B-CELL LINE EXCHANGE #302
DECEMBER 21, 2022

B-cell Line	603 - 604

The results for B-cell Line Exchange #302 were summarized in Tables 1 - 2 and individual laboratory results reported for each sample were listed in Tables 3 - 6. We are grateful to the generosity of **Oxford Transplant Center, Churchill Hospital and to Jean-Marie Tiercy, University Hospital of Geneva** for kindly sharing the interesting cells examined in this study.

We would like to also thank the labs performing NGS for sharing their findings and encourage other NGS labs to do so as well. Haplotype frequencies used in this report were from the NMDP Bioinformatics website, https://bioinformatics.bethematchclinical.org/.

Ter-603. The reported HLA type for this cell from a Hispanic donor was as follows:

HLA-A		HLA-B		HLA-C	
*03:01	*24:02	*35:31	*47:01	*03:05	*06:02

DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1	
*04:05	*14:02	3*01:01	4*01:03	*03:03	*05:03	*03:01	*03:02	*01:03	*02:02	*01:01	*04:02

One likely class I association present in this cell was A*03:01-B*47:01-C*06:02, observed in Hispanic populations, with HF = 0.00177. The other likely association present may then be A*24:02-B*35:31-C*03:05.

This cell was previously studied for class II as Ter 280 (2001) and for class I as extracts 501 (2010), 302 (2004), and 154 (2001). In this present retyping, B*35:31 was assigned by 100% of labs. B*47:01 (100%) was reported as the second B-locus type, with 9 labs assigning B*47:01:01. Good agreement (≥ 90%) was achieved for all other allele assignments.

Ter-604. The reported HLA type for this cell from a Caucasian donor was as follows:

HLA-A		HLA-B		HLA-C	
*02:01	*31:01	*18:01	*51:01	*07:01	*15:02

DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1	
*04:31	*16:02	4*01:03	5*02:02	*01:02	*03:03	*03:01	*05:02	*01:03		*04:01	

One likely association present in this cell was A*02:01-B*51:01-DRB1*16:02-DQB1*05:02, exclusively observed in Caucasians, with HF = 0.00006. The other likely association was A*31:01-B*18:01-DRB1*04:31-DQB1*03:01.

This cell was GE47102 (1), the reference cell for the rare DRB1*04:31 allele. It was examined numerous times in the Exchange as Ter 547 (2018), Ter 463 (2011), Ter 354 (2005), and Ter 287 (2001). In this present retyping, DRB1*04:31 was assigned by 100% of labs. DRB1*16:02 (100%) was reported as the second DRB1 type. Good agreement (≥ 90%) was also achieved for all other allele assignments.

References:

1. Bettens F, Kervaire B, Tiercy JM. Sequence of HLA-DRB1*0431 allele. *Tissue Antigens* (1999) 53:378-380.

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Table 1: Summary of the 302nd B-cell Line Exchange

Ter-603

DNA Typing - class II

30 labs High; 23 labs low-DRB1	%(n)
DRB1*04:05:01G	3 (1)
DRB1*04:05:01	33(10)
DRB1*04:05	63(19)
DRB1*04	96(22)
*DRB1*03*	4 (1)

22 labs High; 17 labs Low-DRB3/4/5	%(n)
DRB3*01:01:02G	5 (1)
DRB3*01:01P	5 (1)
DRB3*01:01:02	22(5)
DRB3*01:01	68(15)
DRB3*01	82(14)
DRB3*PRESENT	18(3)

24 labs High; 20 labs Low-DQA1	%(n)
DQA1*03:03:01	21(5)
DQA1*03:01:01G	4 (1)
DQA1*03:03	75(18)
DQA1*03	100(20)

30 labs High; 22 labs Low-DQB1	%(n)
DQB1*03:01:01	10(3)
DQB1*03:01:01G	23(7)
DQB1*03:01P	3 (1)
DQB1*03:01	63(19)
DQB1*03(DQ7)	59(13)
DQB1*03	41(9)

18 labs High; 12 labs Low-DPA1	%(n)
DPA1*01:03:01	27(5)
DPA1*01:03:01G	6 (1)
DPA1*01:03	61(11)
*DPA1*03:02*	6 (1)
DPA1*01	100(12)

29 labs High; 13 labs Low-DPB1	%(n)
DPB1*01:01:01	34(10)
DPB1*01:01:01G	7 (2)
DPB1*01:01	59(17)
DPB1*01	100(13)

30 labs High; 23 labs low-DRB1	%(n)
DRB1*14:02:01	33(10)
DRB1*14:02P	3 (1)
DRB1*14:02	63(19)
DRB1*14	96(22)
*DRB1*13*	4 (1)

