

Report of the 320th B-cell line Exchange

APRIL 1, 2026

B-cell Lines 643- 645

The findings for B-cell Line Exchange #320 are presented in Tables 1–3, with detailed results from each participating laboratory shown in Tables 4–9. The haplotype frequencies referenced in this report were obtained from the NMDP Bioinformatics website: <https://network.nmdp.org/services-support/bioinformatics-immunobiology/haplotype-frequencies>.

We extend our appreciation to the laboratories that contributed their NGS results and encourage other NGS laboratories to share their data as well.

Ter-643. Below is the consensus type for this cell from a Caucasian donor:

HLA-A		HLA-B		HLA-C	
*02:01	*29:02	*44:02	*44:03	*05:01	*16:01

DRB1	DRB3/4/5		DQA1		DQB1		DPA1		DPB1		
*04:16	*07:01	4*01:01	4*01:03	*02:01	*03:03	*02:02	*03:01	*01:03	*01:03	*02:01	*04:01

Integrating the family study data¹ with the Exchange results, one probable haplotype present in this cell line is A*02:01–B*44:02–C*05:01–DRB1*04:16–DQB1*03:01. The second likely haplotype is A*29:02–B*44:03–C*16:01–DRB1*07:01–DQB1*02:02.

This B-cell line is BEL5GB. It serves as the reference cell for DRB1*04:16. It has been examined in previous workshops as IHW#9320 and was previously typed in the Exchange as Ter 424 (2009), Ter 304 (2002), and Ter 260 (2000).

In the current retyping effort, DRB1*04:16 was identified by all laboratories reporting high-resolution results. Concordance across all remaining loci was similarly strong, exceeding 90%.

Ter-644. Below is the consensus type for this cell from a Caucasian donor:

HLA-A		HLA-B		HLA-C	
*02:82N	*68:01	*40:01	*44:02	*03:04	*05:01

DRB1	DRB3/4/5		DQA1		DQB1		DPA1		DPB1		
*08:01	*13:02	NP	3*03:01	*01:02	*04:01	*04:02	*06:04	*01:03	*01:03	*02:01	*04:01

This cell is the offspring of extract 314 which was examined in the class I typing Exchange in 2005. Integrating findings from the 2005 analysis with results from the present study, one likely haplotype carried by this cell is A*02:82N–B*44:02–C*05:01–DRB1*08:01–DQB1*04:02. The other likely haplotype is A*68:01–B*40:01–C*03:04–DRB1*13:02–DQB1*06:04, observed in Caucasian populations at a frequency of 0.00095.

This B-cell line is Ter-313, one of the reference cells for A*02:82N. It was previously assessed in the Class I Extract Exchange as extracts 465 (2009) and 313 (2005). In this present study, A*02:82N was assigned by 96% of laboratories providing high-resolution results. One lab misassigned A*02:01. Concordance of greater than 90% was also observed across all remaining loci.

Ter-645. Below is the consensus type for this cell from a donor of unknown descent.

HLA-A		HLA-B		HLA-C	
*02:01	*03:01	*14:02	*15:01	*03:04	*08:02

DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1	
*04:01	*15:04	4*01:03	5*01:01	*01:02	*03:01	*03:02	*06:02	*01:03	*01:03	*04:01	*04:01

The likely class I haplotypes represented in this cell are A*02:01–B*14:02–C*08:02 and A*03:01–B15:01–C*03:04. Each are commonly observed in Caucasian populations, with corresponding haplotype frequencies of 0.00297 and 0.00241, respectively.

This B-cell line has previously been analyzed in the Exchange as Ter 441 (2010), Ter 432 (2009), and Ter 347 (2004). In the present study, concordance exceeded 90% across all loci.

References:

1. Middleton D, Hughes DJ, Trainor F, Graham CA, Savage DA. An HLA-DRB1*04 first domain sequence (DRB1*0416) which differs from HLA-DRB1*0401 at codon 59. *Tissue Antigens*. 1994 Jan;43(1):44-6. doi: 10.1111/j.1399-0039.1994.tb02295.x. PMID: 8023318.

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Table 4a: Individual laboratory results for B-cell #643- Class II

