YES             |
| 3808 | 216      | 312               | 230        |       |      | POSITIVE      | A*01:01(9731),<br>C*17:01(2351)                 | 440               | 224        |       | POSITIVE      | DRB3*03:02(2791),<br>DRB3*01:01(2170)                      | 243                   | 328                   | YES             |
| 3966 | 216      | 20                | 229        |       |      | POSITIVE      |                                                 | 50                | 203        |       | POSITIVE      |                                                            | 146                   | 272                   | NO              |
| 5130 | 216      | 61                | 568        |       |      | POSITIVE      | A1(16627)                                       | 77                | 696        |       | POSITIVE      | DQB1*04:02(2002)                                           | 203                   | 392                   | YES             |
| 5214 | 216      | 700               | 10422      |       |      | POSITIVE      | A*01:01, C*17:01                                | 1500              | 30525      |       | POSITIVE      | DRB1*03:02                                                 | 627                   | 794                   | YES             |
| 8001 | 216      | 50                | 363        |       |      | POSITIVE      | A1(18848), Cw17(7404)                           | 100               | 395        |       | POSITIVE      | DR18(6112),<br>DQB1*04:02(1127),<br>DRB3*01:01(2241)       | 203                   | 271                   | YES             |
| 8083 | 216      | 74                | 232        |       |      | POSITIVE      | A1 at 18842                                     | 108               | 139        |       | POSITIVE      | DR18 at 5381; DR52 at<br>4166                              | 299                   | 437                   | YES             |
| 8103 | 216      | 430               | 239.2      | 1.2   |      | POSITIVE      | A*01:01(12872),<br>C*17:01(6496)                | 1961              | 1607.4     | 1.7   | POSITIVE      | DRB1*03:02(2715)                                           | 190.8                 | 353.6                 | NO              |
| 8111 | 216      | 76                | 394        |       |      | POSITIVE      | A1(10000), Cw17(3100)                           | 114               | 323        |       | POSITIVE      | DR18(4000),<br>DRB3*01:01(1800)                            | 209                   | 243                   | YES             |

**Table 8. Individual Flow crossmatch results and DSA reported for Cell #212 vs. Serum #213**

Cell 212 HLA genotype: A\*02:01:01-A\*33:01:01-B\*39:11-B\*44:03:01-C\*02:02:02-C\*07:02:01/DRB1\*04:17:02-DRB1\*13:01:01-DRB3\*01:01:02-DRB4\*01:03:02-DQA1\*01:03-DQA1\*03:03-DQB1\*04:02-DQB1\*06:03-DPA1\*01:03-DPB1\*04:01:01G-DPB1\*04:02:01G

| Ctr  | Serum no | T-Cell Pos cutoff | T-Cell MCS | RATIO | MESF | T-Cell RESULT      | Class I DSA( )                                                |      |       |    |          |                                                                                                        |      |     |     |
|------|----------|-------------------|------------|-------|------|--------------------|---------------------------------------------------------------|------|-------|----|----------|--------------------------------------------------------------------------------------------------------|------|-----|-----|
| 230  | 213      | 2                 | 2.9        |       |      | POSITIVE           | A2,B44                                                        | 3.5  | 4.8   |    | POSITIVE | Class I, DQ4                                                                                           | 0.93 | 1.4 | YES |
| 615  | 213      | 188               | 431        |       |      | POSITIVE           | A*02:01(21390),<br>B*44:03(8185),                             | 269  | 344   |    | POSITIVE | DQB1*06:03(5473),<br>DQB1*04:02(5467),<br>DRB3*01:01(12910),<br>DRB4*01:03(564)                        | 140  | 196 | YES |
| 753  | 213      | 650               | 33770      |       |      | POSITIVE           | 48400                                                         | 1200 | 45070 |    | POSITIVE | 2,844,089,306,850                                                                                      | 304  | 476 | YES |
| 792  | 213      | 57                | 397        |       |      | POSITIVE           | A2(26703), B44(7566)                                          | 107  | 351   |    | POSITIVE | DR52(12054),<br>DQ6(3989)                                                                              | 228  | 268 | YES |
| 793  | 213      | >70               | 502        |       |      | POSITIVE           | A2(26,506)<br>B44/Bw4(10,654);<br>unable to assess<br>B*39:11 | >150 | 404   |    | POSITIVE | DRB3*01(13,540)<br>DQ4(5,183)<br>DQ6(5,533); unable to<br>assess DRB1*04:17:02                         | 89   | 163 | YES |
| 1426 | 213      | 67                | 408        |       |      | POSITIVE           | A2(14672), B44(9554)                                          | 82   | 386   |    | POSITIVE | DQ4(5411), DQ6(7570),<br>DR52(15883)                                                                   | 280  | 286 | YES |
| 2400 | 213      | 36                | 524        | NA    | NA   | POSITIVE           | A*02:01(26125)<br>B*44:03(7969)<br>Bw4(12204)                 | 40   | 424   | NA | POSITIVE | DRB3*01(11929)<br>DQB1*04:02(3937)<br>DQB1*06:03(4321)                                                 | 306  | 337 | YES |
| 3224 | 213      | 70                | 408        |       |      | POSITIVE           |                                                               | 140  | 377   |    | POSITIVE |                                                                                                        | 180  | 193 | YES |
| 3632 | 213      | 70                | 474        |       |      | POSITIVE           | A2(27002), B44(7351)                                          | 100  | 387   |    | POSITIVE | DR52(9383),<br>DQ4(4028), DQ6(3224).                                                                   | 79   | 128 | YES |
| 3753 | 213      | 50                | 475        |       |      | POSITIVE           | A2(32027), B44(6474),<br>Bw4(9308)                            | 100  | 404   |    | POSITIVE | DQ4(3487), DQ6(3937),<br>DRB3*01(12229)                                                                | 276  | 314 | YES |
| 3808 | 213      | 324               | 352        |       |      | POSITIVE<br>Strong | A*02:01(19169),<br>B*44:03(6020)                              | 416  | 223   |    | POSITIVE | DRB3*01:01(6174),<br>DQB1*04:02(1432),<br>DQB1*06:03(933),<br>DQA1*03(10484)                           | 255  | 303 | YES |
| 3966 | 213      | 20                | 366        |       |      | POSITIVE           |                                                               | 50   | 343   |    | POSITIVE |                                                                                                        | 154  | 273 | NO  |
| 5130 | 213      | 61                | 750        |       |      | POSITIVE           | A2(8787), B44(8481)                                           | 77   | 687   |    | POSITIVE | DRB3*01:01(13808),<br>DQB1*04:02(6352),<br>DQB1*06:03(5508),<br>DQA1*01:03(6872),<br>DQA1*03:03(14344) | 224  | 529 | YES |

**Table 8. Individual Flow crossmatch results and DSA reported for Cell #212 vs. Serum #213**

| Ctr  | Serum no | T-Cell Pos cutoff | T-Cell MCS | RATIO | MESF | T-Cell RESULT | Class I DSA( )                           | B-Cell Pos cutoff | B-cell MCS | RATIO | B-Cell RESULT | Class II DSA( )                                                                 | T-Cell NEG Control MC | B-Cell NEG Control MC | Pronase Treated |
|------|----------|-------------------|------------|-------|------|---------------|------------------------------------------|-------------------|------------|-------|---------------|---------------------------------------------------------------------------------|-----------------------|-----------------------|-----------------|
| 5214 | 213      | 700               | 31623      |       |      | POSITIVE      | A*02:01, B*44:03                         | 1500              | 30727      |       | POSITIVE      | DRB3*01:01,<br>DQA1*01:03,<br>DQA1*03:03,<br>DQB1*04:02,<br>DQB1*06:03          | 611                   | 669                   | YES             |
| 8001 | 213      | 50                | 393        |       |      | POSITIVE      | A2(28732), B44(8138),<br>Bw4(26663-7011) | 100               | 270        |       | POSITIVE      | DRB3*01:01(14049),<br>DQB1*04:02(6309),<br>DQB1*06:03(4879)                     | 224                   | 335                   | YES             |
| 8083 | 213      | 74                | 373        |       |      | POSITIVE      | A2(39887);<br>Bw4(29405)                 | 108               | 341        |       | POSITIVE      | DR52(13126)                                                                     | 292                   | 353                   | YES             |
| 8103 | 213      | 984               | 721.2      | 1.2   |      | POSITIVE      | A*02:01(3222),<br>B*44:03(4528)          | 2720              | 2357.9     | 1.7   | POSITIVE      | DQB1*06:03(1168),<br>DRB3*01:01(3324),<br>DQA1*01:03(1266),<br>DQA1*03:03(7691) | 262.8                 | 362.1                 | NO              |
| 8111 | 213      | 76                | 13858      |       |      | POSITIVE      | A2(20000), B44(4300)                     | 114               | 18229      |       | POSITIVE      | DRB3*01:01(9000),<br>DQ4(2700), DQ6(2800)                                       | 366                   | 1397                  | YES             |

**Table 9. Individual Flow crossmatch results and DSA reported for Cell #212 vs. Serum #214**

| Ctr  | Serum no | T-Cell Pos cutoff | T-Cell MCS | RATIO | MESF | T-Cell RESULT     | Class I DSA( )                         | B-Cell Pos cutoff | B-cell MCS | RATIO | B-Cell RESULT | Class II DSA( )                                                                  | T-Cell NEG Control MC | B-Cell NEG Control MC | Pronase Treated |
|------|----------|-------------------|------------|-------|------|-------------------|----------------------------------------|-------------------|------------|-------|---------------|----------------------------------------------------------------------------------|-----------------------|-----------------------|-----------------|
| 230  | 214      | 2                 | 3          |       |      | POSITIVE          | A2, B39                                | 3.5               | 4.8        |       | POSITIVE      | Class I, DQ6, DR13                                                               | 0.93                  | 1.4                   | YES             |
| 615  | 214      | 188               | 134        |       |      | POSITIVE          | A*02:01(6501),<br>B*39:01(2504)        | 269               | 332        |       | POSITIVE      | DRB1*13:01(12822),<br>DRB1*04:02(7278),<br>DQB1*06:03(18222)<br>DQB1*04:02(2814) | 140                   | 196                   | YES             |
| 753  | 214      | 650               | 2669       |       |      | POSITIVE          | 143,704,770                            | 1200              | 25640      |       | POSITIVE      | 26440,15810, 4000                                                                | 304                   | 476                   | YES             |
| 792  | 214      | 57                | 192        |       |      | POSITIVE          | A2(6094)                               | 107               | 398        |       | POSITIVE      | DQ6(17209),<br>DR13(9623)                                                        | 228                   | 268                   | YES             |
| 793  | 214      | >70               | 221        |       |      | POSITIVE          | A2(7,592); unable to assess B*39:11    | >150              | 388        |       | POSITIVE      | DR13(12,015)<br>DQ4(1,652)<br>DQ6(18,409); unable to assess DRB1*04:17           | 89                    | 163                   | YES             |
| 1426 | 214      | 67                | 141        |       |      | POSITIVE          | A2(8425), B39(3090)                    | 82                | 383        |       | POSITIVE      | DQ4(2474),<br>DQ6(22925),<br>DR13(16234)                                         | 280                   | 286                   | YES             |
| 2400 | 214      | 36                | 210        | NA    | NA   | POSITIVE          | A*02:01(7217)<br>B*39:11(2097)         | 40                | 426        | NA    | POSITIVE      | DRB1*13:01(12430)<br>DQB1*04:02(1734)<br>DQB1*06:03(19401)                       | 306                   | 337                   | YES             |
| 3224 | 214      | 70                | 131        |       |      | POSITIVE          |                                        | 140               | 303        |       | POSITIVE      |                                                                                  | 180                   | 193                   | YES             |
| 3632 | 214      | 70                | 194        |       |      | POSITIVE          | Class I DSA to<br>A2(5753), B39(1836). | 100               | 363        |       | POSITIVE      | Class II DSA to<br>DR13(11484) and<br>DQ6(17127).                                | 79                    | 128                   | YES             |
| 3753 | 214      | 50                | 184        |       |      | POSITIVE          | A2(6162),B39(1733)                     | 100               | 315        |       | POSITIVE      | DQ4(1558),<br>DQ6(18715)                                                         | 276                   | 314                   | YES             |
| 3808 | 214      | 324               | 93         |       |      | POSITIVE moderate | A*02:01(4123),<br>B*39:01(1214)        | 416               | 283        |       | POSITIVE      | DRB1*13:01(6134),<br>DQA1*01:03(7378),<br>DQB1*06:03(7378)                       | 255                   | 303                   | YES             |
| 3966 | 214      | 20                | 162        |       |      | POSITIVE          |                                        | 50                | 350        |       | POSITIVE      |                                                                                  | 154                   | 273                   | NO              |
| 5130 | 214      | 61                | 448        |       |      | POSITIVE          | A2(6653)                               | 77                | 698        |       | POSITIVE      | DRB1*13:01(11836),<br>DQB1*06:03(17401),<br>DQA1*01:03(17829)                    | 224                   | 529                   | YES             |
| 5214 | 214      | 700               | 2413       |       |      | POSITIVE          | A*02:01                                | 1500              | 43619      |       | POSITIVE      | DRB1*13:01,<br>DQA1*01:03,<br>DQB1*06:03                                         | 611                   | 669                   | YES             |
| 8001 | 214      | 50                | 262        |       |      | POSITIVE          | A2(7137), B39(2429)                    | 100               | 361        |       | POSITIVE      | DR13(12491),<br>DRB1*04:02(7953),<br>DQB1*04:02(2897),<br>DQB1*06:03(20832)      | 224                   | 335                   | YES             |

**Table 9. Individual Flow crossmatch results and DSA reported for Cell #212 vs. Serum #214**

| Ctr  | Serum no | T-Cell Pos cutoff | T-Cell MCS | RATIO | MESF | T-Cell RESULT | Class I DSA( ) |  | B-Cell Pos cutoff | B-cell MCS | RATIO | B-Cell RESULT | Class II DSA( )                                                |  | T-Cell NEG Control MC | B-Cell NEG Control MC | Pronase Treated |
|------|----------|-------------------|------------|-------|------|---------------|----------------|--|-------------------|------------|-------|---------------|----------------------------------------------------------------|--|-----------------------|-----------------------|-----------------|
| 8083 | 214      | 74                | 236        |       |      | POSITIVE      | A2 at=7238     |  | 108               | 410        |       | POSITIVE      | *No DR04:17 bead;<br>DR4(14262);<br>DR13(12499);<br>DQ6(13450) |  | 292                   | 353                   | YES             |
| 8103 | 214      | 984               | 721.2      | 1.2   |      | NEGATIVE      |                |  | 2720              | 2357.9     | 1.7   | POSITIVE      | DQB1*06:03(6957),<br>DRB1*13:01(2829),<br>DQA1*01:03(6957)     |  | 262.8                 | 362.1                 | NO              |
| 8111 | 214      | 76                | 675        |       |      | POSITIVE      | A2(3243)       |  | 114               | 12678      |       | POSITIVE      | DR13(8000),<br>DQ6(12000),<br>DQ4(1400)                        |  | 366                   | 1397                  | YES             |

**Table 10. Individual Flow crossmatch results and DSA reported for Cell #212 vs. Serum #215**

| Ctr  | Serum no | T-Cell Pos cutoff | T-Cell MCS | RATIO | MESF | T-Cell RESULT      | Class I DSA( )                                                     | B-Cell Pos cutoff | B-cell MCS | RATIO | B-Cell RESULT | Class II DSA( )                                            | T-Cell NEG Control MC | B-Cell NEG Control MC | Pronase Treated |
|------|----------|-------------------|------------|-------|------|--------------------|--------------------------------------------------------------------|-------------------|------------|-------|---------------|------------------------------------------------------------|-----------------------|-----------------------|-----------------|
| 230  | 215      | 2                 | 3.1        |       |      | POSITIVE           | A33, B44                                                           | 3.5               | 4.5        |       | POSITIVE      | Class I, DR13, Dr52                                        | 0.93                  | 1.4                   | YES             |
| 615  | 215      | 188               | 368        |       |      | POSITIVE           | A*33:01(3430),<br>B*44:03(12316)                                   | 269               | 315        |       | POSITIVE      | DRB1*13:01(7034),<br>DRB3*01:01(3905)                      | 140                   | 196                   | YES             |
| 753  | 215      | 650               | 22575      |       |      | POSITIVE           | 565,028,280                                                        | 1200              | 12728      |       | POSITIVE      | 14030, 7370                                                | 304                   | 476                   | YES             |
| 792  | 215      | 57                | 362        |       |      | POSITIVE           | B44(9623), A33(2330)                                               | 107               | 330        |       | POSITIVE      | DR13(7049),<br>DR52(3754)                                  | 228                   | 268                   | YES             |
| 793  | 215      | >70               | 443        |       |      | POSITIVE           | A33(5,268)<br>Bw4/B44(17,705);<br>unable to assess<br>B*39:11      | >150              | 399        |       | POSITIVE      | DR13(7,488)<br>DR52(3,948); unable to<br>assess DRB1*04:17 | 89                    | 163                   | YES             |
| 1426 | 215      | 67                | 349        |       |      | POSITIVE           | A33(4264),<br>B44(16469)                                           | 82                | 380        |       | POSITIVE      | DR13(7884),<br>DR52(4267)                                  | 280                   | 286                   | YES             |
| 2400 | 215      | 36                | 449        | NA    | NA   | POSITIVE           | A*33:01(6193)<br>B*44:03(16343)                                    | 40                | 414        | NA    | POSITIVE      | DRB1*13:01(7848)<br>DRB3*01(4307)                          | 306                   | 337                   | YES             |
| 3224 | 215      | 70                | 328        |       |      | POSITIVE           |                                                                    | 140               | 335        |       | POSITIVE      |                                                            | 180                   | 193                   | YES             |
| 3632 | 215      | 70                | 418        |       |      | POSITIVE           | Class I DSA to<br>A33(2848),<br>B44(13181).                        | 100               | 406        |       | POSITIVE      | DR13(6390),<br>DR52(3571).                                 | 79                    | 128                   | YES             |
| 3753 | 215      | 50                | 384        |       |      | POSITIVE           | A33(2763),<br>B44(18181),<br>Bw4(6316)                             | 100               | 296        |       | POSITIVE      | DR52(3789),<br>DR13(7207)                                  | 276                   | 314                   | YES             |
| 3808 | 215      | 324               | 333        |       |      | POSITIVE<br>Strong | A*33:01(1076),<br>B*44:03(14455)                                   | 416               | 260        |       | POSITIVE      | DRB1*13:01(6762),<br>DRB3*01:01(6713)                      | 255                   | 303                   | YES             |
| 3966 | 215      | 20                | 229        |       |      | POSITIVE           |                                                                    | 50                | 221        |       | POSITIVE      |                                                            | 154                   | 273                   | NO              |
| 5130 | 215      | 61                | 742        |       |      | POSITIVE           | A33(2059), B44(8736)                                               | 77                | 724        |       | POSITIVE      | DRB1*13:01(5985),<br>DRB3*01:01(2892)                      | 224                   | 529                   | YES             |
| 5214 | 215      | 700               | 18560      |       |      | POSITIVE           | A*33:01, B*44:03                                                   | 1500              | 19807      |       | POSITIVE      | DRB1*13:01,<br>DRB3*01:01                                  | 611                   | 669                   | YES             |
| 8001 | 215      | 50                | 418        |       |      | POSITIVE           | A33(3583),<br>B44(17565),<br>Bw4(29542-1278)                       | 100               | 319        |       | POSITIVE      | DRB1*13:01(7564),<br>DRB3*01:01(3834)                      | 224                   | 335                   | YES             |
| 8083 | 215      | 74                | 304        |       |      | POSITIVE           | A33(3060);<br>B44(25092)                                           | 108               | 287        |       | POSITIVE      | DR13(14610);<br>DR52(13752)                                | 292                   | 353                   | YES             |
| 8103 | 215      | 984               | 721.2      | 1.2   |      | NEGATIVE           | A*01:01(2451),<br>A*30:01(2507),<br>B*07:02(976),<br>B*42:01(1237) | 2720              | 2357.9     | 1.7   | POSITIVE      | DRB1*13:01(3804),<br>DRB3*01:01(2987)                      | 262.8                 | 362.1                 | NO              |
| 8111 | 215      | 76                | 10614      |       |      | POSITIVE           | A33(2600), B44(8900)                                               | 114               | 12570      |       | POSITIVE      | DR13(6000),<br>DR52(3400)                                  | 366                   | 1397                  | YES             |