21 labs High; 18 labs Low-DRB3/4/5	%(n)
DRB4*01:01:01G	10(2)
DRB4*01:03:01	19(4)
DRB4*01:03	71(15)
DRB4*01	78(14)
DRB4*PRESENT	22(4)

24 labs High; 20 labs Low-DQA1	%(n)
DQA1*05:01:01G	4 (1)
DQA1*05:03:01	21(5)
DQA1*05:03	75(18)
DQA1*05	100(20)

30 labs High; 22 labs Low-DQB1	%(n)
DQB1*03:02:01	27(8)
DQB1*03:02:01G	10(3)
DQB1*03:02P	3 (1)
DQB1*03:02	60(18)
DQB1*03(DQ8)	59(13)
DQB1*03	41(9)

18 labs High; 12 labs Low-DPA1	%(n)
DPA1*02:02:02	27(5)
DPA1*02:02:02G	6 (1)
DPA1*02:02	61(11)
*DPA1*02:01*	6 (1)
DPA1*02	100(12)

29 labs High; 13 labs Low-DPB1	%(n)
DPB1*04:02:01	24(7)
DPB1*04:02:01G	14(4)
DPB1*04:02P	3 (1)
DPB1*04:02	59(17)
DPB1*04(DP402)	62(8)
DPB1*04	38(5)

DNA Typing - class I

28 labs High; 23 labs low- A	%(n)
A*03:01:01:05	3 (1)
A*03:01:01	29(8)
A*03:01:01G	7 (2)
A*03:01	61(17)
A*03	100(23)

28 labs High; 23 labs low- B	%(n)
B*35:31	100(28)
B*35	100(23)

28 labs High; 22 labs low- C	%(n)
C*03:05:01:01	11(3)
C*03:05:01	7 (2)
C*03:05P	4 (1)
C*03:05	78(22)
C*03(Cw10)	27(6)
C*03	73(16)

28 labs High; 23 labs low- A	%(n)
A*24:02:01:01	3 (1)
A*24:02:01	29(8)
A*24:02:01G	7 (2)
A*24:02	61(17)
A*24	100(23)

28 labs High; 23 labs low- B	%(n)
B*47:01:01	32(9)
B*47:01P	4 (1)
B*47:01	64(18)
B*47	100(23)

28 labs High; 22 labs low- C	%(n)
C*06:02:01:13	7 (2)
C*06:02:01	25(7)
C*06:02:01G	4 (1)
C*06:02P	4 (1)
C*06:02	60(17)
C*06	100(22)

Table 2: Summary of the 302nd B-cell Line Exchange

Ter-604

DNA Typing - class II

30 labs High; 22 labs low-DRB1	%(n)
DRB1*04:31	100(30)
DRB1*04	100(22)

21 labs High; 18 labs Low-DRB3/4/5	%(n)
DRB4*01:03:01	19(4)
DRB4*01:01:01G	10(2)
DRB4*01:03	71(15)
DRB4*01	78(14)
DRB4*PRESENT	22(4)

23 labs High; 20 labs Low-DQA1	%(n)
DQA1*01:02:02	22(5)
DQA1*01:02	78(18)
DQA1*01	100(20)

30 labs High; 22 labs Low-DQB1	%(n)
DQB1*03:01:01	13(4)
DQB1*03:01:01G	23(7)
DQB1*03:01	63(19)
DQB1*03(DQ7)	64(14)
DQB1*03	36(8)

19 labs High; 12 labs Low-DPA1	%(n)
DPA1*01:03:01	26(5)
DPA1*01:03:01G	5 (1)
DPA1*01:03	68(13)
DPA1*01	100(12)

29 labs High; 13 labs Low-DPB1	%(n)
DPB1*04:01:01	28(8)
DPB1*04:01:01G	14(4)
DPB1*04:01	58(17)
DPB1*04(DP401)	62(8)
DPB1*04	38(5)

30 labs High; 23 labs low-DRB1	%(n)
DRB1*16:02:01	13(4)
DRB1*16:02:01G	20(6)
DRB1*16:02P	7 (2)
DRB1*16:02	60(18)
DRB1*16	96(22)
*DRB1*15*	4 (1)

22 labs High; 17 labs Low-DRB3/4/5	%(n)
DRB5*02:02:01	27(6)
DRB5*02:02:01G	4.5 (1)
DRB5*02:02P	4.5 (1)
DRB5*02:02	59(13)
*DRB5*01:01*	4.5 (1)
DRB5*02	71(12)
DRB5*PRESENT	23(4)
DRB5*01	6 (1)