Low resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
725	*04	*07	4*01	4*01	*02	*03	*02	*03(DQ7)	*01		*02(DP201)	*04(DP401)	SSO	
747	*04	*07	4*01	4*01	*02	*03	*02	*03(DQ7)	*01	*01	*02	*04(DP401)	SSP SSO NGS RT-PCR	
771	*04	*07			*02	*03	*02	*03					SSO NGS	
792	*04	*07	4*01	4*01	*02	*03	*02	*03(DQ7)	*01	*01	*02	*04	SSO NGS	
793	*04	*07	4*01	4*01	*02	*03	*02	*03(DQ7)	*01	*01			RT-PCR	
794	*04	*07	4*01	4*01	*02	*03	*02	*03	*01	*01	*02	*04	SSO NGS RT-PCR	
2400	*04	*07	4*01		*02	*03	*02	*03(DQ7)	*01		*02(DP201)	*04(DP401)	SSO NGS	
2847	*04	*07											SSO	
3519	*04	*07	4*01	4*01	*02	*03	*02	*03	*01	*01	*02(DP201)	*04(DP401)	SSP NGS	
3753	*04	*07	4*01	4*01	*02	*03	*02	*03(DQ7)	*01	*01	*02	*04(DP401)	SSO	
5130	*04	*07	4*01	4*01	*02	*03	*02	*03	*01	*01	*02	*04	NGS RT-PCR	
5214	*04	*07	4*01		*02	*03	*02	*03(DQ7)	*01		*02(DP201)	*04(DP401)	RT-PCR	
5219	*04	*07					*02	*03					SSO NGS	
8043	*04	*07			*02	*03	*02	*03					SSO NGS	
8068	*04	*07			*02	*03	*02	*03					SSO	
8123	*04	*07	4*01		*02	*03	*02	*03(DQ7)	*01	*01	*02(DP201)	*04(DP401)	RT-PCR	DRB4*NULL

Table 4b: Individual laboratory results for B-cell #643 - Class II

High resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
230	*04:16	*07:01	4*01:01	4*01:03	*02:01	*03:03	*02:02	*03:01	*01:03	*01:03	*02:01	*04:01	NGS	
747	*04:16	*07:01:01	4*01:01	4*01:03	*02:01:01	*03:03:01	*02:02:01	*03:01:01	*01:03:01	*01:03:01	*02:01:02	*04:01:01	SSP SSO NGS RT-PCR	
762	*04:16	*07:01	4*01:01	4*01:03	*02:01	*03:03	*02:02	*03:01	*01:03	*01:03	*02:01	*04:01	NGS	
771	*04:16	*07:01					*02:02	*03:01			*02:01	*04:01	SSO NGS	
792	*04:16	*07:01	4*01:01	4*01:03	*02:01	*03:03	*02:02	*03:01	*01:03	*01:03	*02:01	*04:01	SSO NGS	
793											*02:01	*04:01	RT-PCR	DRB4*03:01N
794	*04:16	*07:01:01	4*01:01	4*01:03	*02:01:01	*03:03:01	*02:02:01	*03:01:01	*01:03:01	*01:03:01	*02:01:02	*04:01:01	SSO NGS RT-PCR	
2344	*04:16	*07:01:01G					*02:01:01G	*03:01:01G			*02:01:02G	*04:01:01G	NGS	
2400	*04:16	*07:01	4*01:01	4*01:03	*02:01	*03:03	*02:02	*03:01	*01:03		*02:01:02G	*04:01:01G	SSO NGS	DQB1*03:276N DQB1*02:156
3135	*04:16	*07:01P	4*01:01:01	4*01:03:01	*02:01	*03:01:01G	*02:02	*03:01P	*01:03	*01:03	*02:01P	*04:01P		
3224	*04:16	*07:01	4*01:01	4*01:03	*02:01	*03:03	*02:02	*03:01P	*01:03	*01:03	*02:01P	*04:01P	NGS	
3511	*04:16	*07:01	4*01:01P	4*01:01P	*02:01	*03:03	*02:02	*03:01	*01:03	*01:03	*02:01	*04:01	NGS	
3519	*04:16	*07:01P	4*01:01	4*01:03	*02:01	*03:03	*02:02	*03:01	*01:03	*01:03	*02:01P	*04:01P	SSP NGS	
3632	*04:16	*07:01	4*01:01	4*01:03	*02:01	*03:03	*02:02	*03:01	*01:03	*01:03	*02:01	*04:01	NGS	
4337	*04:16	*07:01					*02:02	*03:01			*02:01	*04:01	SSP SBT NGS	
5130	*04:16	*07:01	4*01:01	4*01:03	*02:01	*03:03	*02:02	*03:01	*01:03	*01:03	*02:01:02G	*04:01:01G	NGS RT-PCR	
5133	*04:16	*07:01:01	4*01:01:01	4*01:03:01	*02:01:01	*03:03:01	*02:02:01	*03:01:01	*01:03:01	*01:03:01	*02:01:02	*04:01:01	NGS	
5219	*04:16	*07:01:01					*02:02:01	*03:01:01			*02:01:02	*04:01:01	SSO NGS	
5451	*04:16	*07:01:01	4*01:01P	4*01:01P	*02:01:01	*03:03:01	*02:02:01	*03:01:01	*01:03:01		*02:01:02	*04:01:01	SBT NGS	
5462	*04:16	*07:01	4*01:01	4*01:03	*02:01	*03:03	*02:02	*03:01	*01:03	*01:03	*02:01	*04:01	NGS	
5488	*04:16	*07:01:01	4*01:01:01	4*01:03:01	*02:01:01	*03:03:01	*02:02:01	*03:01:01	*01:03:01	*01:03:01	*02:01:02	*04:01:01	SSO SBT NGS	
8001	*04:16	*07:01	4*01:01	4*01:03	*02:01	*03:03	*02:02	*03:01	*01:03		*02:01	*04:01	NGS	
8038	*04:16	*07:01:01	4*01:01P	4*01:01:01	*02:01:01	*03:03:01	*02:02:01	*03:01:01	*01:03P	*01:03P	*02:01P	*04:01P	NGS	
8043	*04:16	*07:01	4*01:01	4*01:03	*02:01	*03:03	*02:02	*03:01	*01:03		*02:01	*04:01	SSO NGS	
8122	*04:16	*07:01	4*01:01	4*01:03	*02:01	*03:03	*02:02	*03:01	*01:03	*01:03	*02:01	*04:01	NGS	DPB1*939:01 DPB1*1226:01 DQB1*03:454