**Table 11. Individual Flow crossmatch results and DSA reported for Cell #212 vs. Serum #216**

| Ctr  | Serum no | T-Cell Pos cutoff | T-Cell MCS | RATIO | MESF | T-Cell RESULT   | Class I DSA( )                                   | B-Cell Pos cutoff | B-cell MCS | RATIO | B-Cell RESULT | Class II DSA( )                                                       | T-Cell NEG Control MC | B-Cell NEG Control MC | Pronase Treated |
|------|----------|-------------------|------------|-------|------|-----------------|--------------------------------------------------|-------------------|------------|-------|---------------|-----------------------------------------------------------------------|-----------------------|-----------------------|-----------------|
| 230  | 216      | 2                 | 3.4        |       |      | POSITIVE        | B44,Cw2                                          | 3.5               | 4.6        |       | POSITIVE      | Class I, DR13, DR52                                                   | 0.93                  | 1.4                   | YES             |
| 615  | 216      | 188               | 434        |       |      | POSITIVE        | B*44:03(16293), C*02:02(6350)                    | 269               | 370        |       | POSITIVE      | DRB1*13:01(6683), DRB3*01:01(2284), DQB1*04:02(1137), DQB1*06:03(723) | 140                   | 196                   | YES             |
| 753  | 216      | 650               | 27300      |       |      | POSITIVE        | 34065, 15800                                     | 1200              | 46215      |       | POSITIVE      | 12690, 5200, 2340                                                     | 304                   | 476                   | YES             |
| 792  | 216      | 57                | 417        |       |      | POSITIVE        | B44(20060), Cw2(6726)                            | 107               | 369        |       | POSITIVE      | DR13(6374), DR52(2003)                                                | 228                   | 268                   | YES             |
| 793  | 216      | >70               | 497        |       |      | POSITIVE        | B44(20,693) Cw2(9,274); unable to assess B*39:11 | >150              | 421        |       | POSITIVE      | DR13(8,434) DRB3*01(3,118) DQ4(1,981); unable to assess DRB1*04:17    | 89                    | 163                   | YES             |
| 1426 | 216      | 67                | 405        |       |      | POSITIVE        | B44(21045), Cw2(8362)                            | 82                | 417        |       | POSITIVE      | DQ4(1527), DQ6(1285), DR13(7694), DR52(3225)                          | 280                   | 286                   | YES             |
| 2400 | 216      | 36                | 515        | NA    | NA   | POSITIVE        | B*44:03(20145) C*02:02(7735)                     | 40                | 469        | NA    | POSITIVE      | DRB1*13:01(7162) DRB3*01(2582)                                        | 306                   | 337                   | YES             |
| 3224 | 216      | 70                | 409        |       |      | POSITIVE        |                                                  | 140               | 410        |       | POSITIVE      |                                                                       | 180                   | 193                   | YES             |
| 3632 | 216      | 70                | 491        |       |      | POSITIVE        | B44(21195), Cw2(5149)                            | 100               | 409        |       | POSITIVE      | DR13(5534), DR52/ DRB3*01:01(1790)                                    | 79                    | 128                   | YES             |
| 3753 | 216      | 50                | 455        |       |      | POSITIVE        | B44(24099), Cw2(8446)                            | 100               | 365        |       | POSITIVE      | DR13(6183), DR52(1890), DQ4(1195)                                     | 276                   | 314                   | YES             |
| 3808 | 216      | 324               | 418        |       |      | POSITIVE Strong | B*44:03(18934), C*02:02(2840)                    | 416               | 359        |       | POSITIVE      | DRB1*13:01(3344), DRB3*01:01(2170)                                    | 255                   | 303                   | YES             |
| 3966 | 216      | 20                | 412        |       |      | POSITIVE        |                                                  | 50                | 388        |       | POSITIVE      |                                                                       | 154                   | 273                   | NO              |
| 5130 | 216      | 61                | 781        |       |      | POSITIVE        | B44(17459), Cw2(9614)                            | 77                | 816        |       | POSITIVE      | DRB1*13:01(9851), DRB3*01:01(3655), DQB1*04:02(1698)                  | 224                   | 529                   | YES             |
| 5214 | 216      | 700               | 40526      |       |      | POSITIVE        | B*44:03, C*02:02                                 | 1500              | 37378      |       | POSITIVE      | DRB1*13:01, DRB3*01:01                                                | 611                   | 669                   | YES             |
| 8001 | 216      | 50                | 503        |       |      | POSITIVE        | B44(21884), Cw2(8957)                            | 100               | 386        |       | POSITIVE      | DR13(7830), DRB3*01:01(2241), DQB1*04:02(1127)                        | 224                   | 335                   | YES             |
| 8083 | 216      | 74                | 197        |       |      | POSITIVE        | B44(34089)                                       | 108               | 174        |       | POSITIVE      | DR13(6673); DR52(4166)                                                | 292                   | 353                   | YES             |

Table 11. Individual Flow crossmatch results and DSA reported for Cell #212 vs. Serum #216

| Ctr  | Serum no | T-Cell Pos cutoff | T-Cell MCS | RATIO | MESF | T-Cell RESULT | Class I DSA( )                   |  | B-Cell Pos cutoff | B-cell MCS | RATIO | B-Cell RESULT | Class II DSA( )                       |  | T-Cell NEG Control MC | B-Cell NEG Control MC | Pronase Treated |
|------|----------|-------------------|------------|-------|------|---------------|----------------------------------|--|-------------------|------------|-------|---------------|---------------------------------------|--|-----------------------|-----------------------|-----------------|
| 8103 | 216      | 984               | 721.2      | 1.2   |      | POSITIVE      | B*44:03(15158),<br>C*02:02(7309) |  | 2720              | 2357.9     | 1.7   | POSITIVE      | DRB1*13:01(3399),<br>DRB3*01:01(1574) |  | 262.8                 | 362.1                 | NO              |
| 8111 | 216      | 76                | 14972      |       |      | POSITIVE      | B44(13900),<br>Cw2(4000)         |  | 114               | 10182      |       | POSITIVE      | DR13(4900),<br>DRB1*01:01(1700)       |  | 366                   | 1397                  | YES             |

## **Single Antigen**

**Table 12. Summary of Single Antigen results for Serum #213**

| Class I           |         |           |        |       |         |       |       |
|-------------------|---------|-----------|--------|-------|---------|-------|-------|
| *** Serum 213 *** |         |           |        |       |         |       |       |
| 17 typing Labs    |         |           |        |       |         |       |       |
| Antigen           | No.Labs | Consensus | Median | Mean  | Std Dev | Min   | Max   |
| A2                | 17      | 100%      | 27132  | 26019 | 13011   | 3222  | 55262 |
| A68               | 17      | 100%      | 22528  | 23845 | 9113    | 10848 | 49869 |
| A69               | 17      | 100%      | 21607  | 22830 | 8708    | 9649  | 49411 |
| A32               | 17      | 100%      | 17266  | 18561 | 8295    | 7668  | 41758 |
| A24               | 17      | 100%      | 15759  | 16848 | 6796    | 6498  | 34272 |
| A23               | 17      | 100%      | 15381  | 16600 | 7113    | 6294  | 35588 |
| A25               | 17      | 100%      | 14897  | 15560 | 6779    | 6175  | 32855 |
| B57               | 16      | 94%       | 23043  | 24034 | 10466   | 8247  | 51241 |
| B58               | 16      | 94%       | 20970  | 22097 | 9440    | 8065  | 47069 |
| B63               | 16      | 94%       | 14850  | 15856 | 7288    | 6309  | 35524 |
| B38               | 16      | 94%       | 14191  | 14529 | 6764    | 6435  | 32674 |
| B59               | 16      | 94%       | 13794  | 14791 | 6579    | 6740  | 33081 |
| B53               | 16      | 94%       | 13704  | 14363 | 6502    | 6071  | 32285 |
| B49               | 16      | 94%       | 12999  | 14126 | 6087    | 5533  | 30271 |
| B51               | 16      | 94%       | 12644  | 13472 | 5935    | 5977  | 29541 |
| B77               | 16      | 94%       | 11042  | 11980 | 5300    | 4656  | 26176 |
| B37               | 16      | 94%       | 9893   | 10882 | 4335    | 4680  | 20977 |
| B13               | 16      | 94%       | 9616   | 9580  | 4558    | 3235  | 23160 |
| B52               | 16      | 94%       | 9264   | 10256 | 4583    | 4445  | 22798 |
| B44               | 16      | 94%       | 8162   | 8808  | 3387    | 4313  | 16723 |
| B47               | 16      | 94%       | 6835   | 7612  | 2875    | 3749  | 14459 |
| Bw4               | 11      | 64%       | 19065  | 17906 | 7840    | 7500  | 29405 |
| B2705             | 11      | 64%       | 10685  | 11378 | 5269    | 5147  | 21657 |
| B27               | 8       | 47%       | 9513   | 9647  | 2547    | 5147  | 14215 |
| A203              | 3       | 17%       | 19372  | 26288 | 23302   | 1843  | 57649 |
| A2403             | 3       | 17%       | 10227  | 18161 | 13941   | 6498  | 37760 |
| A2C               | 1       | 5%        | 39829  | 39829 | -       | 39829 | 39829 |
| B15               | 1       | 5%        | 6309   | 6309  | -       | 6309  | 6309  |

| Class II          |         |           |        |       |         |      |       |
|-------------------|---------|-----------|--------|-------|---------|------|-------|
| *** Serum 213 *** |         |           |        |       |         |      |       |
| 17 typing Labs    |         |           |        |       |         |      |       |
| Antigen           | No.Labs | Consensus | Median | Mean  | Std Dev | Min  | Max   |
| DR7               | 17      | 100%      | 22785  | 24858 | 10255   | 8347 | 50321 |
| DQ9               | 17      | 100%      | 19512  | 20874 | 8081    | 7903 | 40708 |
| DQ8               | 17      | 100%      | 19387  | 20077 | 7490    | 7691 | 39156 |
| DQ7               | 17      | 100%      | 18952  | 20471 | 8961    | 6702 | 45743 |
| DR9               | 17      | 100%      | 14441  | 14556 | 5735    | 4804 | 30008 |
| DR12              | 17      | 100%      | 12205  | 12550 | 4620    | 3597 | 22759 |
| DQ6               | 17      | 100%      | 5162   | 5096  | 2135    | 1368 | 10658 |
| DQ4               | 15      | 88%       | 5325   | 5309  | 1647    | 2779 | 8930  |
| DQ2               | 15      | 88%       | 4602   | 4601  | 1887    | 849  | 8370  |
| DR52              | 12      | 70%       | 13670  | 14193 | 5974    | 3558 | 28700 |
| DQA1*02           | 5       | 29%       | 19387  | 15622 | 5640    | 7428 | 20657 |
| DQA1*06           | 5       | 29%       | 15218  | 18221 | 11927   | 7054 | 40030 |
| DQA1*03           | 5       | 29%       | 11783  | 15792 | 7579    | 7903 | 28439 |
| DQA1*05           | 4       | 23%       | 14219  | 15016 | 11425   | 1187 | 30440 |
| DQA1*04           | 4       | 23%       | 3723   | 4268  | 2551    | 1490 | 8137  |
| DQ3               | 1       | 5%        | 7903   | 7903  | -       | 7903 | 7903  |
| DQA1*01           | 1       | 5%        | 1266   | 1266  | -       | 1266 | 1266  |
| DR53              | 1       | 5%        | 564    | 564   | -       | 564  | 564   |

Blue = DSA against cell #211 only

Gold = DSA against cell #212 only

Green = DSA against cell #211 and #212

**Table 13. Summary of Single Antigen results for Serum #214**

| Class I           |         |           |        |       |         |       |       |
|-------------------|---------|-----------|--------|-------|---------|-------|-------|
| *** Serum 214 *** |         |           |        |       |         |       |       |
| 17 typing Labs    |         |           |        |       |         |       |       |
| Antigen           | No.Labs | Consensus | Median | Mean  | Std Dev | Min   | Max   |
| B61               | 17      | 100%      | 15951  | 16855 | 6180    | 7314  | 33066 |
| B60               | 17      | 100%      | 15205  | 16023 | 5557    | 7450  | 29821 |
| B7                | 17      | 100%      | 14633  | 14634 | 5348    | 5369  | 27349 |
| B81               | 17      | 100%      | 13404  | 14290 | 5233    | 5743  | 26432 |
| B13               | 17      | 100%      | 12225  | 12645 | 3945    | 5743  | 21819 |
| B48               | 17      | 100%      | 11893  | 11973 | 5570    | 2227  | 24375 |
| B67               | 17      | 100%      | 9542   | 9555  | 3652    | 3595  | 18141 |
| B42               | 17      | 100%      | 8437   | 8299  | 3276    | 2879  | 16113 |
| B55               | 17      | 100%      | 8312   | 8024  | 3364    | 2655  | 15888 |
| A2                | 17      | 100%      | 8217   | 8036  | 2440    | 3243  | 14372 |
| B47               | 17      | 100%      | 6851   | 7568  | 2566    | 3056  | 12891 |
| B41               | 17      | 100%      | 5661   | 5848  | 2170    | 2147  | 11004 |
| B38               | 17      | 100%      | 3441   | 3335  | 1311    | 1106  | 6332  |
| B27               | 16      | 94%       | 12743  | 12910 | 4161    | 4887  | 21201 |
| B73               | 16      | 94%       | 3190   | 3219  | 1333    | 1079  | 6495  |
| B59               | 16      | 94%       | 2974   | 3027  | 1125    | 1205  | 6043  |
| B57               | 15      | 88%       | 2476   | 2614  | 975     | 974   | 4429  |
| B39               | 13      | 76%       | 2475   | 2633  | 903     | 1214  | 4774  |
| B72               | 10      | 58%       | 2194   | 2333  | 814     | 1282  | 4215  |
| B50               | 10      | 58%       | 1691   | 1787  | 632     | 1044  | 3293  |
| B58               | 10      | 58%       | 1465   | 1497  | 566     | 500   | 2737  |
| B49               | 9       | 52%       | 1570   | 1736  | 646     | 1030  | 3180  |
| B62               | 9       | 52%       | 1500   | 1595  | 502     | 989   | 2740  |
| B37               | 8       | 47%       | 1297   | 1551  | 703     | 1016  | 3283  |
| A69               | 8       | 47%       | 1099   | 1245  | 403     | 819   | 2109  |
| B56               | 6       | 35%       | 1501   | 1675  | 460     | 1183  | 2428  |
| B2708             | 4       | 23%       | 10508  | 13528 | 6513    | 8466  | 24631 |
| B2705             | 4       | 23%       | 8199   | 9906  | 4629    | 5722  | 17507 |
| A6602             | 4       | 23%       | 982    | 995   | 106     | 876   | 1143  |
| B3901             | 3       | 17%       | 1673   | 2209  | 1099    | 1214  | 3740  |
| A66               | 3       | 17%       | 915    | 991   | 137     | 876   | 1184  |
| B8101             | 2       | 11%       | 8604   | 8603  | 384     | 8220  | 8987  |
| A203              | 2       | 11%       | 8521   | 8521  | 3000    | 5521  | 11521 |
| B40               | 1       | 5%        | 10865  | 10865 | -       | 10865 | 10865 |
| B703              | 1       | 5%        | 6440   | 6440  | -       | 6440  | 6440  |

| Class II          |         |           |        |       |         |       |        |
|-------------------|---------|-----------|--------|-------|---------|-------|--------|
| *** Serum 214 *** |         |           |        |       |         |       |        |
| 17 typing Labs    |         |           |        |       |         |       |        |
| Antigen           | No.Labs | Consensus | Median | Mean  | Std Dev | Min   | Max    |
| DR16              | 17      | 100%      | 21848  | 23380 | 9021    | 8239  | 45256  |
| DQ6               | 17      | 100%      | 18974  | 20018 | 5842    | 11385 | 36779  |
| DR51              | 17      | 100%      | 18007  | 21497 | 9302    | 4669  | 47474  |
| DQ5               | 17      | 100%      | 17798  | 17652 | 5825    | 8467  | 35753  |
| DR11              | 17      | 100%      | 17370  | 18541 | 6466    | 9482  | 35369  |
| DR8               | 17      | 100%      | 16649  | 17538 | 6556    | 6053  | 33096  |
| DR15              | 17      | 100%      | 15824  | 16302 | 5896    | 8079  | 30126  |
| DR12              | 17      | 100%      | 15506  | 15951 | 6094    | 6093  | 32065  |
| DR13              | 17      | 100%      | 13705  | 13974 | 5099    | 3813  | 26441  |
| DR9               | 17      | 100%      | 10690  | 11466 | 3825    | 4549  | 20690  |
| DR7               | 16      | 94%       | 16835  | 18335 | 5676    | 10858 | 34382  |
| DR103             | 16      | 94%       | 9786   | 10199 | 3835    | 3712  | 20005  |
| DQ2               | 16      | 94%       | 7042   | 7090  | 2811    | 2213  | 12653  |
| DR1               | 15      | 88%       | 3241   | 3114  | 1391    | 931   | 7269   |
| DR4               | 12      | 70%       | 7654   | 8690  | 3037    | 5306  | 15810  |
| DQA1*02           | 10      | 58%       | 3105   | 3518  | 1803    | 1000  | 6251   |
| DQ4               | 9       | 52%       | 2470   | 2409  | 858     | 800   | 4005   |
| DQA1*01           | 6       | 35%       | 19615  | 35296 | 34975   | 12000 | 111385 |
| DR1403            | 3       | 17%       | 15151  | 14345 | 3915    | 9199  | 18686  |
| DR14              | 2       | 11%       | 13157  | 13156 | 3958    | 9199  | 17114  |
| DQA1*04           | 2       | 11%       | 6279   | 6278  | 980     | 5299  | 7258   |