23 labs High; 20 labs Low-DQA1	%(n)
DQA1*03:03:01	22(5)
*DQA1*03:01:01G*	4 (1)
DQA1*03:03	74(17)
DQA1*03	100(20)

30 labs High; 22 labs Low-DQB1	%(n)
DQB1*05:02:01	17(5)
DQB1*05:02:01G	13(4)
DQB1*05:02P	3 (1)
DQB1*05:02	67(20)
DQB1*05	100(22)

DNA Typing - class I

28 labs High; 23 labs low- A	%(n)
A*02:01:01:01	3.5(1)
A*02:01:01	32(9)
A*02:01:01G	3.5(1)
A*02:01P	3.5(1)
A*02:01	57(16)
A*02	100(23)

28 labs High; 23 labs low- B	%(n)
B*18:01:01	28(8)
B*18:01:01G	4 (1)
B*18:01P	7 (2)
B*18:01	61(17)
B*18	100(23)

28 labs High; 22 labs low- C	%(n)
C*07:01:01:16	4 (1)
C*07:01:01	28(8)
C*07:01:01G	4 (1)
C*07:01P	4 (1)
C*07:01	60(17)
C*07	100(22)

28 labs High; 23 labs low- A	%(n)
A*31:01:02:01	4 (1)
A*31:01:02G	4 (1)
A*31:01P	4 (1)
A*31:01:02	28(8)
A*31:01	60(17)
A*31	100(23)

28 labs High; 23 labs low- B	%(n)
B*51:01:01:04	4 (1)
B*51:01:01	25(7)
B*51:01:01G	4 (1)
B*51:01P	7 (2)
B*51:01	60(17)
B*51	100(23)

28 labs High; 22 labs low- C	%(n)
C*15:02:01:01	4 (1)
C*15:02:01	28(8)
C*15:02:01G	4 (1)
C*15:02P	4 (1)
C*15:02	60(17)
C*15	100(22)

Table 3a: Individual laboratory results for B-cell #603 - Class II														
	Low resolution													
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alelles
278	*04	*14	3*01	4*01	*03	*05	*03	*03	*01	*02	*01	*04		
725	*04	*14	3*01	4*01	*03	*05	*03(DQ7)	*03(DQ8)						
731	*04	*14	3*01	4*01	*03	*05	*03(DQ7)	*03(DQ8)	*01	*02	*01	*04	NGS RT-PCR	
747	*04	*14	3*PRESENT	4*PRESENT	*03	*05	*03	*03	*01	*02	*01	*04	SSP SSO NGS	
771	*04	*14			*03	*05	*03	*03					SSP SSO SBT NGS	
792	*04	*14	3*01	4*01	*03	*05	*03(DQ7)	*03(DQ8)	*01	*02	*01	*04(DP402)	SSO NGS	
793	*04	*14	3*01	4*PRESENT	*03	*05	*03(DQ7)	*03(DQ8)	*01	*02	*01	*04(DP402)	SSP	
794	*04	*14	3*01	4*01	*03	*05	*03		*01	*02	*01	*04	SSP SSO NGS RT-PCR	
2400	*04	*14	3*01	4*01	*03	*05	*03(DQ7)	*03(DQ8)			*01	*04(DP402)	SSO NGS	
2847	*04	*14											SSO	
3519	*04	*14	3*01	4*01	*03	*05	*03(DQ7)	*03(DQ8)	*01	*02	*01	*04(DP402)	SSP NGS RT-PCR	
3966													SSP	
4079	*04	*14	3*01	4*01	*03	*05	*03(DQ7)	*03(DQ8)	*01	*02	*01	*04(DP402)	SSO	
5130	*04	*14	3*01	4*01	*03	*05	*03	*03			*01	*04	SSO NGS	
5214	*04	*14	3*01	4*01	*03	*05	*03(DQ7)	*03(DQ8)	*01	*02	*01	*04(DP402)	RT-PCR	
5219	*04	*14			*03	*05	*03	*03					SSO NGS	
5462	*04	*14	3*01	4*01	*03	*05	*03	*03	*01	*02			SSO	
5488				4*01									SSO NGS	
5642	*04	*14	3*PRESENT	4*PRESENT	*03	*05	*03(DQ7)	*03(DQ8)					SSP SSO	
6649	*04	*14					*03(DQ7)	*03(DQ8)					SSO	
8038	*04	*14	3*01	4*01	*03	*05	*03(DQ7)	*03(DQ8)	*01	*02	*01	*04(DP402)	SSO SBT	
8043	*04	*14			*03	*05	*03	*03					SSP SSO NGS	
8058	*03	*13	3*PRESENT	4*PRESENT			*03							
8068	*04	*14			*03	*05	*03(DQ7)	*03(DQ8)					SSP SSO	
8123	*04	*14	3*01	4*01	*03	*05	*03(DQ7)	*03(DQ8)	*01	*02	*01	*04(DP402)	RT-PCR	