Blue = DSA against cell #211 only

Gold = DSA against cell #212 only

Green = DSA against cell #211 and #212

**Table 14. Summary of Single Antigen results for Serum #215**

| Class I           |         |           |        |       |         |      |       |
|-------------------|---------|-----------|--------|-------|---------|------|-------|
| *** Serum 215 *** |         |           |        |       |         |      |       |
| 17 typing Labs    |         |           |        |       |         |      |       |
| Antigen           | No.Labs | Consensus | Median | Mean  | Std Dev | Min  | Max   |
| B57               | 17      | 100%      | 25718  | 26232 | 13765   | 1661 | 55488 |
| B58               | 17      | 100%      | 24516  | 24731 | 11394   | 2780 | 49616 |
| B63               | 17      | 100%      | 24433  | 24615 | 11399   | 2656 | 49243 |
| A11               | 17      | 100%      | 24385  | 24461 | 11265   | 3085 | 50000 |
| A1                | 17      | 100%      | 22077  | 22692 | 11169   | 2451 | 49029 |
| A43               | 17      | 100%      | 16840  | 16207 | 6866    | 4690 | 34307 |
| B44               | 17      | 100%      | 16607  | 17084 | 7392    | 5137 | 37081 |
| A3                | 17      | 100%      | 16589  | 16393 | 6634    | 6080 | 35482 |
| B45               | 17      | 100%      | 16018  | 16838 | 7351    | 5998 | 37520 |
| B55               | 17      | 100%      | 15445  | 14793 | 6042    | 4931 | 28911 |
| B56               | 17      | 100%      | 13860  | 13357 | 5293    | 4796 | 24371 |
| A80               | 17      | 100%      | 13353  | 13253 | 5648    | 4984 | 29166 |
| B54               | 17      | 100%      | 13209  | 13354 | 5065    | 4960 | 23949 |
| A36               | 17      | 100%      | 13166  | 13653 | 5552    | 5153 | 28507 |
| B82               | 17      | 100%      | 12486  | 12672 | 4858    | 4903 | 24602 |
| A26               | 17      | 100%      | 11263  | 11127 | 4526    | 4460 | 22601 |
| A25               | 17      | 100%      | 10743  | 10780 | 4622    | 3863 | 23298 |
| B76               | 17      | 100%      | 9805   | 9853  | 4326    | 3576 | 21459 |
| A66               | 17      | 100%      | 8497   | 10366 | 6777    | 3949 | 35000 |
| A32               | 17      | 100%      | 8270   | 8906  | 3863    | 3433 | 19052 |
| A30               | 17      | 100%      | 8140   | 7931  | 2693    | 2629 | 13285 |
| A24               | 17      | 100%      | 8094   | 8087  | 3491    | 3255 | 17153 |
| A29               | 17      | 100%      | 7860   | 8291  | 2595    | 3277 | 13911 |
| B41               | 17      | 100%      | 7648   | 8060  | 3398    | 2705 | 17250 |
| B47               | 17      | 100%      | 6953   | 7167  | 2924    | 2104 | 13615 |
| B49               | 17      | 100%      | 6662   | 7048  | 2950    | 2339 | 13981 |
| B13               | 17      | 100%      | 6531   | 6769  | 2797    | 2229 | 14100 |
| A74               | 17      | 100%      | 6295   | 6806  | 2581    | 3187 | 12608 |
| B60               | 17      | 100%      | 6058   | 6347  | 2642    | 1878 | 12394 |
| B50               | 17      | 100%      | 5724   | 5734  | 2537    | 1662 | 11200 |
| A31               | 17      | 100%      | 5529   | 5962  | 2285    | 2008 | 10543 |
| B61               | 17      | 100%      | 5404   | 5433  | 2160    | 1525 | 9646  |
| B37               | 17      | 100%      | 4210   | 4584  | 2302    | 1531 | 10998 |
| A34               | 17      | 100%      | 4151   | 4067  | 1221    | 1971 | 6612  |
| A33               | 17      | 100%      | 3430   | 3582  | 1317    | 1076 | 5890  |

| Class II          |         |           |        |       |         |      |       |
|-------------------|---------|-----------|--------|-------|---------|------|-------|
| *** Serum 215 *** |         |           |        |       |         |      |       |
| 17 typing Labs    |         |           |        |       |         |      |       |
| Antigen           | No.Labs | Consensus | Median | Mean  | Std Dev | Min  | Max   |
| B27               | 16      | 94%       | 6199   | 6405  | 2396    | 3036 | 13682 |
| B42               | 13      | 76%       | 2678   | 2755  | 777     | 1237 | 3948  |
| B51               | 12      | 70%       | 1864   | 2064  | 829     | 776  | 3521  |
| B38               | 11      | 64%       | 1856   | 2345  | 1621    | 807  | 7081  |
| B59               | 11      | 64%       | 1811   | 2151  | 889     | 826  | 3768  |
| B67               | 10      | 58%       | 2235   | 2118  | 536     | 1171 | 2807  |
| B53               | 10      | 58%       | 2182   | 2231  | 695     | 1040 | 3453  |
| B7                | 10      | 58%       | 2134   | 1979  | 538     | 976  | 2583  |
| B8                | 10      | 58%       | 2109   | 2208  | 570     | 1557 | 3312  |
| Bw4               | 6       | 35%       | 13509  | 16003 | 9856    | 5000 | 29542 |
| B52               | 9       | 52%       | 2002   | 1953  | 711     | 1077 | 3551  |

| *** Serum 215 *** |         |           |        |      |         |      |       |
|-------------------|---------|-----------|--------|------|---------|------|-------|
| 17 typing Labs    |         |           |        |      |         |      |       |
| Antigen           | No.Labs | Consensus | Median | Mean | Std Dev | Min  | Max   |
| DR11              | 17      | 100%      | 7880   | 8741 | 3091    | 4600 | 15839 |
| DR13              | 17      | 100%      | 7207   | 8407 | 3506    | 3804 | 17659 |
| DR14              | 17      | 100%      | 6892   | 7988 | 2907    | 4326 | 16071 |
| DR8               | 17      | 100%      | 5474   | 6535 | 2585    | 3856 | 13381 |
| DR17              | 17      | 100%      | 5173   | 6080 | 2699    | 2805 | 14076 |
| DR12              | 17      | 100%      | 4228   | 5347 | 2623    | 2610 | 13022 |
| DR52              | 17      | 100%      | 3979   | 5075 | 2618    | 2892 | 13752 |
| DR18              | 16      | 94%       | 6089   | 7155 | 2508    | 5116 | 13172 |
| DR9               | 16      | 94%       | 2511   | 2754 | 1179    | 1620 | 6754  |
| DQ7               | 14      | 82%       | 2308   | 2396 | 623     | 1671 | 4026  |
| DR7               | 7       | 41%       | 1164   | 1857 | 1718    | 791  | 5922  |
| DP14              | 3       | 17%       | 1550   | 1476 | 207     | 1194 | 1685  |
| DR1404            | 2       | 11%       | 4881   | 4881 | 2401    | 2480 | 7282  |
| DR1403            | 2       | 11%       | 4746   | 4745 | 1975    | 2771 | 6720  |

Blue = DSA against cell #211 only

Gold = DSA against cell #212 only

Green = DSA against cell #211 and #212

**Table 15. Summary of Single Antigen results for Serum #216**

| Class I           |         |           |        |       |         |       |       |
|-------------------|---------|-----------|--------|-------|---------|-------|-------|
| *** Serum 216 *** |         |           |        |       |         |       |       |
| 17 typing Labs    |         |           |        |       |         |       |       |
| Antigen           | No.Labs | Consensus | Median | Mean  | Std Dev | Min   | Max   |
| B45               | 17      | 100%      | 23485  | 24941 | 8301    | 15399 | 47857 |
| B76               | 17      | 100%      | 22680  | 24732 | 8502    | 14825 | 46309 |
| B44               | 17      | 100%      | 20338  | 22591 | 7168    | 13906 | 41797 |
| B82               | 17      | 100%      | 19392  | 21551 | 6759    | 14480 | 38563 |
| A1                | 17      | 100%      | 17241  | 18018 | 6275    | 9731  | 35570 |
| A23               | 17      | 100%      | 11183  | 12317 | 4076    | 6859  | 22814 |
| Cw15              | 17      | 100%      | 8089   | 8486  | 4500    | 1851  | 20543 |
| Cw18              | 17      | 100%      | 8027   | 8417  | 4407    | 1855  | 20059 |
| Cw2               | 17      | 100%      | 7876   | 8578  | 4084    | 2840  | 19924 |
| Cw5               | 17      | 100%      | 5094   | 5403  | 2171    | 2254  | 10777 |
| B72               | 17      | 100%      | 3813   | 4317  | 1743    | 2155  | 8837  |
| B50               | 17      | 100%      | 3507   | 3962  | 1547    | 1968  | 7726  |
| Cw6               | 16      | 94%       | 5322   | 5615  | 2575    | 1115  | 12288 |
| B46               | 16      | 94%       | 3286   | 3342  | 1206    | 835   | 5555  |
| B62               | 16      | 94%       | 3116   | 3419  | 1200    | 1781  | 6373  |
| B49               | 16      | 94%       | 2716   | 3088  | 1146    | 1430  | 5804  |
| Cw17              | 15      | 88%       | 6496   | 6853  | 3337    | 2351  | 15725 |
| B56               | 15      | 88%       | 2319   | 2580  | 985     | 781   | 4526  |
| A24               | 13      | 76%       | 10483  | 11174 | 2903    | 7807  | 17240 |
| B71               | 12      | 70%       | 1780   | 1991  | 671     | 1050  | 3271  |
| B52               | 11      | 64%       | 1858   | 2055  | 647     | 1264  | 3090  |
| Cw4               | 11      | 64%       | 1814   | 2093  | 845     | 1105  | 4244  |
| B75               | 9       | 52%       | 1589   | 1701  | 396     | 1048  | 2327  |
| B63               | 8       | 47%       | 1317   | 1306  | 329     | 740   | 1713  |
| B77               | 7       | 41%       | 1158   | 1260  | 406     | 795   | 1940  |
| B41               | 5       | 29%       | 1350   | 1300  | 299     | 797   | 1691  |
| A80               | 4       | 23%       | 1327   | 1430  | 490     | 863   | 2204  |
| B55               | 3       | 17%       | 1322   | 1191  | 294     | 784   | 1468  |
| B35               | 3       | 17%       | 1191   | 1055  | 225     | 738   | 1237  |
| B58               | 3       | 17%       | 1132   | 1003  | 225     | 687   | 1192  |
| B53               | 3       | 17%       | 1113   | 950   | 250     | 597   | 1140  |
| B8201             | 2       | 11%       | 26522  | 26521 | 12042   | 14480 | 38563 |
| Cw14              | 2       | 11%       | 5411   | 5411  | 336     | 5075  | 5747  |
| B15               | 1       | 5%        | 15300  | 15300 | -       | 15300 | 15300 |
| Cw16              | 1       | 5%        | 8555   | 8555  | -       | 8555  | 8555  |

| Class II          |         |           |        |      |         |      |       |
|-------------------|---------|-----------|--------|------|---------|------|-------|
| *** Serum 216 *** |         |           |        |      |         |      |       |
| 17 typing Labs    |         |           |        |      |         |      |       |
| Antigen           | No.Labs | Consensus | Median | Mean | Std Dev | Min  | Max   |
| DR13              | 17      | 100%      | 6683   | 7595 | 3570    | 3344 | 18906 |
| DR11              | 17      | 100%      | 6038   | 6782 | 2604    | 2946 | 13093 |
| DR14              | 17      | 100%      | 5992   | 6580 | 2442    | 3142 | 12514 |
| DR17              | 17      | 100%      | 5220   | 5998 | 2523    | 2358 | 12294 |
| DR8               | 17      | 100%      | 4172   | 4866 | 2197    | 2329 | 11111 |
| DR12              | 17      | 100%      | 3579   | 4280 | 1697    | 2285 | 9205  |
| DR18              | 16      | 94%       | 5858   | 6529 | 2624    | 3161 | 13719 |
| DR15              | 14      | 82%       | 2343   | 2774 | 1389    | 1412 | 6777  |
| DR16              | 14      | 82%       | 2259   | 2657 | 1324    | 1113 | 6303  |
| DR52              | 12      | 70%       | 2848   | 3136 | 1006    | 1859 | 5200  |
| DQ4               | 8       | 47%       | 1250   | 1408 | 416     | 1000 | 2336  |
| DQ5               | 7       | 41%       | 1025   | 1636 | 1112    | 857  | 4210  |
| DQA1*05           | 4       | 23%       | 951    | 990  | 311     | 622  | 1437  |
| DQ6               | 3       | 17%       | 1535   | 1911 | 947     | 986  | 3213  |
| DQA1*01           | 2       | 11%       | 3319   | 3319 | 2261    | 1058 | 5580  |
| DR7               | 2       | 11%       | 798    | 798  | 166     | 632  | 964   |
| DR1403            | 1       | 5%        | 3251   | 3251 | -       | 3251 | 3251  |
| DR3               | 1       | 5%        | 2715   | 2715 | -       | 2715 | 2715  |
| DR1404            | 1       | 5%        | 2080   | 2080 | -       | 2080 | 2080  |
| DQ3               | 1       | 5%        | 850    | 850  | -       | 850  | 850   |

Blue = DSA against cell #211 only

Gold = DSA against cell #212 only

Green = DSA against cell #211 and #212

**Table 16a. Individual laboratory results for Serum #213 - class I by One Lambda Single Antigen**

|       | **** Serum 213 **** |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |               |            |
|-------|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|------------|
| Ctr   | A2                  | A23   | A24   | A25   | A32   | A68   | A69   | B13   | B37   | B38   | B44   | B47   | B49   | B51   | B52   | B53   | B57   | B58   | B59   | B63   | B77   | B2705 | Bw4   | B27   | Other         |            |
| 230   | 12856               | 20204 | 19598 | 17509 | 17266 | 19887 | 18891 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 19065 |       |               | One Lambda |
| 615   | 22515               | 14029 | 14404 | 13750 | 16599 | 18383 | 18325 | 9793  | 9805  | 12496 | 8185  | 7119  | 11505 | 11331 | 8337  | 12164 | 20436 | 17954 | 12724 | 13667 | 9923  | 9914  |       | 9914  |               | One Lambda |
| 753   | 48400               | 31004 | 31033 | 30237 | 35736 | 41193 | 37574 | 15909 | 20977 | 28092 | 15740 | 14459 | 25784 | 24929 | 18768 | 27085 | 43474 | 40703 | 27691 | 30616 | 21580 | 21657 | 25132 |       | A2C           | One Lambda |
| 792   | 27731               | 14686 | 15759 | 14010 | 16547 | 22528 | 21515 | 10338 | 9760  | 12919 | 7566  | 6471  | 12398 | 11650 | 8693  | 12324 | 24258 | 21270 | 13233 | 14137 | 10222 |       |       | 9364  |               | One Lambda |
| 793   | 25837               | 17032 | 17250 | 16391 | 19907 | 22922 | 21607 | 9840  | 12750 | 15788 | 9660  | 9285  | 15397 | 14742 | 12615 | 15148 | 23529 | 21672 | 15902 | 16965 | 13677 | 12572 | 10000 |       |               | One Lambda |
| 1426  | 12558               | 17102 | 17143 | 16791 | 18689 | 22224 | 22342 | 9439  | 12765 | 14679 | 9291  | 8733  | 14528 | 14110 | 10457 | 15322 | 18188 | 20669 | 16005 | 16504 | 12199 |       |       | 12076 | Bw4,B*27:05   | One Lambda |
| 2400  | 27132               | 13101 | 13516 | 12455 | 15169 | 22638 | 22247 | 8051  | 9475  | 10517 | 7516  | 6527  | 11413 | 10901 | 8548  | 11496 | 22346 | 20537 | 12188 | 12545 | 9433  |       | 12204 | 9661  |               | One Lambda |
| 3224  | 28998               | 16513 | 16981 | 16194 | 20021 | 24485 | 24356 | 10502 | 10426 | 14384 | 8443  | 7297  | 13656 | 13131 | 9251  | 14307 | 25137 | 21967 | 13972 | 15762 | 11320 | 11027 | 25137 |       |               | One Lambda |
| 3632  | 27806               | 11714 | 13376 | 12818 | 16135 | 20768 | 20572 | 8339  | 8461  | 10118 | 7351  | 6013  | 10153 | 9788  | 7273  | 10356 | 22557 | 18530 | 10978 | 11668 | 8210  | 10685 | 22557 |       | B*15:24       | One Lambda |
| 3753  | 32027               | 15381 | 14841 | 14897 | 19138 | 23988 | 25540 | 7255  | 8754  | 14544 | 6474  | 6027  | 12843 | 12378 | 9294  | 13892 | 26113 | 24062 | 14326 | 15563 | 10980 |       | 9308  | 9308  | B*27:05(9308) | One Lambda |
| 5130  | 8787                | 15366 | 14960 | 12885 | 12508 | 15393 | 16048 | 10391 | 9981  | 13997 | 8481  | 6551  | 13154 | 12909 | 9276  | 13516 | 12565 | 14014 | 13616 | 13959 | 11103 | 10223 |       |       |               | One Lambda |
| 5214  | 55262               | 35588 | 34272 | 32855 | 41758 | 49869 | 49411 | 23160 | 20493 | 32674 | 16723 | 13004 | 30271 | 29541 | 22798 | 32285 | 51241 | 47069 | 33081 | 35524 | 26176 | 21190 | 10000 |       | A203,A2403    | One Lambda |
| 8001  | 29840               | 17971 | 19000 | 16541 | 20410 | 26137 | 25201 | 10766 | 10810 | 16201 | 8138  | 7543  | 15133 | 14798 | 10973 | 15684 | 26663 | 23885 | 15616 | 17439 | 13091 | 10798 | 26663 |       | B*27:05       | One Lambda |
| 8103  | 3222                | 6294  | 6498  | 6175  | 7668  | 10848 | 9649  | 4466  | 4680  | 6435  | 4528  | 3749  | 5533  | 5977  | 4445  | 6071  | 8247  | 8065  | 6740  | 6309  | 4656  | 5147  |       | 5147  | A203,B15,A240 | One Lambda |
| 8111  | 20081               | 8440  | 8391  | 7612  | 10472 | 16746 | 16851 | 5023  | 6099  | 6681  | 4313  | 3800  | 7436  | 6438  | 4729  | 7615  | 13807 | 12874 | 7707  | 8310  | 5563  | 5515  | 7500  |       |               | One Lambda |
| Avg   | 25537               | 16962 | 17135 | 16075 | 19202 | 23867 | 23342 | 10234 | 11088 | 14966 | 8744  | 7613  | 14229 | 13759 | 10390 | 14805 | 24183 | 22377 | 15270 | 16355 | 12010 | 11873 | 16757 | 9245  |               |            |
| Std   |                     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |               |            |
| Dev.S | 13727               | 7576  | 7234  | 7069  | 8793  | 9770  | 9394  | 4627  | 4623  | 7257  | 3530  | 3019  | 6526  | 6370  | 4967  | 6973  | 11328 | 10222 | 7051  | 7812  | 5703  | 5563  | 7679  | 2256  |               |            |
| MFI   |                     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |               |            |
| %CV   | 54%                 | 45%   | 42%   | 44%   | 46%   | 41%   | 40%   | 45%   | 42%   | 48%   | 40%   | 40%   | 46%   | 46%   | 48%   | 47%   | 47%   | 46%   | 46%   | 48%   | 47%   | 47%   | 46%   | 24%   |               |            |

Blue = DSA against cell #211 only

Gold = DSA against cell #212 only

Green = DSA against cell #211 and #212

**Table 16b. Individual laboratory results for Serum #213 - class I by Werfen Single Antigen**

|       | **** Serum 213 **** |       |       |       |       |       |       |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |            |        |
|-------|---------------------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------|--------|
| Ctr   | A2                  | A23   | A24   | A25   | A32   | A68   | A69   | B13  | B37   | B38   | B44   | B47   | B49   | B51   | B52   | B53   | B57   | B58   | B59   | B63   | B77   | B2705 | Bw4   | B27   | Other      |        |
| 3808  | 19394               | 9422  | 10109 | 6810  | 9571  | 17541 | 15811 | 3235 | 6437  | 7865  | 6020  | 4988  | 9050  | 7794  | 6742  | 7921  | 16585 | 14714 | 8240  | 8585  | 8139  | 6435  |       | 7495  | A203,A2403 | Werfen |
| 8083  | 39887               | 18367 | 19294 | 16593 | 17949 | 29822 | 22182 | 6786 | 12453 | 15085 | 12511 | 10239 | 17764 | 15143 | 11908 | 14633 | 29405 | 25567 | 14645 | 16152 | 15410 |       | 29405 | 14215 |            | Werfen |
| Avg   | 29641               | 13895 | 14702 | 11702 | 13760 | 23682 | 18997 | 5011 | 9445  | 11475 | 9266  | 7614  | 13407 | 11469 | 9325  | 11277 | 22995 | 20141 | 11443 | 12369 | 11775 | -     | -     | 10855 |            |        |
| Std   |                     |       |       |       |       |       |       |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |            |        |
| Dev.S | 14491               | 6325  | 6495  | 6918  | 5924  | 8684  | 4505  | 2511 | 4254  | 5105  | 4590  | 3713  | 6162  | 5197  | 3653  | 4746  | 9065  | 7674  | 4529  | 5351  | 5141  | -     | -     | 4752  |            |        |
| MFI   |                     |       |       |       |       |       |       |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |            |        |
| %CV   | 49%                 | 46%   | 44%   | 59%   | 43%   | 37%   | 24%   | 50%  | 45%   | 44%   | 50%   | 49%   | 46%   | 45%   | 39%   | 42%   | 39%   | 38%   | 40%   | 43%   | 44%   | -     | -     | 44%   |            |        |

**Table 17a. Individual laboratory results for Serum #214 - class I by One Lambda Single Antigen**

|           | **** Serum 214 **** |       |      |       |       |       |       |       |       |       |       |       |       |       |       |       |      |      |      |      |      |      |      |      |      |      |
|-----------|---------------------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|
| Ctr       | A2                  | B13   | B38  | B41   | B42   | B47   | B48   | B55   | B60   | B61   | B67   | B7    | B81   | B27   | B2705 | B2708 | B59  | B73  | B57  | B39  | B50  | B58  | B72  | B49  | B62  | A69  |
| 230       | 9723                | 13400 | 4824 | 8534  | 9600  | 9265  | 15713 | 10634 | 17680 | 18256 | 12285 | 17061 | 16911 | 14510 |       |       |      | 4154 | 3407 | 3250 |      |      |      |      |      |      |
| 615       | 8416                | 12225 | 3458 | 5661  | 8437  | 6612  | 11893 | 8312  | 14484 | 15739 | 9542  | 13658 | 13234 | 12447 |       |       | 3090 | 3065 | 2452 | 2504 | 1735 | 1240 | 2043 | 1333 | 1500 | 1083 |
| 753       | 14372               | 20911 | 6332 | 11004 | 16113 | 12891 | 23271 | 15888 | 28330 | 30125 | 18141 | 27349 | 26432 | 21201 |       |       | 6043 | 6495 | 4429 | 4774 | 3293 | 2737 | 4215 | 2489 | 2740 | 2109 |
| 792       | 7701                | 12426 | 2243 | 4490  | 7147  | 5868  | 11144 | 6476  | 14274 | 15547 | 7873  | 12826 | 11979 | 12114 |       |       | 2282 | 2450 | 2124 |      |      |      |      |      |      |      |
| 793       | 8180                | 11934 | 3477 | 6114  | 8944  | 7745  | 13043 | 8891  | 15813 | 16160 | 10046 | 14691 | 14546 | 12032 |       |       | 3387 | 3618 | 2625 | 2654 | 1925 | 1563 | 2311 | 1570 | 1569 | 1092 |
| 1426      | 9308                | 13104 | 4251 | 6870  | 10186 | 8177  | 14025 | 9652  | 16908 | 18274 | 11260 | 16110 | 15883 | 13038 |       |       | 3862 | 4029 | 2900 | 3194 | 2446 | 1894 | 2656 | 1738 | 2101 | 1654 |
| 2400      | 8217                | 11610 | 3002 | 5215  | 7748  | 6851  | 11967 | 7722  | 14709 | 14917 | 8450  | 12440 | 12513 | 11124 |       |       | 2858 | 2906 | 2310 | 2148 |      |      |      |      |      |      |
| 3224      | 9162                | 14045 | 3487 | 5657  | 8822  | 7013  | 12563 | 8891  | 16059 | 17314 | 10021 | 14892 | 15188 | 13577 |       |       | 3127 | 3315 | 2476 | 2441 | 1647 | 1367 | 2110 | 1260 | 1443 | 1106 |
| 3632      | 7159                | 12624 | 2044 | 4151  | 7234  | 5268  | 8211  | 6761  | 12571 | 14104 | 8245  | 12446 | 11275 |       | 9712  | 11634 | 2155 | 2295 |      |      |      |      |      |      |      |      |
| 3753      | 6162                | 12137 | 2734 | 4845  | 7793  | 6449  | 11765 | 7149  | 15205 | 15951 | 8581  | 13485 | 13413 | 10636 | 9308  |       | 2609 | 2418 | 1920 | 1733 | 1044 | 1108 | 1282 |      |      |      |
| 5130      | 8628                | 11973 | 2883 | 5966  | 8924  | 6520  | 10606 | 8342  | 14122 | 16301 | 9962  | 15121 | 13061 | 13757 |       |       | 2421 | 3620 | 3479 | 2475 | 1758 | 1695 | 2277 |      | 1568 |      |
| 5214      | 10177               | 21819 | 5521 | 9651  | 14532 | 12624 | 24375 | 14067 | 29821 | 33066 | 16997 | 26237 | 26369 | 20000 | 17507 | 24631 | 4828 | 5103 | 4155 | 3740 |      |      | 3142 |      |      |      |
| 8001      | 9142                | 14835 | 3441 | 6201  | 8783  | 8080  | 14440 | 8552  | 17460 | 18105 | 10063 | 15751 | 15773 | 15093 |       |       | 3290 | 3657 | 3177 | 2429 | 1586 | 1775 | 1925 | 1305 | 1334 | 1215 |
| 8103      | 5663                | 8423  | 1925 | 3508  | 4964  | 4821  | 7930  | 5392  | 9630  | 10865 | 6187  | 8912  | 8987  | 8466  | 5722  | 8466  | 1994 | 2101 | 1794 | 1673 | 1269 | 1094 | 1378 | 1030 | 1116 | 883  |
| 8111      | 3243                | 5743  | 1106 | 2147  | 2879  | 3056  | 5024  | 2655  | 7450  | 7314  | 3595  | 5369  | 5743  | 4887  |       |       | 1205 | 1079 | 1000 |      |      | 500  |      |      |      |      |
| Avg       | 8350                | 13147 | 3382 | 6001  | 8807  | 7416  | 13065 | 8626  | 16301 | 17469 | 10083 | 15090 | 14754 | 13063 | 10562 | 14910 | 3082 | 3354 | 2732 | 2751 | 1856 | 1497 | 2334 | 1532 | 1671 | 1306 |
| Std Dev.S | 2446                | 4002  | 1398 | 2307  | 3231  | 2636  | 5146  | 3218  | 5880  | 6446  | 3681  | 5584  | 5508  | 4126  | 4965  | 8566  | 1224 | 1312 | 936  | 875  | 667  | 597  | 858  | 479  | 514  | 426  |
| MFI %CV   | 29%                 | 30%   | 41%  | 38%   | 37%   | 36%   | 39%   | 37%   | 36%   | 37%   | 37%   | 37%   | 37%   | 32%   | 47%   | 57%   | 40%  | 39%  | 34%  | 32%  | 36%  | 40%  | 37%  | 31%  | 31%  | 33%  |

**Table 17b. Individual laboratory results for Serum #214 - class I by Werfen Single Antigen**

|           | **** Serum 214 **** |       |      |      |      |       |      |      |       |       |      |       |       |       |       |       |      |      |      |      |      |     |      |      |     |     |
|-----------|---------------------|-------|------|------|------|-------|------|------|-------|-------|------|-------|-------|-------|-------|-------|------|------|------|------|------|-----|------|------|-----|-----|
| Ctr       | A2                  | B13   | B38  | B41  | B42  | B47   | B48  | B55  | B60   | B61   | B67  | B7    | B81   | B27   | B2705 | B2708 | B59  | B73  | B57  | B39  | B50  | B58 | B72  | B49  | B62 | A69 |
| 3808      | 4123                | 6848  | 2099 | 3580 | 3187 | 6297  | 2227 | 2688 | 10000 | 9126  | 4749 | 7813  | 8220  | 6685  | 6685  | 9381  | 2172 | 1201 | 974  | 1214 | 1168 |     |      | 1721 | 989 | 819 |
| 8083      | 7238                | 10922 | 3882 | 5834 | 5790 | 11131 | 5357 | 4343 | 17879 | 15375 | 6440 | 14633 | 13404 | 16998 |       |       | 3114 |      |      |      |      |     |      | 3180 |     |     |
| Avg       | 4438                | 7012  | 1970 | 3340 | 4123 | 5051  | 5536 | 3846 | 9591  | 9514  | 4962 | 8200  | 8088  | 7746  | 5587  | 8265  | 1827 | 1508 | 1239 | 1303 | 992  | 738 | 1142 | 1324 | 858 | 687 |
| Std Dev.S | 2882                | 4374  | 1330 | 2122 | 2758 | 3640  | 4172 | 2690 | 6113  | 5836  | 3111 | 5348  | 5018  | 5727  | 3794  | 5335  | 1115 | 1127 | 926  | 1015 | 697  | 575 | 976  | 1113 | 632 | 495 |
| MFI       |                     |       |      |      |      |       |      |      |       |       |      |       |       |       |       |       |      |      |      |      |      |     |      |      |     |     |
| %CV       | 65%                 | 62%   | 68%  | 64%  | 67%  | 72%   | 75%  | 70%  | 64%   | 61%   | 63%  | 65%   | 62%   | 74%   | 68%   | 65%   | 61%  | 75%  | 75%  | 78%  | 70%  | 78% | 85%  | 84%  | 74% | 72% |

**Table 17a. Individual laboratory results for Serum #214 - class I by One Lambda Single Antigen, cont.**

|                  | **** Serum 214 **** |      |       |                        |            |
|------------------|---------------------|------|-------|------------------------|------------|
| Ctr              | B37                 | B56  | A6602 | Other                  |            |
| 230              |                     |      |       |                        | One Lambda |
| 615              | 1154                | 1460 | 915   | B63,B46,B71,Cw1 >      | One Lambda |
| 753              |                     | 2428 |       |                        | One Lambda |
| 792              |                     |      |       |                        | One Lambda |
| 793              | 1522                | 1542 | 1143  |                        | One Lambda |
| 1426             | 1811                | 2163 |       | A66, A*66:02           | One Lambda |
| 2400             |                     |      |       |                        | One Lambda |
| 3224             | 1016                | 1183 |       |                        | One Lambda |
| 3632             |                     |      |       |                        | One Lambda |
| 3753             |                     |      |       |                        | One Lambda |
| 5130             |                     |      |       |                        | One Lambda |
| 5214             |                     |      |       | B3901,A203             | One Lambda |
| 8001             | 1140                |      | 1048  |                        | One Lambda |
| 8103             | 1043                | 1279 |       | B3901,B8101,A203,B40 > | One Lambda |
| 8111             |                     |      |       |                        | One Lambda |
| <b>Avg</b>       | 1281                | -    | -     |                        |            |
| <b>Std Dev.S</b> | 317                 | -    | -     |                        |            |
| <b>MFI %CV</b>   | 25%                 | -    | -     |                        |            |

**Table 17b. Individual laboratory results for Serum #214 - class I by Werfen Single Antigen, cont.**

|                  | **** Serum 214 **** |     |       |                      |        |
|------------------|---------------------|-----|-------|----------------------|--------|
| Ctr              | B37                 | B56 | A6602 | Other                |        |
| 3808             | 1439                |     | 876   | B3901,B703,B8101,A66 | Werfen |
| 8083             | 3283                |     |       |                      | Werfen |
| <b>Avg</b>       | 1227                | -   | -     |                      |        |
| <b>Std Dev.S</b> | 1153                | -   | -     |                      |        |
| <b>MFI %CV</b>   | 94%                 | -   | -     |                      |        |

**Table 18a. Individual laboratory results for Serum #215 - class I by One Lambda Single Antigen**

|           | **** Serum 215 **** |       |       |       |       |       |       |       |       |       |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|-----------|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Ctr       | A1                  | A11   | A24   | A25   | A26   | A29   | A3    | A30   | A31   | A32   | A33  | A34  | A36   | A43   | A66   | A74   | A80   | B13   | B37   | B41   | B44   | B45   | B47   | B49   | B50   | B54   | B55   | B56   |
| 230       | 13604               | 14527 | 9200  | 11049 | 10650 | 11168 | 14930 | 8936  | 7628  | 10245 | 4773 | 5115 | 12825 | 13690 | 7798  | 8570  | 13353 | 6767  | 5400  | 7648  | 14247 | 14839 | 7927  | 6817  | 6609  | 11225 | 11582 | 10322 |
| 615       | 19099               | 21990 | 7071  | 8493  | 8763  | 7240  | 13845 | 8140  | 5146  | 7724  | 3430 | 3954 | 10224 | 13007 | 9393  | 5922  | 10681 | 5783  | 3548  | 5854  | 13236 | 13268 | 5255  | 4980  | 3834  | 12257 | 14307 | 13077 |
| 753       | 41416               | 44302 | 14410 | 18253 | 18124 | 13911 | 28049 | 13285 | 10087 | 15078 | 5647 | 6612 | 22035 | 28158 | 11951 | 11376 | 23209 | 11229 | 7915  | 13455 | 28284 | 29600 | 11844 | 11001 | 8560  | 22395 | 26453 | 22923 |
| 792       | 16818               | 20518 | 5280  | 7046  | 6048  | 6509  | 12899 | 6249  | 4055  | 5439  | 2330 | 2813 | 8569  | 10646 | 6183  | 4619  | 9272  | 4319  | 2559  | 4678  | 13107 | 10682 | 4232  | 4285  | 3086  | 9943  | 11636 | 10307 |
| 793       | 22597               | 24385 | 8954  | 11865 | 12061 | 9643  | 17343 | 9248  | 7596  | 10604 | 4757 | 4921 | 15178 | 17027 | 8035  | 8187  | 14635 | 8152  | 5714  | 9104  | 18202 | 18040 | 9128  | 8538  | 6164  | 15722 | 16329 | 15567 |
| 1426      | 18627               | 16798 | 8938  | 11509 | 12800 | 8983  | 17509 | 8701  | 7200  | 10479 | 4083 | 4314 | 13507 | 17979 | 8497  | 7280  | 14369 | 7577  | 5444  | 9295  | 17175 | 18525 | 7564  | 7691  | 5724  | 15567 | 16640 | 15901 |
| 2400      | 24533               | 25168 | 9135  | 11946 | 13242 | 10881 | 16968 | 9428  | 8000  | 11497 | 5890 | 5130 | 14808 | 17909 | 8606  | 9370  | 14538 | 8069  | 6338  | 9446  | 17639 | 18063 | 8105  | 8234  | 6549  | 15373 | 17028 | 16479 |
| 3224      | 24018               | 27146 | 8094  | 9897  | 11750 | 8744  | 16823 | 9533  | 6065  | 9414  | 4578 | 4722 | 13206 | 16840 | 12031 | 7052  | 12125 | 6531  | 4210  | 7447  | 16607 | 16018 | 6285  | 6224  | 4830  | 13747 | 16002 | 14718 |
| 3632      | 22077               | 27185 | 6026  | 8691  | 9479  | 7782  | 13654 | 8132  | 5529  | 7426  | 3423 | 4151 | 10855 | 15256 | 9663  | 6295  | 10192 | 4832  | 3092  | 5927  | 14610 | 14168 | 4847  | 4915  | 3948  | 16617 | 17655 | 17264 |
| 3753      | 26752               | 28473 | 6775  | 10743 | 11263 | 7516  | 16589 | 7376  | 5466  | 8270  | 2763 | 3624 | 13166 | 17989 | 7334  | 6183  | 13515 | 6508  | 4415  | 8426  | 18181 | 19164 | 6953  | 6651  | 5512  | 13209 | 15904 | 13860 |
| 5130      | 9428                | 10711 | 4952  | 7273  | 6070  | 6711  | 9989  | 7002  | 4124  | 5797  | 2059 | 2969 | 7848  | 8993  | 7072  | 4272  | 8396  | 4921  | 3365  | 6400  | 8736  | 9943  | 4844  | 4173  | 3870  | 6612  | 7452  | 6205  |
| 5214      | 49029               | 50000 | 17153 | 23298 | 22601 | 11315 | 35482 | 11160 | 10543 | 19052 | 4781 | 5437 | 28507 | 34307 | 35000 | 12608 | 29166 | 14100 | 10998 | 17250 | 37081 | 37520 | 13615 | 13981 | 11200 | 23949 | 28911 | 24371 |
| 8001      | 26131               | 29005 | 9308  | 11812 | 12535 | 9413  | 18720 | 11155 | 6604  | 10628 | 3583 | 4764 | 14702 | 18262 | 13614 | 7595  | 15752 | 8113  | 5596  | 9090  | 19630 | 19054 | 7890  | 7642  | 5981  | 12509 | 15080 | 12559 |
| 8103      | 2451                | 3085  | 3255  | 3863  | 4460  | 3277  | 6080  | 3998  | 2986  | 4023  | 2050 | 1971 | 5153  | 4690  | 4312  | 3187  | 4984  | 2229  | 1980  | 2705  | 5137  | 5998  | 2104  | 2339  | 1662  | 4960  | 4931  | 4796  |
| 8111      | 13427               | 16740 | 4018  | 5626  | 6482  | 5424  | 10195 | 4845  | 4344  | 5503  | 2621 | 2393 | 8541  | 10055 | 3949  | 4107  | 7136  | 3505  | 2492  | 4272  | 8933  | 10141 | 3733  | 3927  | 2809  | 8696  | 8787  | 8562  |
| Avg       | 22000               | 24002 | 8171  | 10758 | 11089 | 8568  | 16605 | 8479  | 6358  | 9412  | 3785 | 4193 | 13275 | 16321 | 10229 | 7108  | 13422 | 6842  | 4871  | 8066  | 16720 | 17002 | 6955  | 6760  | 5356  | 13519 | 15246 | 13794 |
| Std Dev.S | 11616               | 11890 | 3703  | 4839  | 4759  | 2664  | 7180  | 2423  | 2184  | 3922  | 1263 | 1260 | 5807  | 7347  | 7357  | 2655  | 6127  | 2990  | 2360  | 3650  | 7822  | 7922  | 3048  | 2981  | 2401  | 5173  | 6334  | 5445  |
| MFI %CV   | 53%                 | 50%   | 45%   | 45%   | 43%   | 31%   | 43%   | 29%   | 34%   | 42%   | 33%  | 30%  | 44%   | 45%   | 72%   | 37%   | 46%   | 44%   | 48%   | 45%   | 47%   | 47%   | 44%   | 44%   | 45%   | 38%   | 42%   | 39%   |

**Table 18b. Individual laboratory results for Serum #215 - class I by Werfen Single Antigen**

|           | **** Serum 215 **** |       |       |       |       |      |       |      |      |      |      |      |       |       |       |      |       |      |      |       |       |       |       |       |       |       |       |       |
|-----------|---------------------|-------|-------|-------|-------|------|-------|------|------|------|------|------|-------|-------|-------|------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Ctr       | A1                  | A11   | A24   | A25   | A26   | A29  | A3    | A30  | A31  | A32  | A33  | A34  | A36   | A43   | A66   | A74  | A80   | B13  | B37  | B41   | B44   | B45   | B47   | B49   | B50   | B54   | B55   | B56   |
| 3808      | 18643               | 19217 | 4787  | 6755  | 7483  | 4575 | 11587 | 2629 | 2008 | 3433 | 1076 | 2384 | 12392 | 10664 | 8200  | 3342 | 9423  | 4326 | 1531 | 5806  | 14547 | 11335 | 6567  | 6662  | 6280  | 6738  | 7344  | 5787  |
| 8083      | 37127               | 36594 | 10134 | 15155 | 15364 | 7860 | 18019 | 5024 | 3976 | 6797 | 3060 | 3869 | 20593 | 20060 | 14598 | 5737 | 14564 | 8113 | 3343 | 10227 | 25092 | 19897 | 10946 | 11758 | 10860 | 17509 | 15445 | 14378 |
| Avg       | 15038               | 15933 | 4867  | 6714  | 7091  | 4624 | 9952  | 3914 | 3122 | 4727 | 1979 | 2296 | 9395  | 9877  | 6949  | 3734 | 7951  | 4001 | 2368 | 4961  | 11179 | 10328 | 4765  | 4918  | 4195  | 8085  | 8298  | 7538  |
| Std Dev.S | 12572               | 12508 | 3342  | 4924  | 4960  | 2992 | 6242  | 2650 | 2024 | 2944 | 1297 | 1446 | 6699  | 6791  | 4747  | 2276 | 5030  | 2754 | 1510 | 3415  | 8301  | 6688  | 3652  | 3847  | 3635  | 5833  | 5546  | 5144  |
| MFI       |                     |       |       |       |       |      |       |      |      |      |      |      |       |       |       |      |       |      |      |       |       |       |       |       |       |       |       |       |
| %CV       | 84%                 | 79%   | 69%   | 73%   | 70%   | 65%  | 63%   | 68%  | 65%  | 62%  | 66%  | 63%  | 71%   | 69%   | 68%   | 61%  | 63%   | 69%  | 64%  | 69%   | 74%   | 65%   | 77%   | 78%   | 87%   | 72%   | 67%   | 68%   |