Table 3b: Individual laboratory results for B-cell #603 - Class II

	High resolution													
Center	**DRB1**		**DRB3/4/5**		**DQA1**		**DQB1**		**DPA1**		**DPB1**		**METHOD**	**Other Alelles**
230	*04:05	*14:02	3*01:01	4*01:03	*03:03	*05:03	*03:01	*03:02	*01:03	*02:02	*01:01	*04:02	NGS	
278	*04:05	*14:02	3*01:01	4*01:03	*03:03	*05:03	*03:01	*03:02	*01:03	*02:02	*01:01	*04:02		
731	*04:05	*14:02			*03:03	*05:03	*03:01	*03:02			*01:01	*04:02	NGS RT-PCR	DQB1*03:276N
747	*04:05:01	*14:02:01	3*01:01:02	4*01:03:01	*03:03:01	*05:03:01	*03:01	*03:02:01	*01:03:01	*02:02:02	*01:01:01	*04:02:01	SSP SSO NGS	DQB1*03:276N
762	*04:05	*14:02	3*01:01	4*01:03	*03:03	*05:03	*03:01	*03:02	*01:03	*02:02	*01:01	*04:02	NGS	
771	*04:05	*14:02					*03:01	*03:02			*01:01	*04:02	SSP SSO SBT NGS	
792	*04:05	*14:02	3*01:01	4*01:03	*03:03	*05:03	*03:01	*03:02	*01:03	*02:02	*01:01	*04:02	SSO NGS	DQB1*03:358N
793					*03:03	*05:03					*01:01	*04:02	SSP	
794	*04:05:01	*14:02:01	3*01:01	4*01:03	*03:03:01	*05:03:01	*03:01:01	*03:02:01	*01:03:01	*02:02:02	*01:01:01	*04:02:01	SSP SSO NGS RT-PCR	
2344	*04:05:01	*14:02:01	NT	NT	NT	NT	*03:01:01G	*03:02:01G	NT	NT	*01:01:01	*04:02:01		
2400	*04:05	*14:02	3*01:01	4*01:03	*03:03	*05:03	*03:01	*03:02			*01:01:01G	*04:02:01G	SSO NGS	DQB1*03:276N
3135	*04:05:01	*14:02:01	3*01:01	4*01:03	*03:01:01G	*05:01:01G	*03:01:01G	*03:02:01G	*03:02	*02:01	*01:01:01	*04:02:01G		
3224	*04:05	*14:02	3*01:01	4*01:03	*03:03	*05:03	*03:01	*03:02	*01:03	*02:02	*01:01	*04:02	NGS	
3511	*04:05	*14:02	3*01:01	4*01:03	*03:03	*05:03	*03:01	*03:02	*01:03	*02:02	*01:01	*04:02	NGS	
3519	*04:05	*14:02	3*01:01	4*01:03	*03:03	*05:03	*03:01	*03:02			*01:01	*04:02	SSP NGS RT-PCR	
3753	*04:05:01	*14:02:01	3*01:01:02	4*01:03:01	*03:03	*05:03	*03:01:01G	*03:02:01	*01:03	*02:02	*01:01:01G	*04:02:01G	NGS	
3966	*04:05	*14:02	3*01:01	4*01:03			*03:01	*03:02					SSP	
4251	*04:05	*14:02	3*01:01:02G	4*01:01:01G	*03:03	*05:03	*03:01:01G	*03:02:01G	*01:03:01G	*02:02:02G	*01:01	*04:02	NGS	
4337	*04:05	*14:02					*03:01	*03:02			*01:01	*04:02	SSP SBT NGS	
5130	*04:05	*14:02	3*01:01	4*01:03	*03:03	*05:03	*03:01	*03:02			*01:01	*04:02	SSO NGS	DRB3*01:12 DQB1*03:02 DQB1*03:358N
5133	*04:05:01	*14:02:01	3*01:01:02	4*01:03:01	*03:03:01	*05:03:01	*03:01:01	*03:02:01	*01:03:01	*02:02:02	*01:01:01	*04:02:01	NGS	
5219	*04:05:01	*14:02:01					*03:01:01	*03:02:01			*01:01:01	*04:02:01	SSO NGS	
5451	*04:05:01	*14:02:01	3*01:01:02	4*01:03:01	*03:03:01	*05:03:01	*03:01P	*03:02:01	*01:03:01	*02:02:02	*01:01:01	*04:02:01	NGS	
5488	*04:05:01	*14:02:01	3*01:01:02		*03:03:01	*05:03:01	*03:01:01G	*03:02:01	*01:03:01	*02:02:02	*01:01:01	*04:02:01	SSO NGS	
5642	*04:05	*14:02			*03:03	*05:03	*03:01	*03:02					SSP SSO	
8001	*04:05	*14:02	3*01:01	4*01:03	*03:03	*05:03	*03:01	*03:02	*01:03	*02:02	*01:01	*04:02	NGS	DRB3*01:62 DQB1*03:276N DQB1*03:454
8021	*04:05	*14:02	3*01:01	4*01:03	*03:03	*05:03	*03:01	*03:02	*01:03	*02:02	*01:01	*04:02	SSO NGS	
8029	*04:05:01	*14:02:01					*03:01:01G	*03:02:01			*01:01:01	*04:02:01G		
8038	*04:05:01G	*14:02P	3*01:01P	4*01:01:01G	NT	NT	*03:01:01G	*03:02P	NT	NT	*01:01:01	*04:02P	SSO SBT	
8043	*04:05	*14:02			*03:03	*05:03	*03:01	*03:02	*01:03	*02:02	*01:01	*04:02	SSP SSO NGS	
8122	*04:05	*14:02	3*01:01	4*01:03	*03:03	*05:03	*03:01	*03:02	*01:03	*02:02	*01:01	*04:02	NGS	DRB3*01:62

Table 4: Individual laboratory results for B-cell #603 - Class I														
	Low resolution						High resolution							
Center	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C		METHOD	Other Alleles
230							*03:01	*24:02	*35:31	*47:01	*03:05	*06:02	NGS	
278	*03	*24	*35	*47	*03	*06	*03:01	*24:02	*35:31	*47:01	*03:05	*06:02		
725	*03	*24	*35	*47	*03	*06								
731	*03	*24	*35	*47	*03	*06	*03:01	*24:02	*35:31	*47:01	*03:05	*06:02	NGS RT-PCR	
747	*03	*24	*35	*47	*03	*06	*03:01:01	*24:02:01	*35:31	*47:01:01	*03:05:01:01	*06:02:01	SSP SSO NGS	
762							*03:01	*24:02	*35:31	*47:01	*03:05	*06:02	NGS	
771	*03	*24	*35	*47	*03	*06	*03:01	*24:02	*35:31	*47:01	*03:05	*06:02	SSP SSO SBT NGS	
792	*03	*24	*35	*47	*03(Cw10)	*06	*03:01	*24:02	*35:31	*47:01	*03:05	*06:02	SSO NGS	
793	*03	*24	*35	*47	*03(Cw10)	*06							SSP	
794	*03	*24	*35	*47	*03	*06	*03:01:01	*24:02:01	*35:31	*47:01:01	*03:05	*06:02:01	SSP SSO NGS RT-PCR	
2344							*03:01:01	*24:02:01	*35:31	*47:01:01	*03:05:01	*06:02:01		
2400	*03	*24	*35	*47	*03(Cw10)	*06	*03:01	*24:02	*35:31	*47:01	*03:05	*06:02	SSO NGS	
2847	*03	*24	*35	*47	*03	*06							SSO	
3135							*03:01:01G	*24:02:01G	*35:31	*47:01	*03:05:01	*06:02:01G		
3224							*03:01	*24:02	*35:31	*47:01	*03:05	*06:02	NGS	
3511							*03:01	*24:02	*35:31	*47:01	*03:05	*06:02	NGS	
3519	*03	*24	*35	*47	*03(Cw10)	*06	*03:01	*24:02	*35:31	*47:01	*03:05	*06:02	SSP NGS RT-PCR	
3753							*03:01:01	*24:02:01	*35:31	*47:01:01	*03:05	*06:02:01	NGS	
3966	*03	*24	*35	*47	*03	*06							SSP	
4079	*03	*24	*35	*47	*03	*06							SSO	
4251							*03:01	*24:02	*35:31	*47:01	*03:05	*06:02	NGS	
4337							*03:01	*24:02	*35:31	*47:01	*03:05	*06:02	SSP SBT NGS	
5130	*03	*24	*35	*47	*03	*06	*03:01	*24:02	*35:31	*47:01	*03:05	*06:02	SSO NGS	A*03:72 A*24:104
5133							*03:01:01:05	*24:02:01:01	*35:31	*47:01:01	*03:05:01:01	*06:02:01:13	NGS	
5214	*03	*24	*35	*47	*03	*06							RT-PCR	
5219	*03	*24	*35	*47	*03	*06	*03:01:01	*24:02:01	*35:31	*47:01:01	*03:05	*06:02:01	SSO NGS	
5451							*03:01:01	*24:02:01	*35:31	*47:01:01	*03:05	*06:02:01	NGS	
5462	*03	*24	*35	*47	*03	*06							SSO	
5488							*03:01:01	*24:02:01	*35:31	*47:01:01	*03:05	*06:02:01	SSO NGS	
5642	*03	*24	*35	*47	*03(Cw10)	*06							SSP SSO	
6649	*03	*24	*35	*47									SSO	
8001							*03:01	*24:02	*35:31	*47:01	*03:05	*06:02	NGS	
8021							*03:01	*24:02	*35:31	*47:01	*03:05	*06:02	SSO NGS	
8029							*03:01:01	*24:02:01	*35:31	*47:01:01	*03:05:01:01	*06:02:01:13		
8038	*03	*24	*35	*47	*03	*06	*03:01:01G	*24:02:01G	*35:31	*47:01P	*03:05P	*06:02P	SSO SBT	C*06:297
8043	*03	*24	*35	*47	*03	*06	*03:01	*24:02	*35:31	*47:01	*03:05	*06:02	SSP SSO NGS	
8068	*03	*24	*35	*47	*03	*06							SSP SSO	
8122							*03:01	*24:02	*35:31	*47:01	*03:05	*06:02	NGS	
8123	*03	*24	*35	*47	*03(Cw10)	*06							RT-PCR	