**Table 18a. Individual laboratory results for Serum #215 - class I by One Lambda Single Antigen, cont.**

|       | **** Serum 215 **** |       |       |      |       |       |       |      |       |       |      |      |      |      |      |      |      |      |      |      |      |      |       |      |                    |            |
|-------|---------------------|-------|-------|------|-------|-------|-------|------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|--------------------|------------|
| Ctr   | B57                 | B58   | B60   | B61  | B63   | B76   | B82   | B27  | B2705 | B2708 | B42  | B51  | B38  | B59  | B53  | B67  | B7   | B8   | B52  | B77  | A68  | B81  | Bw4   | A69  | Other              |            |
| 230   | 11984               | 15390 | 7548  | 5404 | 15033 | 10521 | 11515 | 5537 |       |       | 3046 |      | 7081 |      |      |      |      |      |      |      |      |      |       |      | B4005              | One Lambda |
| 615   | 23366               | 20375 | 4447  | 3973 | 20763 | 7267  | 10201 | 7112 |       |       | 2615 | 1648 | 1287 | 1606 | 1581 | 2468 | 2197 | 1557 | 1077 | 1026 | 1015 | 1640 |       | 693  | Cw15,Cw18          | One Lambda |
| 753   | 47703               | 44737 | 10002 | 8599 | 44042 | 16567 | 20992 | 7229 |       |       | 3388 | 2957 | 2480 | 3002 | 2947 | 2116 | 2298 | 2851 | 2230 | 2006 |      |      | 17017 |      |                    | One Lambda |
| 792   | 24811               | 21708 | 3531  | 3348 | 19741 | 5601  | 7871  | 4206 |       |       |      |      |      |      |      |      |      |      |      |      |      |      |       |      |                    | One Lambda |
| 793   | 25718               | 24516 | 7064  | 5991 | 24433 | 10493 | 14783 | 6126 |       |       | 3142 | 2694 | 1856 | 2653 | 2499 | 2354 | 2432 | 1744 | 2311 | 1799 | 1269 | 1511 | 5000  | 1145 | Cw15               | One Lambda |
| 1426  | 13301               | 17961 | 6674  | 5530 | 18542 | 9805  | 13932 | 6630 |       |       | 3751 | 2723 | 2476 | 2938 | 2653 | 2807 | 2535 | 2481 | 2002 | 2047 | 1629 | 2134 |       | 1186 | Cw15,A*68:02       | One Lambda |
| 2400  | 28112               | 26324 | 7176  | 6243 | 26394 | 11612 | 14228 | 6272 |       |       | 3456 | 2869 | 2317 | 2749 | 2688 | 2683 | 2583 | 2574 | 2212 |      |      |      |       |      |                    | One Lambda |
| 3224  | 28149               | 25560 | 5370  | 4913 | 25425 | 8454  | 12717 | 7642 |       |       | 2678 | 1936 | 1446 | 1811 | 1865 | 1981 | 2027 | 1626 | 1406 | 1161 | 925  | 1406 | 28149 | 714  |                    | One Lambda |
| 3632  | 31828               | 27484 | 4073  | 3979 | 28033 | 7697  | 12024 | 8928 |       | 2859  | 2667 |      |      |      |      | 2593 | 2071 | 2402 |      |      |      |      |       |      | B4005              | One Lambda |
| 3753  | 32624               | 29650 | 6058  | 5246 | 30011 | 10290 | 12586 | 4184 |       |       | 2178 | 1529 | 1605 | 1695 | 1850 | 1431 | 1222 | 1815 | 1261 | 1288 | 1145 |      | 6313  |      |                    | One Lambda |
| 5130  | 7205                | 10755 | 4608  | 4106 | 10632 | 6424  | 6707  |      | 3197  |       |      |      |      |      |      |      |      |      |      |      |      |      |       |      |                    | One Lambda |
| 5214  | 55488               | 49616 | 12394 | 9576 | 49243 | 21459 | 24602 | 6500 | 10982 | 3122  | 3948 | 3521 | 3035 | 3768 | 3453 |      |      | 3312 | 3551 |      |      |      | 10000 |      | A1101,A1102,A6601> | One Lambda |
| 8001  | 29542               | 27125 | 6783  | 6031 | 26858 | 10104 | 12486 | 5574 |       |       | 1923 | 1792 | 1415 | 1721 | 1735 |      |      | 1720 | 1527 | 1278 | 1276 |      | 29542 |      |                    | One Lambda |
| 8103  | 1661                | 2780  | 1878  | 1525 | 2656  | 3576  | 4903  | 3036 | 3036  | 1466  | 1237 | 1080 | 807  | 901  | 1040 | 1171 | 976  |      |      |      |      | 943  |       |      | A1101,A1102,A6601> | One Lambda |
| 8111  | 19361               | 17539 | 3731  | 2770 | 17038 | 5056  | 8382  | 3764 |       |       | 1787 | 1244 |      |      |      | 1580 | 1456 |      |      |      |      | 1169 |       |      |                    |            |
| Avg   | 25390               | 24101 | 6089  | 5149 | 23923 | 9662  | 12529 | 5910 | 5738  | 2482  | 2755 | 2181 | 2346 | 2284 | 2231 | 2118 | 1980 | 2208 | 1953 | 1515 | 1210 | 1467 | 16004 | 935  |                    |            |
| Std   |                     |       |       |      |       |       |       |      |       |       |      |      |      |      |      |      |      |      |      |      |      |      |       |      |                    |            |
| Dev.S | 14118               | 11785 | 2665  | 2076 | 11738 | 4543  | 5106  | 1649 | 4542  | 890   | 808  | 802  | 1700 | 867  | 733  | 565  | 567  | 601  | 755  | 424  | 248  | 411  | 10797 | 267  |                    |            |
| MFI   |                     |       |       |      |       |       |       |      |       |       |      |      |      |      |      |      |      |      |      |      |      |      |       |      |                    |            |
| %CV   | 56%                 | 49%   | 44%   | 40%  | 49%   | 47%   | 41%   | 28%  | 79%   | 36%   | 29%  | 37%  | 72%  | 38%  | 33%  | 27%  | 29%  | 27%  | 39%  | 28%  | 20%  | 28%  | 67%   | 29%  |                    |            |

**Table 18b. Individual laboratory results for Serum #215 - class I by Werfen Single Antigen, cont.**

|       | **** Serum 215 **** |       |       |      |       |       |       |       |       |       |      |      |      |     |      |      |     |      |      |     |      |     |      |      |                    |        |
|-------|---------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|------|------|------|-----|------|------|-----|------|------|-----|------|-----|------|------|--------------------|--------|
| Ctr   | B57                 | B58   | B60   | B61  | B63   | B76   | B82   | B27   | B2705 | B2708 | B42  | B51  | B38  | B59 | B53  | B67  | B7  | B8   | B52  | B77 | A68  | B81 | Bw4  | A69  | Other              |        |
| 3808  | 19512               | 19159 | 5979  | 5492 | 19347 | 7794  | 9664  | 6066  | 3009  | 1114  |      | 776  |      | 826 |      |      |     |      |      | 981 |      |     |      |      | A1101,A1102,A6601> | Werfen |
| 8083  | 45592               | 39748 | 10597 | 9646 | 40270 | 14784 | 17845 | 13682 |       |       |      |      |      |     |      |      |     |      |      |     |      |     |      |      |                    | Werfen |
| Avg   | 17948               | 16445 | 4420  | 3808 | 16425 | 6488  | 8347  | 4872  | 3265  | 1191  | 1318 | 1014 | 1213 | 976 | 1001 | 1087 | 996 | 936  | 903  | 730 | 486  | 798 | 8934 | 401  |                    |        |
| Std   |                     |       |       |      |       |       |       |       |       |       |      |      |      |     |      |      |     |      |      |     |      |     |      |      |                    |        |
| Dev.S | 15417               | 13473 | 3486  | 3228 | 13632 | 4778  | 5795  | 4450  | 2152  | 902   | 1035 | 714  | 1025 | 822 | 929  | 832  | 767 | 1142 | 985  | 660 | 639  | 590 | 8162 | 481  |                    |        |
| MFI   |                     |       |       |      |       |       |       |       |       |       |      |      |      |     |      |      |     |      |      |     |      |     |      |      |                    |        |
| %CV   | 86%                 | 82%   | 79%   | 85%  | 83%   | 74%   | 69%   | 91%   | 66%   | 76%   | 79%  | 70%  | 85%  | 84% | 93%  | 77%  | 77% | 122% | 109% | 90% | 132% | 74% | 91%  | 120% |                    |        |

**Table 19a. Individual laboratory results for Serum #216 - class I by One Lambda Single Antigen**

|           | **** Serum 216 **** |       |       |       |      |      |       |       |       |       |       |       |      |      |      |       |      |       |       |      |      |      |      |      |      |
|-----------|---------------------|-------|-------|-------|------|------|-------|-------|-------|-------|-------|-------|------|------|------|-------|------|-------|-------|------|------|------|------|------|------|
| Ctr       | A1                  | A23   | B44   | B45   | B50  | B72  | B76   | B82   | Cw15  | Cw18  | Cw2   | Cw5   | B46  | B49  | B62  | Cw6   | B56  | Cw17  | A24   | B71  | B52  | Cw4  | B75  | B63  | B77  |
| 230       | 22647               | 16829 | 23535 | 21661 | 6010 | 6629 | 22402 | 22868 | 8942  | 8143  | 11573 | 7229  | 5555 | 4464 | 4484 | 7187  | 3929 | 10346 | 15966 | 3271 |      |      |      |      |      |
| 615       | 13696               | 8996  | 16293 | 18884 | 2816 | 2898 | 18657 | 15585 | 6727  | 6765  | 6350  | 3864  | 2536 | 1963 | 2550 | 4225  | 1868 | 4588  | 8340  | 1457 | 1309 | 1105 | 1373 | 914  | 927  |
| 753       | 29696               | 19339 | 34065 | 41273 | 6199 | 6404 | 40409 | 32802 | 18010 | 17464 | 15809 | 9684  | 5093 | 4476 | 5122 | 10323 | 3785 | 11124 | 17240 | 2895 | 2748 | 2470 | 2251 |      |      |
| 792       | 15751               | 9880  | 20060 | 22889 | 3124 | 3377 | 22171 | 18589 | 6695  | 7029  | 6726  | 4081  | 2938 | 2221 | 2610 | 4408  | 2013 | 4533  | 8913  |      |      |      |      |      |      |
| 793       | 17811               | 12308 | 20170 | 23071 | 4545 | 5202 | 22680 | 20178 | 9174  | 8976  | 10129 | 6502  | 3822 | 3571 | 3968 | 6174  | 3100 | 7211  | 11775 | 2562 | 2815 | 1767 | 1991 | 1599 | 1737 |
| 1426      | 17604               | 11088 | 21005 | 23966 | 3484 | 3813 | 22766 | 19392 | 9214  | 9892  | 8579  | 5382  | 3136 | 2675 | 2952 | 6037  | 2288 | 7372  | 10483 | 1777 | 1858 | 1804 | 1589 | 1364 | 1352 |
| 2400      | 17241               | 11685 | 19936 | 24898 | 3615 | 3991 | 23313 | 20061 | 7795  | 8027  | 7876  | 5094  | 3637 | 2757 | 2993 | 5416  | 2319 | 6450  | 10714 |      |      |      |      |      |      |
| 3224      | 16617               | 10392 | 20338 | 23697 | 2874 | 3242 | 22666 | 18913 | 8089  | 7862  | 7558  | 4315  | 2367 | 2069 | 2521 | 4367  | 1858 |       |       | 1517 | 1305 | 1191 | 1048 | 740  | 913  |
| 3632      | 14105               | 9243  | 21195 | 23485 | 2031 | 2351 | 22902 | 19157 | 5302  | 5257  | 5149  | 3578  | 2045 |      |      | 3687  |      | 3849  | 8814  |      |      |      |      |      |      |
| 3753      | 18567               | 11183 | 24099 | 28215 | 3400 | 3702 | 28438 | 22829 | 8479  | 9146  | 8446  | 5011  | 3186 | 2498 | 2813 | 5227  | 2122 | 7170  | 10243 | 1588 | 1577 | 2001 | 1437 | 1198 |      |
| 5130      | 16627               | 13021 | 17484 | 15399 | 5212 | 5833 | 14825 | 15747 | 10313 | 9668  | 9614  | 6272  | 3693 | 3892 | 4820 | 5760  | 3400 |       |       | 2525 | 2145 |      | 1718 | 1713 |      |
| 5214      | 35570               | 22814 | 41797 | 47857 | 7726 | 8837 | 46309 | 38563 | 20543 | 20059 | 19924 | 10777 | 5275 | 5804 | 6373 | 12288 | 4526 | 15725 |       |      | 3090 | 3016 |      |      |      |
| 8001      | 18848               | 12043 | 21884 | 24775 | 4098 | 4145 | 24090 | 19723 | 8546  | 9320  | 8957  | 5208  | 3386 | 2992 | 3238 | 5681  | 2382 | 7404  | 11109 | 1782 | 1814 | 1740 | 1581 | 1270 | 1158 |
| 8103      | 12872               | 9461  | 15269 | 16044 | 3507 | 3536 | 15300 | 14480 | 6294  | 6197  | 7309  | 5612  | 3720 | 2569 | 3254 | 4948  | 2953 | 6496  | 9042  | 2269 | 2683 | 1814 | 2327 | 1655 | 1940 |
| 8111      | 10093               | 6859  | 13906 | 18552 | 1968 | 2155 | 17092 | 14681 | 3962  | 3712  | 4060  | 2641  | 2250 | 1430 | 1908 | 3000  | 1382 | 3163  |       | 1207 |      |      |      |      |      |
| Avg       | 18516               | 12343 | 22069 | 24978 | 4041 | 4408 | 24268 | 20905 | 9206  | 9168  | 9204  | 5683  | 3509 | 3099 | 3543 | 5915  | 2709 | 7341  | 11149 | 2077 | 2134 | 1879 | 1702 | 1307 | 1338 |
| Std Dev.S | 6526                | 4240  | 7190  | 8756  | 1625 | 1833 | 8595  | 6618  | 4434  | 4281  | 4066  | 2203  | 1088 | 1202 | 1245 | 2456  | 924  | 3419  | 2914  | 666  | 659  | 589  | 420  | 351  | 425  |
| MFI %CV   | 35%                 | 34%   | 33%   | 35%   | 40%  | 42%  | 35%   | 32%   | 48%   | 47%   | 44%   | 39%   | 31%  | 39%  | 35%  | 42%   | 34%  | 47%   | 26%   | 32%  | 31%  | 31%  | 25%  | 27%  | 32%  |

**Table 19b. Individual laboratory results for Serum #216 - class I by Werfen Single Antigen**

|       | **** Serum 216 **** |       |       |       |      |      |       |       |      |      |      |      |      |      |      |      |      |      |       |      |      |      |      |     |     |
|-------|---------------------|-------|-------|-------|------|------|-------|-------|------|------|------|------|------|------|------|------|------|------|-------|------|------|------|------|-----|-----|
| Ctr   | A1                  | A23   | B44   | B45   | B50  | B72  | B76   | B82   | Cw15 | Cw18 | Cw2  | Cw5  | B46  | B49  | B62  | Cw6  | B56  | Cw17 | A24   | B71  | B52  | Cw4  | B75  | B63 | B77 |
| 3808  | 9731                | 8212  | 18934 | 17675 | 2169 | 2304 | 19081 | 18985 | 1851 | 1855 | 2840 | 2254 | 835  | 1967 | 1781 | 1115 | 781  | 2351 | 7807  | 1050 | 1264 | 1874 |      |     | 795 |
| 8083  | 18842               | 16047 | 34089 | 31666 | 4581 | 4980 | 37359 | 33823 | 4328 | 3721 | 4941 | 4358 |      | 4073 | 3330 |      |      | 5027 | 14818 |      |      | 4244 |      |     |     |
| Avg   | 10940               | 8166  | 15922 | 16810 | 2556 | 2745 | 17385 | 15642 | 4296 | 4133 | 4631 | 3250 | 1900 | 2049 | 2152 | 2906 | 1458 | 3971 | 7622  | 1212 | 1348 | 1733 | 1112 | 828 | 900 |
| Std   |                     |       |       |       |      |      |       |       |      |      |      |      |      |      |      |      |      |      |       |      |      |      |      |     |     |
| Dev.S | 6645                | 5245  | 10887 | 10322 | 1587 | 1698 | 11784 | 10784 | 2962 | 2951 | 2985 | 2072 | 1512 | 1340 | 1303 | 2240 | 1155 | 2523 | 5413  | 855  | 1084 | 1460 | 1086 | 780 | 761 |
| MFI   |                     |       |       |       |      |      |       |       |      |      |      |      |      |      |      |      |      |      |       |      |      |      |      |     |     |
| %CV   | 61%                 | 64%   | 68%   | 61%   | 62%  | 62%  | 68%   | 69%   | 69%  | 71%  | 64%  | 64%  | 80%  | 65%  | 61%  | 77%  | 79%  | 64%  | 71%   | 71%  | 80%  | 84%  | 98%  | 94% | 85% |

**Table 19a. Individual laboratory results for Serum #216 - class I by One Lambda Single Antigen, cont.**

| **** Serum 216 **** |      |      |                              |            |
|---------------------|------|------|------------------------------|------------|
| Ctr                 | B41  | A80  | Other                        |            |
| 230                 |      |      | B48,Cw16                     | One Lambda |
| 615                 | 797  | 863  | A*24:02,B*57:01,B55,B58,B35> | One Lambda |
| 753                 |      |      | A*24:02                      | One Lambda |
| 792                 |      |      |                              | One Lambda |
| 793                 | 1466 | 1228 | B55,B58,B35,B53              | One Lambda |
| 1426                |      | 1426 | A*24:02                      | One Lambda |
| 2400                |      |      |                              | One Lambda |
| 3224                |      |      | Cw14,A*24:02(9342)           | One Lambda |
| 3632                |      |      | C*16:02                      | One Lambda |
| 3753                |      |      |                              | One Lambda |
| 5130                | 1691 |      | Cw14,A*24:02(12487)          | One Lambda |
| 5214                |      |      | B8201                        | One Lambda |
| 8001                | 1197 |      | A*24:02                      | One Lambda |
| 8103                | 1350 | 2204 | B8201,B55,B58,B35 >          | One Lambda |
| 8111                |      |      |                              |            |
| <b>Avg</b>          | 1300 | 1430 |                              |            |
| <b>Std Dev.S</b>    | 334  | 566  |                              |            |
| <b>MFI %CV</b>      | 26%  | 40%  |                              |            |

**Table 19b. Individual laboratory results for Serum #216 - class I by Werfen Single Antigen, cont.**

| **** Serum 216 **** |     |     |       |        |
|---------------------|-----|-----|-------|--------|
| Ctr                 | B41 | A80 | Other |        |
| 3808                |     |     | Cw403 | Werfen |
| 8083                |     |     |       | Werfen |
| <b>Avg</b>          | -   | -   |       |        |
| <b>Std Dev.S</b>    | -   | -   |       |        |
| <b>MFI %CV</b>      | -   | -   |       |        |

**Table 20a. Individual laboratory results for Serum #213 - class II by One Lambda Single Antigen**

| **** Serum 213 **** |       |       |       |       |       |       |       |      |      |       |         |         |         |         |         |                                                                                                                                                           |            |
|---------------------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|---------|---------|---------|---------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Ctr                 | DQ6   | DQ7   | DQ8   | DQ9   | DR12  | DR7   | DR9   | DQ2  | DQ4  | DR52  | DQA1*02 | DQA1*03 | DQA1*06 | DQA1*04 | DQA1*05 | Other                                                                                                                                                     |            |
| 230                 | 7460  | 21862 | 21952 | 24035 | 16268 | 19066 | 18264 | 6017 | 7305 | 19367 |         |         |         |         |         |                                                                                                                                                           | One Lambda |
| 615                 | 5531  | 18952 | 17762 | 17735 | 13876 | 20273 | 14357 | 5681 | 5467 | 14229 |         |         |         |         |         | DR53, DRB3*03:01 DRB3*01:01                                                                                                                               | One Lambda |
| 753                 | 10658 | 37662 | 35827 | 39688 | 22759 | 46504 | 23722 | 6849 | 8930 | 28700 | 20657   | 28439   | 40030   | 4896    | 30440   | DRB3*01,DRB3*03                                                                                                                                           | One Lambda |
| 792                 | 5284  | 21880 | 20675 | 20439 | 12154 | 23979 | 14441 | 4854 | 5325 | 13014 |         |         |         |         |         |                                                                                                                                                           | One Lambda |
| 793                 | 5162  | 18260 | 21142 | 19512 | 12205 | 22140 | 12453 | 3741 | 4742 | 14213 |         |         |         |         |         | DRB3*01,DRB3*03                                                                                                                                           | One Lambda |
| 1426                | 6569  | 21050 | 20769 | 22191 | 14712 | 20680 | 14746 | 4602 | 5620 | 16767 |         |         |         |         |         | DRB3*03:01(17378) DRB3*01:01(15883)                                                                                                                       | One Lambda |
| 2400                | 4028  | 18711 | 18019 | 19050 | 11151 | 24375 | 10845 | 3949 | 4323 | 12845 |         |         |         |         |         |                                                                                                                                                           | One Lambda |
| 3224                | 5878  | 20989 | 20248 | 20428 | 12812 | 25285 | 15602 | 4220 | 5325 |       | 20428   | 20353   | 20433   | 2550    | 20989   | DRB3*01:01(12965), DRB3*03:01(15158)                                                                                                                      | One Lambda |
| 3632                | 4063  | 17751 | 17327 | 17043 | 9555  | 22785 | 12231 | 3276 | 4028 |       |         |         |         |         |         | DRB3*01:01(9383) DRB3*03:01(10698)                                                                                                                        | One Lambda |
| 3753                | 3937  | 19806 | 18531 | 20739 | 10011 | 27974 | 11003 | 2605 | 3487 | 13025 |         |         |         |         |         | DRB3*01(12229) DRB3*03(13820)                                                                                                                             | One Lambda |
| 5130                | 6927  | 16642 | 16304 | 17757 | 14139 | 12167 | 15804 | 6293 | 6352 |       |         |         |         |         |         | DRB3*03:01(15032) DRB3*01:01(13808)<br>DQA1*02:01(17757) DQA1*03:01(17058)<br>DQA1*05:03(15316) DQA1*03:02(15269)<br>DQA1*06:01(14462) DQA1*03:03(14344)> | One Lambda |
| 5214                | 4729  | 45743 | 39156 | 40708 | 20533 | 50321 | 30008 | 8370 | 6854 |       |         |         |         |         |         |                                                                                                                                                           | One Lambda |
| 8001                | 6163  | 23073 | 22829 | 22629 | 14424 | 26932 | 16241 | 5557 | 6309 | 15309 |         |         |         |         |         | DRB3*01:01 DRB3*03:01                                                                                                                                     | One Lambda |
| 8103                | 1368  | 6702  | 7691  | 7903  | 3597  | 8347  | 4804  | 849  |      | 3558  |         | 7903    | 7054    |         | 7449    | DQ3,DQA1*01                                                                                                                                               | One Lambda |
| 8111                | 2887  | 14476 | 13480 | 15562 | 7290  | 20741 | 8322  | 2154 | 2794 |       | 7428    | 11783   | 15218   | 1490    | 1187    | DRB3*03:01 DRB3*01:01                                                                                                                                     | One Lambda |
| <b>Avg</b>          | 5376  | 21571 | 20781 | 21695 | 13032 | 24771 | 14856 | 4601 | 5490 | 15103 | 16171   | 17120   | 20684   | 2979    | 15016   |                                                                                                                                                           |            |
| <b>Std Dev.S</b>    | 2160  | 9203  | 7785  | 8402  | 4753  | 10910 | 6041  | 1953 | 1613 | 6276  | 7573    | 9165    | 14024   | 1743    | 13192   |                                                                                                                                                           |            |
| <b>MFI %CV</b>      | 40%   | 43%   | 37%   | 39%   | 36%   | 44%   | 41%   | 42%  | 29%  | 42%   | 47%     | 54%     | 68%     | 59%     | 88%     |                                                                                                                                                           |            |