Table 5a: Individual laboratory results for B-cell #604 - Class II														
	Low resolution													
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alelles
278	*04	*16	4*01	5*02	*01	*03	*03	*05	*01	*01	*04	*04		
725	*04	*16	4*01	5*02	*01	*03	*03(DQ7)	*05						
731	*04	*16	4*01	5*01	*01	*03	*03(DQ7)	*05	*01	*01	*04	*04	NGS RT-PCR	
747	*04	*16	4*PRESENT	5*PRESENT	*01	*03	*03	*05	*01	*01	*04	*04	SSP SSO NGS	
771	*04	*16			*01	*03	*03	*05					SSP SSO SBT NGS	
792	*04	*16	4*01	5*02	*01	*03	*03(DQ7)	*05	*01	*01	*04(DP401)	*04(DP401)	SSO NGS	
793	*04	*16	4*PRESENT	5*PRESENT	*01	*03	*03(DQ7)	*05	*01		*04(DP401)		SSP	
794	*04	*16	4*01	5*02	*01	*03	*03	*05	*01		*04		SSP SSO NGS RT-PCR	
2400	*04	*16	4*01	5*02	*01	*03	*03(DQ7)	*05			*04(DP401)		SSO NGS	
2847	*04	*16											SSO	
3519	*04	*16	4*01	5*02	*01	*03	*03(DQ7)	*05	*01		*04(DP401)		SSP NGS RT-PCR	
3966													SSP	
4079	*04	*16	4*01	5*02	*01	*03	*03(DQ7)	*05	*01		*04(DP401)		SSO	
5130	*04	*16	4*01	5*02	*01	*03	*03	*05			*04	*04	SSO NGS	
5214	*04	*16	4*01	5*02	*01	*03	*03(DQ7)	*05	*01		*04(DP401)		RT-PCR	
5219	*04	*16			*01	*03	*03	*05					SSO NGS	
5462	*04	*16	4*01	5*02	*01	*03	*03	*05	*01	*01			SSO	
5488			4*01										SSO NGS	
5642	*04	*16	4*PRESENT	5*PRESENT	*01	*03	*03(DQ7)	*05					SSP SSO	
6649	*04	*16					*03(DQ7)	*05					SSO	
8038	*04	*16	4*01	5*02	*01	*03	*03(DQ7)	*05	*01	*01	*04(DP401)	*04(DP401)	SSO SBT	
8043	*04	*16			*01	*03	*03	*05					SSP SSO NGS	
8058		*15	4*PRESENT	5*PRESENT			*03(DQ7)	*05						
8068	*04	*16			*01	*03	*03(DQ7)	*05					SSP SSO	
8123	*04	*16	4*01	5*02	*01	*03	*03(DQ7)	*05	*01	*01	*04(DP401)	*04(DP401)	RT-PCR	