Blue = DSA against cell #211 only

Gold = DSA against cell #212 only

Green = DSA against cell #211 and #212

**Table 20b. Individual laboratory results for Serum #213 - class II by Werfen Single Antigen**

| **** Serum 213 **** |      |       |       |       |       |       |       |     |      |       |         |         |         |         |         |       |        |
|---------------------|------|-------|-------|-------|-------|-------|-------|-----|------|-------|---------|---------|---------|---------|---------|-------|--------|
| Ctr                 | DQ6  | DQ7   | DQ8   | DQ9   | DR12  | DR7   | DR9   | DQ2 | DQ4  | DR52  | DQA1*02 | DQA1*03 | DQA1*06 | DQA1*04 | DQA1*05 | Other |        |
| 3808                | 1957 | 8670  | 10210 | 10484 | 6024  | 17753 | 8025  |     | 2779 | 6174  | 10210   | 10484   | 8372    | 8137    |         |       | Werfen |
| 8083                | 4039 | 15781 | 19387 | 18969 | 11850 | 33278 | 16593 |     |      | 13126 | 19387   |         |         |         |         |       | Werfen |
| <b>Avg</b>          | 2998 | 12226 | 14799 | 14727 | 8937  | 25516 | 12309 | -   | -    | 9650  | 14799   | -       | -       | -       | -       |       |        |
| <b>Std Dev.S</b>    | 1472 | 5028  | 6489  | 6000  | 4120  | 10978 | 6058  | -   | -    | 4916  | 6489    | -       | -       | -       | -       |       |        |
| <b>MFI %CV</b>      | 49%  | 41%   | 44%   | 41%   | 46%   | 43%   | 49%   | -   | -    | 51%   | 44%     | -       | -       | -       | -       |       |        |

**Table 21a. Individual laboratory results for Serum #214 - class II by One Lambda Single Antigen**

| **** Serum 214 **** |       |       |       |       |       |       |       |       |       |       |       |       |       |      |       |         |      |         |                                                                                               |            |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|---------|------|---------|-----------------------------------------------------------------------------------------------|------------|
| Ctr                 | DQ5   | DQ6   | DR11  | DR12  | DR13  | DR15  | DR16  | DR51  | DR8   | DR9   | DQ2   | DR103 | DR7   | DR1  | DR4   | DQA1*02 | DQ4  | DQA1*01 | Other                                                                                         |            |
| 230                 | 17935 | 20446 | 19960 | 16026 | 12878 | 18909 | 22365 | 17952 | 18409 | 11801 | 7539  |       | 16762 | 3849 | 8796  |         |      |         | DR1403                                                                                        | One Lambda |
| 615                 | 16148 | 18342 | 17727 | 15613 | 13705 | 15357 | 20924 | 21879 | 16118 | 10690 | 9153  | 9790  | 16205 | 3241 | 7278  | 6251    | 2814 |         | DRB1*04:02                                                                                    | One Lambda |
| 753                 | 35753 | 36779 | 35369 | 28064 | 26441 | 30126 | 44385 | 34125 | 32333 | 20690 | 12653 | 20005 | 34382 | 7269 | 15810 | 5797    | 4005 | 36523   | DQA1*04,DRB1*04:02                                                                            | One Lambda |
| 792                 | 17269 | 19138 | 16197 | 13150 | 12310 | 14068 | 20982 | 22570 | 14891 | 11389 | 7068  | 7979  | 15475 | 2379 | 6211  |         |      |         |                                                                                               | One Lambda |
| 793                 | 17125 | 18974 | 16208 | 14322 | 11956 | 13159 | 20104 | 15300 | 16067 | 10583 | 6351  | 9097  | 16169 | 3028 | 7873  | 2000    | 1919 |         | DRB1*04:02                                                                                    | One Lambda |
| 1426                | 20088 | 22069 | 20123 | 19422 | 17014 | 19067 | 24268 | 17783 | 20889 | 13853 | 7015  | 12222 | 19654 | 3432 | 9444  | 3507    | 2756 |         | DRB1*04:02(DR4)                                                                               | One Lambda |
| 2400                | 17798 | 18458 | 16080 | 15506 | 13268 | 15824 | 21848 | 17113 | 16649 | 10644 | 5659  | 9255  | 16907 | 2639 | 7435  | 2556    | 2470 |         |                                                                                               | One Lambda |
| 3224                | 18639 | 20213 | 19070 | 15567 | 14556 | 16044 | 23906 | 24937 | 16999 | 12563 | 7722  | 9782  | 16941 | 3462 |       | 4590    | 2467 | 20213   | DQA1*04, DRB1*04:02(7535)                                                                     | One Lambda |
| 3632                | 19476 | 18915 | 16784 | 13891 | 14251 | 13140 | 21260 | 22968 | 15192 | 15011 | 5304  | 10385 | 17042 | 2437 |       |         |      |         | DR1403 DRB1*04:02(7981)                                                                       | One Lambda |
| 3753                | 18048 | 18715 | 19279 | 15003 | 13192 | 14608 | 25039 | 18007 | 17980 | 7631  | 4740  | 8022  | 15211 | 1884 | 6910  | 1338    | 1558 |         | DRB1*04:02(6910) DQA1*02(1338)                                                                | One Lambda |
| 5130                | 17338 | 17967 | 17370 | 14513 | 14416 | 16686 | 18624 | 16823 | 15413 | 11264 | 9673  | 10462 | 14799 | 3619 |       |         |      |         | DQB1*04:01(1902) DQA1*01:02(17967)<br>DQA1*01:03(17829) DQA1*01:01(16255)<br>DQA1*05:01(9673) | One Lambda |
| 5214                | 20997 | 29112 | 32239 | 32065 | 23352 | 29730 | 45256 | 47474 | 33096 | 9737  | 11407 | 15697 | 27522 |      |       |         |      |         |                                                                                               | One Lambda |
| 8001                | 20327 | 22895 | 20703 | 16995 | 15588 | 18109 | 25560 | 26577 | 18114 | 10590 | 9637  | 10649 | 17735 | 3395 | 7953  | 5448    | 2897 |         | DRB1*04:02 DQA1*02:01                                                                         | One Lambda |
| 8103                | 8467  | 11385 | 10512 | 6093  | 3813  | 8079  | 8239  | 4669  | 6053  | 4549  |       | 3712  |       | 3712 | 5306  |         |      | 111385  |                                                                                               | One Lambda |
| 8111                | 11044 | 12442 | 10806 | 8854  | 8028  | 8747  | 14973 | 11386 | 11095 | 7295  | 3370  | 5377  | 10858 | 1442 |       | 1000    | 800  | 12000   | DRB1*04:02                                                                                    | One Lambda |
| <b>Avg</b>          | 18430 | 20390 | 19228 | 16339 | 14318 | 16777 | 23849 | 21304 | 17953 | 11219 | 7664  | 10174 | 18262 | 3271 | 8302  | 3610    | 2410 | 45030   |                                                                                               |            |
| <b>Std Dev.S</b>    | 5845  | 6097  | 6656  | 6453  | 5358  | 6208  | 9554  | 9922  | 6900  | 3680  | 2604  | 4002  | 5868  | 1357 | 2893  | 1993    | 910  | 45395   |                                                                                               |            |
| <b>MFI %CV</b>      | 32%   | 30%   | 35%   | 39%   | 37%   | 37%   | 40%   | 47%   | 38%   | 33%   | 34%   | 39%   | 32%   | 41%  | 35%   | 55%     | 38%  | 101%    |                                                                                               |            |

Blue = DSA against cell #211 only

Gold = DSA against cell #212 only

Green = DSA against cell #211 and #212

**Table 21b. Individual laboratory results for Serum #214 - class II by Werfen Single Antigen**

| **** Serum 214 **** |       |       |       |       |       |       |       |       |       |       |      |       |       |     |       |         |     |         |             |        |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-----|-------|---------|-----|---------|-------------|--------|
| Ctr                 | DQ5   | DQ6   | DR11  | DR12  | DR13  | DR15  | DR16  | DR51  | DR8   | DR9   | DQ2  | DR103 | DR7   | DR1 | DR4   | DQA1*02 | DQ4 | DQA1*01 | Other       |        |
| 3808                | 8542  | 12641 | 9482  | 9227  | 7860  | 9377  | 13648 | 16320 | 9842  | 8246  | 2213 | 6708  | 13055 | 931 | 7010  | 2702    |     | 12641   | DR14,DR1403 | Werfen |
| 8083                | 15097 | 21822 | 17300 | 16859 | 14935 | 16117 | 26089 | 29579 | 19016 | 18390 | 3940 | 14053 | 24651 |     | 14262 |         |     | 19016   | DR14        | Werfen |
| <b>Avg</b>          | 11820 | 17232 | 13391 | 13043 | 11398 | 12747 | 19869 | 22950 | 14429 | 13318 | 3077 | 10381 | 18853 | -   | -     | -       | -   | -       |             |        |
| <b>Std Dev.S</b>    | 4635  | 6492  | 5528  | 5397  | 5003  | 4766  | 8797  | 9376  | 6487  | 7173  | 1221 | 5194  | 8200  | -   | -     | -       | -   | -       |             |        |
| <b>MFI %CV</b>      | 39%   | 38%   | 41%   | 41%   | 44%   | 37%   | 44%   | 41%   | 45%   | 54%   | 40%  | 50%   | 43%   | -   | -     | -       | -   | -       |             |        |

**Table 22a. Individual laboratory results for Serum #215 - class II by One Lambda Single Antigen**

|                  | **** Serum 215 **** |       |       |       |       |      |       |       |      |      |      |                                                                        |            |
|------------------|---------------------|-------|-------|-------|-------|------|-------|-------|------|------|------|------------------------------------------------------------------------|------------|
| Ctr              | DR11                | DR12  | DR13  | DR14  | DR17  | DR52 | DR8   | DR18  | DR9  | DQ7  | DR7  | Other                                                                  |            |
| 230              | 8877                | 4160  | 6751  | 6835  | 6271  | 4663 | 6027  | 6991  | 3492 | 2323 |      |                                                                        | One Lambda |
| 615              | 7880                | 4605  | 7034  | 6683  | 4017  | 3905 | 4784  | 5116  | 2006 | 2722 | 930  | DP14                                                                   | One Lambda |
| 753              | 14513               | 7689  | 14032 | 12899 | 10259 | 7368 | 10614 | 11445 | 3461 | 4026 |      |                                                                        | One Lambda |
| 792              | 7945                | 4169  | 7244  | 7442  | 5136  | 3933 | 5341  | 6077  | 2459 | 2376 |      |                                                                        | One Lambda |
| 793              | 6605                | 4168  | 6554  | 6637  | 5173  | 3553 | 5416  | 5727  | 1828 | 1932 |      |                                                                        | One Lambda |
| 1426             | 7993                | 5865  | 8120  | 7399  | 4758  | 4655 | 6365  | 6551  | 2074 | 2879 | 1164 | DP14                                                                   | One Lambda |
| 2400             | 8054                | 5054  | 8027  | 6892  | 4832  | 4522 | 5836  | 5869  | 2743 | 2154 |      |                                                                        | One Lambda |
| 3224             | 7829                | 4228  | 7204  | 7314  | 5225  | 3979 | 5714  | 6137  | 2551 | 1929 | 791  |                                                                        | One Lambda |
| 3632             | 7008                | 3607  | 6683  | 6847  | 4804  | 3696 | 5191  | 5465  | 3131 |      |      | DR1403,DR1404                                                          | One Lambda |
| 3753             | 7624                | 3824  | 7207  | 6761  | 5247  | 3789 | 5474  | 5962  | 1782 | 1732 |      |                                                                        | One Lambda |
| 5130             | 6931                | 2610  | 6299  | 6047  | 4299  | 2892 | 4465  | 5480  |      | 2293 |      | DRB1*09:02(2423) DQA1*05:05(2293)<br>DQA1*06:01(2289) DQA1*05:03(1903) | One Lambda |
| 5214             | 14897               | 10237 | 17659 | 12684 | 9618  | 8291 | 11461 | 12024 | 3000 | 3255 |      |                                                                        | One Lambda |
| 8001             | 7597                | 4281  | 7564  | 7212  | 5368  | 4087 | 5451  | 6100  | 2470 | 2334 |      |                                                                        | One Lambda |
| 8103             | 4600                | 3365  | 3804  | 4326  | 2805  | 2987 | 3856  |       | 1620 | 1923 | 1196 | DR3,DQ3,DQA1*05,DQA1*06 >                                              | One Lambda |
| 8111             | 6134                | 3569  | 6061  | 5889  | 4543  | 3499 | 4824  | 5226  | 1925 | 1671 | 800  |                                                                        | One Lambda |
| <b>Avg</b>       | 8299                | 4762  | 8016  | 7458  | 5490  | 4388 | 6055  | 6726  | 2467 | 2396 | 976  |                                                                        |            |
| <b>Std Dev.S</b> | 2789                | 1921  | 3405  | 2301  | 1962  | 1500 | 2124  | 2182  | 627  | 647  | 194  |                                                                        |            |
| <b>MFI %CV</b>   | 34%                 | 40%   | 42%   | 31%   | 36%   | 34%  | 35%   | 32%   | 25%  | 27%  | 20%  |                                                                        |            |

**Blue** = DSA against cell #211 only

**Gold** = DSA against cell #212 only

**Green** = DSA against cell #211 and #212

**Table 22b. Individual laboratory results for Serum #215 - class II by Werfen Single Antigen**

|                  | **** Serum 215 **** |       |       |       |       |       |       |       |      |     |      |               |        |
|------------------|---------------------|-------|-------|-------|-------|-------|-------|-------|------|-----|------|---------------|--------|
| Ctr              | DR11                | DR12  | DR13  | DR14  | DR17  | DR52  | DR8   | DR18  | DR9  | DQ7 | DR7  | Other         |        |
| 3808             | 8275                | 6460  | 7661  | 7858  | 6944  | 6713  | 6898  | 7149  | 2771 |     | 2199 | DR1403,DR1404 | Werfen |
| 8083             | 15839               | 13022 | 15027 | 16071 | 14076 | 13752 | 13381 | 13172 | 6754 |     | 5922 |               | Werfen |
| <b>Avg</b>       | 12057               | 9741  | 11344 | 11965 | 10510 | 10233 | 10140 | 10161 | 4763 | -   | 4061 |               |        |
| <b>Std Dev.S</b> | 5349                | 4640  | 5209  | 5807  | 5043  | 4977  | 4584  | 4259  | 2816 | -   | 2633 |               |        |
| <b>MFI %CV</b>   | 44%                 | 48%   | 46%   | 49%   | 48%   | 49%   | 45%   | 42%   | 59%  | -   | 65%  |               |        |

**Table 23a. Individual laboratory results for Serum #216 - class II by One Lambda Single Antigen**

| **** Serum 216 **** |       |      |       |       |       |       |       |      |      |      |      |      |         |                                                                                                                              |            |
|---------------------|-------|------|-------|-------|-------|-------|-------|------|------|------|------|------|---------|------------------------------------------------------------------------------------------------------------------------------|------------|
| Ctrl                | DR11  | DR12 | DR13  | DR14  | DR17  | DR8   | DR18  | DR15 | DR16 | DR52 | DQ4  | DQ5  | DQA1*05 | Other                                                                                                                        |            |
| 230                 | 9100  | 5432 | 9319  | 8264  | 8202  | 7110  | 8523  | 3287 | 3255 | 4286 |      |      |         |                                                                                                                              | One Lambda |
| 615                 | 5980  | 3561 | 6683  | 5708  | 4218  | 3633  | 4620  | 2267 | 2139 | 2598 | 1304 | 1005 | 793     | DR7,DQ6,DRB3*03:01 DRB3*01:01 DQB1*06:02<br>DQB1*06:03 DQB1*06:04 DQB1*06:09                                                 | One Lambda |
| 753                 | 11841 | 6738 | 12689 | 11227 | 11008 | 8358  | 10982 | 4144 | 4357 | 5200 | 2336 |      |         |                                                                                                                              | One Lambda |
| 792                 | 5935  | 3200 | 6374  | 5992  | 5026  | 3790  | 5276  |      |      | 2495 |      |      |         |                                                                                                                              | One Lambda |
| 793                 | 6459  | 4609 | 6899  | 6659  | 6380  | 5349  | 6506  | 2263 | 2360 | 3717 | 1541 |      |         | DRB3*01,DRB3*03                                                                                                              | One Lambda |
| 1426                | 6800  | 4971 | 7217  | 6418  | 5519  | 5061  | 6307  | 3299 | 3163 | 3564 | 1699 | 2031 | 1437    | DQ6                                                                                                                          | One Lambda |
| 2400                | 5776  | 4262 | 6481  | 5413  | 4694  | 3951  | 5098  | 2555 | 2439 | 2809 |      |      |         |                                                                                                                              | One Lambda |
| 3224                | 5713  | 3299 | 6806  | 5987  | 4977  | 3860  | 5058  | 1777 | 2053 |      | 1064 | 1025 | 622     | DRB3*01:01(1978) DRB3*03:01(2593) DQB1*06:02(502)<br>DQB1*06:03(632) DQB1*06:04(544) DQB1*06:09(944)                         | One Lambda |
| 3632                | 4920  | 2751 | 5534  | 4802  | 4298  | 3155  | 4549  |      |      |      |      |      |         | DRB3*03:01(2240)                                                                                                             | One Lambda |
| 3753                | 6038  | 3190 | 6183  | 5663  | 5220  | 4172  | 5603  | 1890 | 1918 | 1890 | 1195 |      |         |                                                                                                                              | One Lambda |
| 5130                | 9240  | 5346 | 9858  | 9186  | 7928  | 6367  | 8492  | 3760 | 3227 |      |      |      |         | DRB3*03:01(4666) DRB3*01:01(3655) DQB1*04:02(1689)<br>DQB1*03:19(1945) DQA1*05:01(2184) DQA1*05:05(1945)<br>DQA1*05:03(1979) | One Lambda |
| 5214                | 13093 | 9205 | 18906 | 12514 | 12294 | 11111 | 13719 | 6777 | 6303 |      |      |      |         |                                                                                                                              | One Lambda |
| 8001                | 6722  | 3579 | 7830  | 6733  | 6191  | 4427  | 6112  | 2419 | 2158 | 2886 | 1127 | 1004 |         | DRB3*01:01 DRB3*03:01 DQB1*05:01                                                                                             | One Lambda |
| 8103                | 2946  | 2763 | 3399  | 3142  | 2358  | 2503  |       | 1412 | 1142 | 1859 |      | 857  | 1108    | DR3,DR7,DQ3                                                                                                                  | One Lambda |
| 8111                | 4489  | 2739 | 4931  | 4320  | 4094  | 3138  | 4325  | 1513 | 1575 |      | 1000 |      |         | DRB3*03:01 DRB3*01:01                                                                                                        | One Lambda |
| <b>Avg</b>          | 7003  | 4376 | 7941  | 6802  | 6160  | 5066  | 6798  | 2874 | 2776 | 3130 | 1408 | 1184 | 990     |                                                                                                                              |            |
| <b>Std Dev.S</b>    | 2722  | 1784 | 3742  | 2528  | 2680  | 2312  | 2740  | 1449 | 1353 | 1062 | 445  | 478  | 360     |                                                                                                                              |            |
| <b>MFI %CV</b>      | 39%   | 41%  | 47%   | 37%   | 44%   | 46%   | 40%   | 50%  | 49%  | 34%  | 32%  | 40%  | 36%     |                                                                                                                              |            |