Table 5b: Individual laboratory results for B-cell #604 - Class II

	High resolution													
Center	**DRB1**		**DRB3/4/5**		**DQA1**		**DQB1**		**DPA1**		**DPB1**		**METHOD**	**Other Alelles**
230	*04:31	*16:02	4*01:03	5*02:02	*01:02	*03:03	*03:01	*05:02	*01:03	*01:03	*04:01	*04:01	NGS	
278	*04:31	*16:02	4*01:03	5*02:02	*01:02	*03:03	*03:01	*05:02	*01:03	*01:03	*04:01	*04:01		
731	*04:31	*16:02			*01:02	*03:03	*03:01	*05:02			*04:01	*04:01	NGS RT-PCR	DQB1*03:276N
747	*04:31	*16:02	4*01:03:01	5*02:02:01	*01:02:02	*03:03:01	*03:01	*05:02	*01:03:01	*01:03:01	*04:01:01	*04:01:01	SSP SSO NGS	DQB1*03:276N DQB1*05:241 DRB1*16:64
762	*04:31	*16:02	4*01:03	5*02:02	*01:02	*03:03	*03:01	*05:02	*01:03		*04:01		NGS	
771	*04:31	*16:02					*03:01	*05:02			*04:01		SSP SSO SBT NGS	
792	*04:31	*16:02	4*01:03	5*02:02	*01:02	*03:03	*03:01	*05:02	*01:03	*01:03	*04:01	*04:01	SSO NGS	DQB1*03:358N DRB1*16:64
793					*01:02	*03:03					*04:01		SSP	
794	*04:31	*16:02:01	4*01:03	5*02:02:01	*01:02:02	*03:03:01	*03:01:01	*05:02:01	*01:03:01		*04:01:01		SSP SSO NGS RT-PCR	
2344	*04:31	*16:02:01G	NT	NT	NT	NT	*03:01:01G	*05:02:01G	NT	NT	*04:01:01	*04:01:01		
2400	*04:31	*16:02	4*01:03	5*02:02	*01:02	*03:03	*03:01	*05:02			*04:01:01G		SSO NGS	DRB1*16:64 DQB1*03:276N DQB1*05:241
3135	*04:31	*16:02:01G	4*01:03	5*01:01	*01:02	*03:01:01G	*03:01:01G	*05:02:01G	*01:03		*04:01:01G			
3224	*04:31	*16:02	4*01:03	5*02:02	*01:02	*03:03	*03:01	*05:02	*01:03		*04:01		NGS	
3511	*04:31	*16:02	4*01:03	5*02:02	*01:02	*03:03	*03:01	*05:02	*01:03		*04:01		NGS	
3519	*04:31	*16:02P	4*01:03	5*02:02	*01:02	*03:03	*03:01	*05:02	*01:03		*04:01		SSP NGS RT-PCR	DRB1*16:64
3753	*04:31	*16:02:01G	4*01:03:01	5*02:02:01	*01:02	*03:03	*03:01:01G	*05:02:01G	*01:03	*01:03	*04:01:01	*04:01:01	NGS	
3966	*04:31	*16:02	4*01:03	5*02:02			*03:01	*05:02					SSP	
4251	*04:31	*16:02:01G	4*01:01:01G	5*02:02:01G	*01:02	*03:03	*03:01:01G	*05:02:01G	*01:03:01G	*01:03:01G	*04:01	*04:01	NGS	
4337	*04:31	*16:02					*03:01	*05:02			*04:01	*04:01	SSP SBT NGS	
5130	*04:31	*16:02	4*01:03	5*02:02	*01:02	*03:03	*03:01	*05:02			*04:01	*04:01	SSO NGS	DRB1*16:64 DQB1*03:358N
5133	*04:31	*16:02:01	4*01:03:01	5*02:02:01	*01:02:02	*03:03:01	*03:01:01	*05:02:01	*01:03:01		*04:01:01		NGS	
5219	*04:31	*16:02:01					*03:01:01	*05:02:01			*04:01:01	*04:01:01	SSO NGS	
5451	*04:31	*16:02:01	4*01:03:01	5*02:02:01	*01:02:02	*03:03:01	*03:01:01	*05:02:01	*01:03:01		*04:01:01		NGS	
5488	*04:31	*16:02:01G		5*02:02:01	*01:02:02	*03:03:01	*03:01:01G	*05:02:01	*01:03:01		*04:01:01		SSO NGS	
5642	*04:31	*16:02					*03:01	*05:02					SSP SSO	
8001	*04:31	*16:02	4*01:03	5*02:02	*01:02	*03:03	*03:01	*05:02	*01:03		*04:01		NGS	DQB1*03:276N DQB1*03:454 DPB1*939:01
8021	*04:31	*16:02	4*01:03	5*02:02	*01:02	*03:03	*03:01	*05:02	*01:03		*04:01		SSO NGS	
8029	*04:31	*16:02:01G					*03:01:01G	*05:02			*04:01:01G	*04:01:01G		
8038	*04:31	*16:02P	4*01:01:01G	5*02:02P	NT	NT	*03:01:01G	*05:02P	NT	NT	*04:01:01G	*04:01:01G	SSO SBT	DPB1*1226:01
8043	*04:31	*16:02			*01:02	*03:03	*03:01	*05:02	*01:03		*04:01		SSP SSO NGS	
8122	*04:31	*16:02	4*01:03	5*02:02	*01:02	*03:03	*03:01	*05:02	*01:03		*04:01		NGS	DPB1*939:01