Blue = DSA against cell #211 only

Gold = DSA against cell #212 only

Green = DSA against cell #211 and #212

**Table 23b. Individual laboratory results for Serum #216 - class II by Werfen Single Antigen**

| **** Serum 216 **** |      |      |      |      |      |      |      |      |      |      |     |      |         |                       |        |
|---------------------|------|------|------|------|------|------|------|------|------|------|-----|------|---------|-----------------------|--------|
| Ctrl                | DR11 | DR12 | DR13 | DR14 | DR17 | DR8  | DR18 | DR15 | DR16 | DR52 | DQ4 | DQ5  | DQA1*05 | Other                 |        |
| 3808                | 3491 | 2285 | 3344 | 3245 | 3314 | 2329 | 3161 | 1476 | 1113 | 2170 |     | 1322 |         | DR1403,DR1404,DQA1*01 | Werfen |
| 8083                | 6761 | 4833 | 6673 | 6594 | 6253 | 4417 | 6145 |      |      | 4166 |     | 4210 |         | DQ6,DQA1*01           | Werfen |
| <b>Avg</b>          | 5126 | 3559 | 5009 | 4920 | 4784 | 3373 | 4653 | -    | -    | 3168 | -   | 2766 | -       |                       |        |
| <b>Std Dev.S</b>    | 2312 | 1802 | 2354 | 2368 | 2078 | 1476 | 2110 | -    | -    | 1411 | -   | 2042 | -       |                       |        |
| <b>MFI %CV</b>      | 45%  | 51%  | 47%  | 48%  | 43%  | 44%  | 45%  | -    | -    | 45%  | -   | 74%  | -       |                       |        |

## **Paper Challenge**

**Table 24. Individual Virtual crossmatch results for Serum #215 vs Donor# V1**

Donor #V1 HLA genotype: A\*01:01:01-A\*02:01:01-B\*13:02:01-B\*52:01:01-C\*06:02:01-C\*12:02:02/DRB1\*07:01:01-DRB1\*15:02:01G-DRB4\*01:03:01-DRB5\*01:02:01-DQA1\*01:03:01-DQA1\*02:01:01-DQB1\*02:01:01G-DQB1\*06:01-DPA1\*01:03:01-DPA1\*02:01:01-DPB1\*04:01:01G-DPB1\*17:01:01

| Ctr  | Patient | % CPRA | Virtual<br>T Cell<br>Prediction | Class I DSA(MFI)                              | Virtual<br>B-cell<br>prediction | Class II DSA(MFI) | Comments                                                                                                         |
|------|---------|--------|---------------------------------|-----------------------------------------------|---------------------------------|-------------------|------------------------------------------------------------------------------------------------------------------|
| 230  | 215     | 71%    | Positive                        | A1 (13614) B13 (7411)                         | Positive                        | No class II DSA   | Based on Class I positivity                                                                                      |
| 792  | 215     | 99.16  | Positive                        | A1 (16818) B13 (4319)                         | Positive                        | No class II DSA   | No Class II DSA present                                                                                          |
| 793  | 215     | 99.77  | Positive                        | A1 (23713) B13 (7535) B52 (2122)              | Positive                        | DR7 (1401)        | B cell positive due to strong class I                                                                            |
| 910  | 215     | 100%   | Positive                        | A1 (21213) B13 (6507) B52 (1235)              | Positive                        | DR7 (1019)        | Patient has Bw4 CREG reactivity                                                                                  |
| 1426 | 215     | 100    | Positive                        | A1 (18627) B13 (7577) B52 (2002)              | Positive                        | DR7 (1164)        |                                                                                                                  |
| 1461 | 215     | 50     | Positive                        | A1 (13196) B13 (2138)                         | Positive                        | DR7 (1837)        |                                                                                                                  |
| 2400 | 215     | 100    | Positive                        | A1 (24394) B13 (8252) B52 (2038)              | Positive                        | DR7 (1031)        |                                                                                                                  |
| 3632 | 215     | 99     | Positive                        | A1 (22077) B13 (4832)                         | Positive                        | No class II DSA   | DSA to A1(MFI=22077) and B13(MFI=4832).<br>No Class II DSA, B Cell prediction is positive<br>due to class I DSA. |
| 3753 | 215     | 99.85  | Positive                        | A1 (26752) Bw4 (6313) B13 (6508) B52 (1261)   | Positive                        | No class II DSA   | No Class II DSA                                                                                                  |
| 3808 | 215     |        | Positive                        | A1 (18643) B13 (4326)                         | Positive                        | DR7 (2199)        | Unacceptable                                                                                                     |
| 3966 | 215     | 100%   | Positive                        | A1 (24597) B13 (6902) B52 (1541)              | Positive                        | DR7 (1324)        | Unacceptable. Unacceptable .                                                                                     |
| 5130 | 215     | 99%    | Positive                        | A1 (9428) B13 (4921)                          | Positive                        | No class II DSA   | Positive due to Class I DSAs                                                                                     |
| 8001 | 215     | 100    | Positive                        | A1 (26131) Bw4 (29542) B13 (8113) B52 (1527)  | Positive                        | No class II DSA   | C*12:02 not in LSAB panel. No class II DSA                                                                       |
| 8080 | 215     | 100    | Positive                        | A1 (23983) B13 (7143)                         | Positive                        | No class II DSA   | Patient has Class I DSA                                                                                          |
| 8083 | 215     | 99.24  | Positive                        | A1 (37127) B13 (8113)                         | Positive                        | DR7 (5922)        | Class I antibodies                                                                                               |
| 8103 | 215     | 58     | Borderline                      | A1 (2451) B13 (3576)                          | Borderline                      | DR7 (1196)        | Class I Low MFI; class II Low MFI                                                                                |
| 8110 | 215     | 99     | Positive                        | A1 (28680) Bw4 (12771) B13 (10885) B52 (3285) | Positive                        | No class II DSA   | d/t HLA Class I DSA                                                                                              |
| 8111 | 215     |        | Positive                        | A1 (13427) B13 (3500)                         | Positive                        | No class II DSA   |                                                                                                                  |

**Table 25. Individual Virtual crossmatch results for Serum #215 vs Donor# V2**

Donor #V2 HLA genotype: A\*02:01:01-A\*32:01:01-B\*27:05:02-B\*44:02:01-C\*02:02:02-C\*05:01:01/DRB1\*11:01:01-DRB1\*13:01:01-DRB3\*01:01:02-DRB3\*02:02:01-DQA1\*01:03:01-DQA1\*05:05:01-DQB1\*03:01:01G-DQB1\*06:03-DPA1\*01:03:01-DPB1\*03:01:01G-DPB1\*04:01:01G

| Ctr  | Patient | % CPRA | Virtual<br>T Cell<br>Prediction | Class I DSA(MFI)                                 | Virtual<br>B-cell<br>prediction | Class II DSA(MFI)                                                           | Comments                                                                                                                                      |
|------|---------|--------|---------------------------------|--------------------------------------------------|---------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 230  | 215     | 73     | Positive                        | A32 (10245) B44 (14500) B27 (6487)               | Positive                        | DR11 (8293) DR13 (7988) DQA1*05 (2567)<br>DR52 (4120) DQ7 (2323)            |                                                                                                                                               |
| 792  | 215     | 99.16  | Positive                        | A32 (5439) B44 (13107) B27 (4206)                | Positive                        | DR11 (7013) DR13 (7049) DR52 (3933)<br>DQ7 (2376)                           |                                                                                                                                               |
| 793  | 215     | 99.77  | Positive                        | A32 (10712) Bw4 (10000) B44 (18312) B27 (9195)   | Positive                        | DR11 (7335) DR13 (7601) DQA1*05 (1209)<br>DR52 (4137) DQ7 (2433)            |                                                                                                                                               |
| 910  | 215     | 100%   | Positive                        | A32 (9747) B44 (15643) B27 (8289)                | Positive                        | DR11 (6140) DR13 (6177) DR52 (7520)<br>DQ7 (1478)                           | Patient has Bw4 CREG reactivity                                                                                                               |
| 1426 | 215     | 100    | Positive                        | A32 (10479) B44 (17175) B27 (6630)               | Positive                        | DR11 (7993) DR13 (8120) DR52 (4655)<br>DQ7 (2879)                           |                                                                                                                                               |
| 1461 | 215     | 50     | Positive                        | B2705 (2462) A32 (1603) B44 (8414)               | Positive                        | DR11 (4721) DR13 (4785) DR52 (4274)                                         |                                                                                                                                               |
| 2400 | 215     | 100    | Positive                        | A32 (11363) B44 (18548) B27 (8563)               | Positive                        | DR11 (6657) DR13 (7848) DR52 (4256)<br>DQ7 (1813)                           |                                                                                                                                               |
| 3632 | 215     | 99     | Positive                        | A32 (7426) B44 (14610) B27 (8676)                | Positive                        | DR11 (6205) DR13 (6683) DR52 (3578)<br>DQ7 (1503)                           | A32(MFI=7426), B44(MFI=14610), B27(8676);<br>DSA to DR11(MFI=6205), DR13(MFI=6683),<br>DQA1*05:05, DQB1*03:19(MFI=1503) and<br>DR52(MFI=3578) |
| 3753 | 215     | 99.85  | Positive                        | A32 (8270) Bw4 (6313) B44 (18181) B27 (4184)     | Positive                        | DR11 (7624) DR13 (7207) DR52 (3789)<br>DQ7 (1732)                           |                                                                                                                                               |
| 3808 | 215     |        | Positive                        | B2705 (3009) A32 (3433) B44 (14547)              | Positive                        | DR11 (7457) DR13 (6762) DR52 (6713)                                         | Unacceptable                                                                                                                                  |
| 3966 | 215     | 100%   | Positive                        | A32 (9125) B44 (17932) B27 (4621)                | Positive                        | DR11 (8111) DR13 (8278) DR52 (4736)<br>DQ7 (2126)                           | Unacceptable                                                                                                                                  |
| 5130 | 215     | 99%    | Positive                        | A32 (5767) B44 (9676) B27 (3197)                 | Positive                        | DR11 (6247) DR13 (5985) DR52 (2892)                                         | DRB3*01:01 (2892), DRB3*02:02 (2838),<br>DQA1*05:05 (2293)                                                                                    |
| 8001 | 215     | 100    | Positive                        | A32 (10628) Bw4 (29542) B44 (19630) B27 (5574)   | Positive                        | DR11 (6873) DR13 (7564) DR52 (3854)<br>DQ7 (2334)                           | DQA1*05:05 (MFI=2334) overlap with DQB.<br>DRB3*01:01 (MFI=3834),DRB3*02:02<br>(MFI=3854)                                                     |
| 8080 | 215     | 100    | Positive                        | A32 (8781) B44 (18049) B27 (7970)                | Positive                        | DR11 (7022) DR13 (8520) DR52 (8872)<br>DQ7 (2579)                           |                                                                                                                                               |
| 8083 | 215     | 99.24  | Positive                        | A32 (6797) B44 (23538) B27 (10389)               | Positive                        | DR11 (14215) DR13 (14610) DR52 (13752)                                      | Class I antibodies                                                                                                                            |
| 8103 | 215     | 58     | Positive                        | B2705 (3036) A32 (4023) B44 (5137) B27 (3036)    | Borderline                      | DR11 (3767) DR13 (3804) DQ3 (1923)<br>DQA1*05 (2082) DR52 (2987) DQ7 (1923) | Class I high MFI.Class II Low MFI .                                                                                                           |
| 8110 | 215     | 99     | Positive                        | B2705 (7235) A32 (13283) Bw4 (12771) B44 (22992) | Positive                        | DR11 (10894) DR13 (11452) DR52 (5280)<br>DQ7 (4847)                         |                                                                                                                                               |
| 8111 | 215     |        | Positive                        | A32 (5500) Bw4 (5000) B44 (8900) B27 (3700)      | Positive                        | DR11 (6130) DR13 (6000) DR52 (3500)<br>DQ7 (1600)                           |                                                                                                                                               |

**Table 26. Individual Virtual crossmatch results for Serum #215 vs Donor# V3**

Donor #V3 HLA genotype: A\*02:02:01-A\*24:02:01-B\*27:05:02-B\*39:06:02-C\*02:02:02-C\*07:02:01/DRB1\*04:04:01-DRB1\*14:06:01-DRB4\*01:03:03-DRB3\*01:01:02-DQA1\*03:01:01-DQA1\*05:03:01-DQB1\*03:01:01-DQB1\*03:02:01-DPA1\*01:03:01-DPB1\*04:01:01G-DPB1\*04:02:01G

| Ctr  | Patient | % CPRA | Virtual<br>T Cell<br>Prediction | Class I DSA(MFI)                     | Virtual<br>B-cell<br>prediction | Class II DSA(MFI)                                    | Comments                                                                                 |
|------|---------|--------|---------------------------------|--------------------------------------|---------------------------------|------------------------------------------------------|------------------------------------------------------------------------------------------|
| 230  | 215     | 73     | Positive                        | Bw4 (8000) A24 (8480) B27 (6487)     | Positive                        | DQA1*05 (2262) DR14 (7327) DR52 (4182)<br>DQ7 (2323) |                                                                                          |
| 792  | 215     | 99.16  | Positive                        | A24 (3561) B27 (4206)                | Positive                        | DR52 (3754)                                          | DRB1*14:06 is not present on our panel                                                   |
| 793  | 215     | 99.77  | Positive                        | A24 (7564) B27 (9195)                | Positive                        | DR14 (4063) DR52 (4317) DQ7 (2433)                   | ExPlex, A*02:05 bead assessed for donor A*02:02; ExPlex; DRB1*14:06 empirically assessed |
| 910  | 215     | 100%   | Positive                        | A24 (6617) B27 (8289)                | Positive                        | DR14 (6466) DR52 (3741) DQ7 (1478)                   | Patient has Bw4 CREG reactivity                                                          |
| 1426 | 215     | 100    | Positive                        | A24 (8938) B27 (6630)                | Positive                        | DR14 (7399) DR52 (4655) DQ7 (2879)                   |                                                                                          |
| 1461 | 215     | 50     | Positive                        | B2705 (2462) A24 (2396)              | Positive                        | DR14 (5295) DR52 (4274)                              |                                                                                          |
| 2400 | 215     | 100    | Positive                        | A24 (8306) B27 (8563)                | Positive                        | DR14 (6202) DR52 (4307) DQ7 (1813)                   |                                                                                          |
| 3632 | 215     | 99     | Positive                        | A24 (5072) B27 (8676)                | Positive                        | DR14 (5144) DR52 (3571)                              | DSA to A24(MFI=5072) and B27(MFI=8676).<br>DSA to DR52(MFI=3571) and DR14(MFI=5144)      |
| 3753 | 215     | 99.85  | Positive                        | Bw4 (6313) A24 (6775) B27 (4184)     | Positive                        | DR14 (6761) DR52 (3789) DQ7 (1732)                   |                                                                                          |
| 3808 | 215     |        | Positive                        | B2705 (3009) A24 (4787)              | Positive                        | DR14 (7858) DR52 (6713)                              | Unacceptable                                                                             |
| 3966 | 215     | 100%   | Positive                        | A24 (7593) B27 (4621)                | Positive                        | DR14 (7067) DR52 (4736) DQ7 (2126)                   | Unacceptable, No bead DRB1*14:06 in SAB PANEL                                            |
| 5130 | 215     | 99%    | Positive                        | A24 (4952) B27 (3197)                | Positive                        | DQ7 (2289)                                           | DQA1*05:03 (1903)                                                                        |
| 8001 | 215     | 100    | Positive                        | Bw4 (29542) A24 (7844) B27 (5574)    | Positive                        | DR14 (7212) DR52 (3834) DQ7 (2111)                   | DRB1*14:06 is not in LSAB panel, however other allele DRB1*14:54 (MFI = 7212)            |
| 8080 | 215     | 100    | Positive                        | A24 (6697) B27 (7970)                | Positive                        | DR14 (4142) DR52 (4563) DQ7 (2579)                   |                                                                                          |
| 8083 | 215     | 99.24  | Positive                        | A24 (9241) B27 (10389)               | Positive                        | DR14 (16071)                                         | Class I antibodies. No DRB1*14:06 bead                                                   |
| 8103 | 215     | 58     | Borderline                      | B2705 (3036) A24 (2874) B27 (3036)   | Borderline                      | DQ3 (1923) DQA1*05 (1923) DR52 (2987)<br>DQ7 (1923)  | Class I Low MFI; class II Low MFI                                                        |
| 8110 | 215     | 99     | Positive                        | B2705 (7235) Bw4 (12771) A24 (11941) | Positive                        | DR14 (8893) DR52 (5280) DQ7 (4847)                   |                                                                                          |
| 8111 | 215     |        | Positive                        | Bw4 (3700) A24 (4000) B27 (3700)     | Positive                        | DR14 (5800) DR52 (3500) DQ7 (1600)                   |                                                                                          |

**Table 27. Individual Virtual crossmatch results for Serum #216 vs Donor# V1**

Donor #V1 HLA genotype: A\*01:01:01-A\*02:01:01-B\*13:02:01-B\*52:01:01-C\*06:02:01-C\*12:02:02/DRB1\*07:01:01-DRB1\*15:02:01G-DRB4\*01:03:01-DRB5\*01:02:01-DQA1\*01:03:01-DQA1\*02:01:01-DQB1\*02:01:01G-DQB1\*06:01:01-DPA1\*01:03:01-DPA1\*02:01:01-DPB1\*04:01:01G-DPB1\*17:01:01

| Ctr  | Patient | % CPRA | Virtual<br>T Cell<br>Prediction | Class I DSA(MFI)                 | Virtual<br>B-cell<br>prediction | Class II DSA(MFI)                     | Comments                                                         |
|------|---------|--------|---------------------------------|----------------------------------|---------------------------------|---------------------------------------|------------------------------------------------------------------|
| 230  | 216     | 55     | Positive                        | A1 (22664) B52 (2905) Cw6 (7187) | Positive                        | DR15 (3144)                           | Class I positive                                                 |
| 792  | 216     | 94.06  | Positive                        | A1 (15751) Cw6 (4408)            | Positive                        | No class II DSA                       |                                                                  |
| 793  | 216     | 98.7   | Positive                        | A1 (17894) B52 (2122) Cw6 (5746) | Positive                        | DR7 (1055) DR15 (2446)                | B cell positive due to strong class I                            |
| 910  | 216     | 99%    | Positive                        | A1 (16452) B52 (1652) Cw6 (4295) | Positive                        | DR15 (1951)                           |                                                                  |
| 1426 | 216     | 99     | Positive                        | A1 (17604) B52 (1858) Cw6 (6037) | Positive                        | DR15 (3299)                           |                                                                  |
| 1461 | 216     | 21     | Positive                        | A1 (6967) B52 (809)              | Positive                        | DR15 (833)                            |                                                                  |
| 2400 | 216     | 97     | Positive                        | A1 (17133) B52 (1794) Cw6 (5259) | Positive                        | DR15 (2535)                           |                                                                  |
| 3632 | 216     | 92     | Positive                        | A1 (14105) Cw6 (3687)            | Positive                        | DR15 (1793)                           | DSA to A1(MFI=14105) and Cw6(MFI=3687);<br>DSA to DR15(MFI=1793) |
| 3753 | 216     | 98.64  | Positive                        | A1 (18567) B52 (1577) Cw6 (5227) | Positive                        | DR15 (1890)                           |                                                                  |
| 3808 | 216     |        | Positive                        | A1 (9731) B52 (1264) Cw6 (1115)  | Positive                        | DR15 (1339)                           | Unacceptable                                                     |
| 3966 | 216     | 99%    | Positive                        | A1 (18196) B52 (1873) Cw6 (4359) | Positive                        | DR15 (2371)                           | Unacceptable. Unacceptable                                       |
| 5130 | 216     | 98%    | Positive                        | A1 (16627) Cw6 (5760)            | Positive                        | DR15 (3760)                           |                                                                  |
| 8001 | 216     | 99     | Positive                        | A1 (18848) B52 (1814) Cw6 (5681) | Positive                        | DR15 (2419)                           |                                                                  |
| 8080 | 216     | 99     | Positive                        | A1 (18172) B52 (1845) Cw6 (5296) | Positive                        | DR15 (3929)                           |                                                                  |
| 8083 | 216     | 96.59  | Positive                        | A1 (18842) Cw5 (1997) B52 (2501) | Positive                        | DR15 (2690) DQ6 (5580) DQA1*01 (5580) | Class I antibodies                                               |
| 8103 | 216     | 38     | Positive                        | A1 (12872) B52 (2683)            | Borderline                      | DR7 (964) DR15 (1412)                 | class I high MFI; class II low MFI                               |
| 8110 | 216     | 97     | Positive                        | A1 (22155) B52 (3135) Cw6 (8935) | Positive                        | DR15 (4720)                           |                                                                  |
| 8111 | 216     |        | Positive                        | A1 (10000) B52 (1000) Cw6 (2800) | Positive                        | DR15 (1500)                           |                                                                  |

**Table 28. Individual Virtual crossmatch results for Serum #216 vs Donor# V2**

Donor #V2 HLA genotype: A\*02:01:01-A\*32:01:01-B\*27:05:02-B\*44:02:01-C\*02:02:02-C\*05:01:01/DRB1\*11:01:01-DRB1\*13:01:01-DRB3\*01:01:02-DRB3\*02:02:01-DQA1\*01:03:01-DQA1\*05:05:01-DQB1\*03:01:01G-DQB1\*06:03-DPA1\*01:03:01-DPB1\*03:01:01G-DPB1\*04:01:01G

| Ctr  | Patient | % CPRA | Virtual<br>T Cell<br>Prediction | Class I DSA(MFI)                   | Virtual<br>B-cell<br>prediction | Class II DSA(MFI)                                                | Comments                                                                                                             |
|------|---------|--------|---------------------------------|------------------------------------|---------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| 230  | 216     | 55     | Positive                        | Cw2 (11709) Cw5 (7229) B44 (23152) | Positive                        | DR11 (8764) DR13 (10672) DR52 (3752)                             |                                                                                                                      |
| 792  | 216     | 94.06  | Positive                        | Cw2 (6726) Cw5 (4081) B44 (18396)  | Positive                        | DR11 (5300) DR13 (6374) DR52 (2003)                              |                                                                                                                      |
| 793  | 216     | 98.7   | Positive                        | Cw2 (8106) Cw5 (5388) B44 (19546)  | Positive                        | DR11 (6517) DR13 (8042) DR52 (2935)<br>DQ6 (1209)                | ExPlex; DR52= DRB3*01 allele specific                                                                                |
| 910  | 216     | 99%    | Positive                        | Cw2 (6882) Cw5 (4023) B44 (16872)  | Positive                        | DR11 (4671) DR13 (5781) DR52 (1935)                              |                                                                                                                      |
| 1426 | 216     | 99     | Positive                        | Cw2 (8579) Cw5 (5382) B44 (21005)  | Positive                        | DR11 (6800) DR13 (7217) DQA1*05 (1437)<br>DR52 (3564) DQ6 (1535) |                                                                                                                      |
| 1461 | 216     | 21     | Positive                        | Cw2 (1337) Cw5 (1268) B44 (13913)  | Positive                        | DR11 (1934) DR13 (2039) DR52 (1308)                              |                                                                                                                      |
| 2400 | 216     | 97     | Positive                        | Cw2 (7735) Cw5 (4964) B44 (19400)  | Positive                        | DR11 (4995) DR13 (7162) DR52 (2582)                              |                                                                                                                      |
| 3632 | 216     | 92     | Positive                        | Cw2 (5149) Cw5 (3578) B44 (19332)  | Positive                        | DR11 (4652) DR13 (5534) DR52 (1790)                              | DSA to B44(MFI=19332), Cw2(MFI=5149),<br>Cw5(MFI=3578). DSA to DR11(MFI=4652),<br>DR13(MFI=5534) and DR52(MFI=1790). |
| 3753 | 216     | 98.64  | Positive                        | Cw2 (8446) Cw5 (5011) B44 (24099)  | Positive                        | DR11 (6038) DR13 (6183) DR52 (1890)                              |                                                                                                                      |
| 3808 | 216     |        | Positive                        | Cw2 (2840) Cw5 (2254) B44 (18749)  | Positive                        | DR11 (3076) DR13 (3344)                                          | Unacceptable                                                                                                         |
| 3966 | 216     | 99%    | Positive                        | Cw2 (7772) Cw5 (4407) B44 (20297)  | Positive                        | DR11 (5889) DR13 (6629) DR52 (2540)                              | Unacceptable. Unacceptable                                                                                           |
| 5130 | 216     | 98%    | Positive                        | Cw2 (9614) Cw5 (6272) B44 (17484)  | Positive                        | DR11 (8536) DR13 (9851)                                          | DRB3*01:01 (3655)                                                                                                    |
| 8001 | 216     | 99     | Positive                        | Cw2 (8957) Cw5 (5208) B44 (20387)  | Positive                        | DR11 (6271) DR13 (7830) DR52 (2241)                              |                                                                                                                      |
| 8080 | 216     | 99     | Positive                        | Cw2 (8734) Cw5 (5253) B44 (18667)  | Positive                        | DR11 (7174) DR13 (9906) DR52 (3601)                              |                                                                                                                      |
| 8083 | 216     | 96.59  | Positive                        | Cw2 (4941) Cw5 (4358) B44 (33116)  | Positive                        | DR11 (5757) DR13 (6673) DR52 (4166)<br>DQ6 (2007)                | Class I antibodies                                                                                                   |
| 8103 | 216     | 38     | Positive                        | Cw2 (7309) Cw5 (5612) B44 (15269)  | Borderline                      | DR11 (2868) DR13 (3399) DQA1*05 (8085)<br>DR52 (1574)            | Class I high MFI; class II low MFI                                                                                   |
| 8110 | 216     | 97     | Positive                        | Cw2 (15177) Cw5 (9507) B44 (24753) | Positive                        | DR11 (10815) DR13 (12710) DR52 (3905)                            |                                                                                                                      |
| 8111 | 216     |        | Positive                        | Cw2 (3900) Cw5 (2500) B44 (13900)  | Positive                        | DR11 (4500) DR13 (4900) DR52 (2000)                              |                                                                                                                      |

**Table 29. Individual Virtual crossmatch results for Serum #216 vs Donor# V3**

Donor #V3 HLA genotype: A\*02:02:01-A\*24:02:01-B\*27:05:02-B\*39:06:02-C\*02:02:02-C\*07:02:01/DRB1\*04:04:01-DRB1\*14:06:01-DRB4\*01:03:03-DRB3\*01:01:02-DQA1\*03:01:01-DQA1\*05:03:01-DQB1\*03:01:01-DQB1\*03:02:01-DPA1\*01:03:01-DPB1\*04:01:01G-DPB1\*04:02:01G

| Ctr  | Patient | % CPRA | Virtual<br>T Cell<br>Prediction | Class I DSA(MFI)        | Virtual<br>B-cell<br>prediction | Class II DSA(MFI)                      | Comments                                                                                   |
|------|---------|--------|---------------------------------|-------------------------|---------------------------------|----------------------------------------|--------------------------------------------------------------------------------------------|
| 230  | 216     | 68%    | Positive                        | Cw2 (11709) A24 (15966) | Positive                        | DR14 (10593) DR52 (3753)               |                                                                                            |
| 792  | 216     | 94.06  | Positive                        | Cw2 (6726) A24 (8913)   | Positive                        | DR52 (2003)                            | DRB1*14:06 is not present on our panel                                                     |
| 793  | 216     | 98.7   | Positive                        | Cw2 (8106) A24 (11370)  | Positive                        | DQA1*05 (1209) DR14 (4063) DR52 (2935) | ExPlex, A*02:05 bead assessed for donor A*02:02; A24 = A*24:02 allele specific DSA.        |
| 910  | 216     | 99%    | Positive                        | Cw2 (6882) A24 (9963)   | Positive                        | DR14 (4786) DR52 (1935)                | ExPlex; DRB1*14:06 empirically assessed.                                                   |
| 1426 | 216     | 99     | Positive                        | Cw2 (8579) A24 (10483)  | Positive                        | DQA1*05 (1437) DR14 (6418) DR52 (4655) |                                                                                            |
| 1461 | 216     | 21     | Positive                        | Cw2 (1337) A24 (4285)   | Positive                        | DR14 (2042) DR52 (1308)                |                                                                                            |
| 2400 | 216     | 97     | Positive                        | Cw2 (7735) A24 (10599)  | Positive                        | DR14 (6392) DR52 (2582)                |                                                                                            |
| 3632 | 216     | 92     | Positive                        | Cw2 (5149) A24 (8814)   | Positive                        | DR14 (4802) DR52 (1790)                | DSA detected to A24(MFI=8814) and Cw2(MFI=5149). DSA to DR14(MFI=4802) and DR52(MFI=1790). |
| 3753 | 216     | 98.64  | Positive                        | Cw2 (8446) A24 (10243)  | Positive                        | DR14 (5663) DR52 (1890)                |                                                                                            |
| 3808 | 216     |        | Positive                        | Cw2 (2840) A24 (7807)   | Positive                        | DR14 (3251) DR52 (2170)                | Unacceptable                                                                               |
| 3966 | 216     | 99%    | Positive                        | Cw2 (7772) A24 (11108)  | Positive                        | DR14 (5393) DR52 (2540)                | Unacceptable; No bead DRB1*14:06 in SAB PANEL                                              |
| 5130 | 216     | 98%    | Positive                        | Cw2 (9614) A24 (12487)  | Positive                        | DRB3*01:01 (3655), DQA1*05:01 (1679)   |                                                                                            |
| 8001 | 216     | 99     | Positive                        | Cw2 (8957) A24 (11109)  | Positive                        | DR14 (6733) DR52 (2241)                | DRB1*14:06 is not in the panel, however other allele DRB1*14:02 (MFI=6733)                 |
| 8080 | 216     | 99     | Positive                        | Cw2 (8734) A24 (10869)  | Positive                        | DR14 (6007) DR52 (3601)                |                                                                                            |
| 8083 | 216     | 96.33  | Positive                        | Cw2 (4941) A24 (14818)  | Positive                        | DR14 (6594) DR52 (4166)                | Class I antibodies                                                                         |
| 8103 | 216     | 38     | Positive                        | Cw2 (7309) A24 (9042)   | Borderline                      | DR52 (1574)                            | Class I high MFI; class II low MFI                                                         |
| 8110 | 216     | 97     | Positive                        | Cw2 (15177) A24 (13651) | Positive                        | DR14 (9483) DR52 (3905)                | A*2402                                                                                     |
| 8111 | 216     |        | Positive                        | Cw2 (4000) A24 (6500)   | Positive                        | DR14 (4300) DR52 (1700)                |                                                                                            |

**Table 30. Individual Cutoff values and Pretreatment - Exchange 36**

| Ctr | Locus   | Pos<br>Cutoff<br>Value | Locus    | Pos<br>Cutoff<br>Value | Manufacturer | Kit type                 | Sera<br>pretreatment |
|-----|---------|------------------------|----------|------------------------|--------------|--------------------------|----------------------|
| 230 | A       | 4000                   | DRB1     | 4000                   | One Lambda   | Explex/Single Antigen    | None                 |
|     | B       | 4000                   | DRB3/4/5 | 4000                   |              |                          |                      |
|     | C       | 10000                  | DQA1     | 4000                   |              |                          |                      |
|     | Class I |                        | DQB1     | 4000                   |              |                          |                      |
|     |         |                        | DPB1     | 10000                  |              |                          |                      |
|     |         |                        | Class II |                        |              |                          |                      |
| 615 | A       |                        | DRB1     |                        | One Lambda   | LABScreen Single Antigen | FBS/EDTA             |
|     | B       |                        | DRB3/4/5 |                        |              |                          |                      |
|     | C       |                        | DQA1     |                        |              |                          |                      |
|     | Class I | 500                    | DQB1     |                        |              |                          |                      |
|     |         |                        | DPB1     |                        |              |                          |                      |
|     |         |                        | Class II | 500                    |              |                          |                      |
| 753 | A       | 2000                   | DRB1     | 2000                   | One Lambda   | LABScreen Single Antigen | EDTA                 |
|     | B       | 2000                   | DRB3/4/5 | 2000                   |              |                          |                      |
|     | C       | 3000                   | DQA1     | 2000                   |              |                          |                      |
|     | Class I | 2000                   | DQB1     | 2000                   |              |                          |                      |
|     |         |                        | DPB1     | 2000                   |              |                          |                      |
|     |         |                        | Class II |                        |              |                          |                      |
| 792 | A       | 2000                   | DRB1     | 2000                   | One Lambda   | LABScreen Single Antigen | FBS/EDTA             |
|     | B       | 2000                   | DRB3/4/5 | 2000                   |              |                          |                      |
|     | C       | 2000                   | DQA1     | 2000                   |              |                          |                      |
|     | Class I | 2000                   | DQB1     | 2000                   |              |                          |                      |
|     |         |                        | DPB1     | 2000                   |              |                          |                      |
|     |         |                        | Class II | 2000                   |              |                          |                      |
| 793 | A       |                        | DRB1     |                        | One Lambda   | LABScreen Single Antigen | EDTA                 |
|     | B       |                        | DRB3/4/5 |                        |              |                          |                      |
|     | C       |                        | DQA1     |                        |              |                          |                      |
|     | Class I | 1000                   | DQB1     |                        |              |                          |                      |
|     |         |                        | DPB1     |                        |              |                          |                      |
|     |         |                        | Class II | 1000                   |              |                          |                      |

**Table 30. Individual Cutoff values and Pretreatment - Exchange 36**

| Ctr  | Locus   | Pos<br>Cutoff<br>Value | Locus    | Pos<br>Cutoff<br>Value | Manufacturer | Kit type                 | Sera<br>pretreatment |
|------|---------|------------------------|----------|------------------------|--------------|--------------------------|----------------------|
| 1426 | A       | 1000                   | DRB1     | 1000                   | One Lambda   | LABScreen Single Antigen | PreSorb              |
|      | B       | 1000                   | DRB3/4/5 | 1000                   |              |                          |                      |
|      | C       | 1000                   | DQA1     | 1000                   |              |                          |                      |
|      | Class I | 1000                   | DQB1     | 1000                   |              |                          |                      |
|      |         |                        | DPB1     | 1000                   |              |                          |                      |
|      |         |                        | Class II | 1000                   |              |                          |                      |
| 2400 | A       | 2000                   | DRB1     | 2000                   | One Lambda   | LABScreen Single Antigen | EDTA                 |
|      | B       | 2000                   | DRB3/4/5 | 2000                   |              |                          |                      |
|      | C       | 2000                   | DQA1     | 2000                   |              |                          |                      |
|      | Class I | 2000                   | DQB1     | 2000                   |              |                          |                      |
|      |         |                        | DPB1     | 2000                   |              |                          |                      |
|      |         |                        | Class II | 2000                   |              |                          |                      |
| 3224 | A       | 1000                   | DRB1     | 1000                   | One Lambda   | LABScreen Single Antigen | EDTA                 |
|      | B       | 1000                   | DRB3/4/5 | 1000                   |              |                          |                      |
|      | C       | 1000                   | DQA1     | 1000                   |              |                          |                      |
|      | Class I | 1000                   | DQB1     | 1000                   |              |                          |                      |
|      |         |                        | DPB1     | 1000                   |              |                          |                      |
|      |         |                        | Class II | 1000                   |              |                          |                      |
| 3632 | A       | 2000                   | DRB1     | 2000                   | One Lambda   | Expex/Single Antigen     | EDTA                 |
|      | B       | 2000                   | DRB3/4/5 | 2000                   |              |                          |                      |
|      | C       | 2000                   | DQA1     | 2000                   |              |                          |                      |
|      | Class I | 2000                   | DQB1     | 2000                   |              |                          |                      |
|      |         |                        | DPB1     | 5000                   |              |                          |                      |
|      |         |                        | Class II |                        |              |                          |                      |
| 3753 | A       | 1000                   | DRB1     | 1000                   | One Lambda   | LABScreen Single Antigen | EDTA                 |
|      | B       | 1000                   | DRB3/4/5 | 1000                   |              |                          |                      |
|      | C       | 2000                   | DQA1     | 1000                   |              |                          |                      |
|      | Class I | 1000                   | DQB1     | 1000                   |              |                          |                      |
|      |         |                        | DPB1     | 2000                   |              |                          |                      |
|      |         |                        | Class II | 1000                   |              |                          |                      |

**Table 30. Individual Cutoff values and Pretreatment - Exchange 36**

| Ctr  | Locus   | Pos<br>Cutoff<br>Value | Locus    | Pos<br>Cutoff<br>Value | Manufacturer | Kit type                               | Sera<br>pretreatment |
|------|---------|------------------------|----------|------------------------|--------------|----------------------------------------|----------------------|
| 3808 | A       |                        | DRB1     |                        | Werfen       | LIFECODES® Single Antigen Assays (LSA) | None                 |
|      | B       |                        | DRB3/4/5 |                        |              |                                        |                      |
|      | C       |                        | DQA1     |                        |              |                                        |                      |
|      | Class I | 750                    | DQB1     |                        |              |                                        |                      |
|      |         |                        | DPB1     |                        |              |                                        |                      |
|      |         |                        | Class II | 750                    |              |                                        |                      |
|      |         |                        |          |                        |              |                                        |                      |
| 5130 | A       | 1500                   | DRB1     | 1500                   | One Lambda   | LABScreen Single Antigen               | EDTA                 |
|      | B       | 1500                   | DRB3/4/5 | 1500                   |              |                                        |                      |
|      | C       | 1500                   | DQA1     | 1500                   |              |                                        |                      |
|      | Class I | 1500                   | DQB1     | 1500                   |              |                                        |                      |
|      |         |                        | DPB1     | 1500                   |              |                                        |                      |
|      |         |                        | Class II | 1500                   |              |                                        |                      |
|      |         |                        |          |                        |              |                                        |                      |
| 5214 | A       | 3000                   | DRB1     | 3000                   | One Lambda   | LABScreen Single Antigen               | FCS + EDTA           |
|      | B       | 3000                   | DRB3/4/5 | 3000                   |              |                                        |                      |
|      | C       | 3000                   | DQA1     | 3000                   |              |                                        |                      |
|      | Class I | 3000                   | DQB1     | 3000                   |              |                                        |                      |
|      |         |                        | DPB1     | 3000                   |              |                                        |                      |
|      |         |                        | Class II | 3000                   |              |                                        |                      |
|      |         |                        |          |                        |              |                                        |                      |
| 8001 | A       |                        | DRB1     |                        | One Lambda   | LABScreen Single Antigen               | EDTA                 |
|      | B       |                        | DRB3/4/5 |                        |              |                                        |                      |
|      | C       |                        | DQA1     |                        |              |                                        |                      |
|      | Class I | 1000                   | DQB1     |                        |              |                                        |                      |
|      |         |                        | DPB1     |                        |              |                                        |                      |
|      |         |                        | Class II | 1000                   |              |                                        |                      |
|      |         |                        |          |                        |              |                                        |                      |
| 8083 | A       | 3000                   | DRB1     | 3000                   | Werfen       | LIFECODES® Single Antigen Assays (LSA) | EDTA                 |
|      | B       | 3000                   | DRB3/4/5 | 5000                   |              |                                        |                      |
|      | C       | 5000                   | DQA1     | 5000                   |              |                                        |                      |
|      | Class I |                        | DQB1     | 3000                   |              |                                        |                      |
|      | A       | 3000                   | DPB1     | 10000                  |              |                                        |                      |
|      |         |                        | Class II |                        |              |                                        |                      |
|      |         |                        |          |                        |              |                                        |                      |
|      |         |                        |          |                        |              |                                        |                      |

**Table 30. Individual Cutoff values and Pretreatment - Exchange 36**

| Ctr  | Locus   | Pos          | Locus    | Pos          | Manufacturer | Kit type                 | Sera pretreatment |
|------|---------|--------------|----------|--------------|--------------|--------------------------|-------------------|
|      |         | Cutoff Value |          | Cutoff Value |              |                          |                   |
| 8103 | A       | 500          | DRB1     | 500          | One Lambda   | LABScreen Single Antigen | DTT               |
|      | B       | 500          | DRB3/4/5 | 500          |              |                          |                   |
|      | C       | 500          | DQA1     | 500          |              |                          |                   |
|      | Class I |              | DQB1     | 500          |              |                          |                   |
|      |         |              | DPB1     | 500          |              |                          |                   |
|      |         |              | Class II |              |              |                          |                   |
|      |         |              | DRB1     | 1000         |              |                          |                   |
|      |         |              |          |              |              |                          |                   |
| 8111 | A       | 1000         | DRB3/4/5 | 1000         | One Lambda   | LABScreen Single Antigen | EDTA              |
|      | B       | 1000         | DQA1     | 1000         |              |                          |                   |
|      | C       | 1000         | DQB1     | 1000         |              |                          |                   |
|      | Class I |              | DPB1     | 1000         |              |                          |                   |
|      |         |              | Class II |              |              |                          |                   |