Table 6: Individual laboratory results for B-cell #604 - Class I														
	Low resolution						High resolution							
Center	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C		METHOD	Other Alleles
230							*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	NGS	
278	*02	*31	*18	*51	*07	*15	*02:01	*31:01	*18:01	*51:01	*07:01	*15:02		
725	*02	*31	*18	*51	*07	*15								
731	*02	*31	*18	*51	*07	*15	*02:01:01	*31:01	*18:01	*51:01	*07:01	*15:02	NGS RT-PCR	B*18:17N B*51:11N
747	*02	*31	*18	*51	*07	*15	*02:01:01	*31:01:02	*18:01:01	*51:01:01	*07:01:01	*15:02:01	SSP SSO NGS	
762							*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	NGS	
771	*02	*31	*18	*51	*07	*15	*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	SSP SSO SBT NGS	
792	*02	*31	*18	*51	*07	*15	*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	SSO NGS	
793	*02	*31	*18	*51	*07	*15							SSP	
794	*02	*31	*18	*51	*07	*15	*02:01:01	*31:01:02	*18:01:01	*51:01:01	*07:01:01	*15:02:01	SSP SSO NGS RT-PCR	
2344							*02:01:01	*31:01:02	*18:01:01G	*51:01:01G	*07:01:01	*15:02:01		
2400	*02	*31	*18	*51	*07	*15	*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	SSO NGS	
2847	*02	*31	*18	*51	*07	*15							SSO	
3135							*02:01P	*31:01P	*18:01P	*51:01P	*07:01P	*15:02P		
3224							*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	NGS	
3511							*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	NGS	
3519	*02	*31	*18	*51	*07	*15	*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	SSP NGS RT-PCR	
3753							*02:01:01	*31:01:02	*18:01:01	*51:01:01	*07:01:01	*15:02:01	NGS	
3966	*02	*31	*18	*51	*07	*15							SSP	
4079	*02	*31	*18	*51	*07	*15							SSO	
4251							*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	NGS	
4337							*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	SSP SBT NGS	
5130	*02	*31	*18	*51	*07	*15	*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	SSO NGS	
5133							*02:01:01:01	*31:01:02:01	*18:01:01	*51:01:01:04	*07:01:01:16	*15:02:01:01	NGS	
5214	*02	*31	*18	*51	*07	*15							RT-PCR	
5219	*02	*31	*18	*51	*07	*15	*02:01:01	*31:01:02	*18:01:01	*51:01:01	*07:01:01	*15:02:01	SSO NGS	
5451							*02:01:01	*31:01:02	*18:01:01	*51:01:01	*07:01:01	*15:02:01	NGS	
5462	*02	*31	*18	*51	*07	*15							SSO	
5488							*02:01:01	*31:01:02	*18:01:01	*51:01:01	*07:01:01	*15:02:01	SSO NGS	
5642	*02	*31	*18	*51	*07	*15							SSP SSO	
6649	*02	*31	*18	*51									SSO	
8001							*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	NGS	
8021							*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	SSO NGS	
8029							*02:01:01	*31:01:02	*18:01:01	*51:01:01	*07:01:01	*15:02:01		
8038	*02	*31	*18	*51	*07	*15	*02:01:01G	*31:01:02G	*18:01P	*51:01P	*07:01:01G	*15:02:01G	SSO SBT	A*02:01:135 B*18:131 C*07:877 C*15:219 C*07:848
8043	*02	*31	*18	*51	*07	*15	*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	SSP SSO NGS	

Table 6: Individual laboratory results for B-cell #604 - Class I														
	Low resolution						High resolution							
Center	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C		METHOD	Other Alleles
8068	*02	*31	*18	*51	*07	*15							SSP SSO	
8122							*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	NGS	
8123	*02	*31	*18	*51	*07	*15							RT-PCR	