Table 5: Individual laboratory results for B-cell #643 - Class I

Center	Low resolution						High resolution						METHOD	Other Alleles
	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
230							*02:01	*29:02	*44:02	*44:03	*05:01	*16:01	NGS	
725	*02	*29	*44		*05	*16							SSO	
747	*02	*29	*44	*44	*05	*16	*02:01:01	*29:02:01	*44:02:01	*44:03:01	*05:01:01	*16:01:01	SSP SSO NGS RT-PCR	
762							*02:01	*29:02	*44:02	*44:03	*05:01	*16:01	NGS	
771	*02	*29	*44	*44	*05	*16	*02:01	*29:02	*44:02	*44:03	*05:01	*16:01	SSO NGS	
792	*02	*29	*44	*44	*05	*16	*02:01	*29:02	*44:02	*44:03	*05:01	*16:01	SSO NGS	
793	*02	*29	*44	*44	*05	*16							RT-PCR	
794	*02	*29	*44	*44	*05	*16	*02:01:01	*29:02:01	*44:02:01	*44:03:01	*05:01:01	*16:01:01	SSO NGS RT-PCR	
2344							*02:01:01	*29:02:01	*44:02:01	*44:03:01	*05:01:01	*16:01:01	NGS	
2400	*02	*29	*44		*05	*16	*02:01	*29:02	*44:02	*44:03	*05:01	*16:01	SSO NGS	
2847	*02	*29	*44	*44	*05	*16							SSO	
3135							*02:01P	*29:02P	*44:02P	*44:03P	*05:01P	*16:01P		
3224							*02:01	*29:02	*44:02	*44:03	*05:01	*16:01	NGS	
3511							*02:01	*29:02	*44:02	*44:03	*05:01	*16:01	NGS	
3519	*02	*29	*44	*44	*05	*16	*02:01	*29:02	*44:02	*44:03	*05:01	*16:01	SSP NGS	
3632							*02:01	*29:02	*44:02	*44:03	*05:01	*16:01	NGS	
3753	*02	*29	*44	*44	*05	*16							SSO	
4337							*02:01	*29:02	*44:02	*44:03	*05:01	*16:01	SSP SBT NGS	
5130	*02	*29	*44	*44	*05	*16	*02:01	*29:02	*44:02	*44:03	*05:01	*16:01	NGS RT-PCR	
5133							*02:01:01:01	*29:02:01:01	*44:02:01:01	*44:03:01	*05:01:01:02	*16:01:01:01	NGS	
5214	*02	*29	*44	*44	*05	*16							RT-PCR	
5219	*02	*29	*44	*44	*05	*16	*02:01:01	*29:02:01	*44:02:01	*44:03:01	*05:01:01	*16:01:01	SSO NGS	
5451							*02:01:01	*29:02:01	*44:02:01	*44:03:01	*05:01:01	*16:01:01	SBT NGS	
5462							*02:01	*29:02	*44:02	*44:03	*05:01	*16:01	NGS	
5488							*02:01:01	*29:02:01	*44:02:01	*44:03:01	*05:01:01	*16:01:01	SSO SBT NGS	
8001							*02:01	*29:02	*44:02	*44:03	*05:01	*16:01	NGS	
8038							*02:01:01	*29:02:01:01	*44:02:01	*44:03:01	*05:01:01	*16:01:01	NGS	
8043	*02	*29	*44	*44	*05	*16	*02:01	*29:02	*44:02	*44:03	*05:01	*16:01	SSO NGS	
8068	*02	*29	*44	*44	*05	*16							SSO	
8122							*02:01	*29:02	*44:02	*44:03	*05:01	*16:01	NGS	
8123	*02	*29	*44	*44	*05	*16							RT-PCR	

Table 6a: Individual laboratory results for B-cell #644- Class II

Low resolution															
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles	
725	*08	*13	3*03	NP	*01	*04	*04	*06	*01		*02(DP201)	*04(DP401)	SSO		
747	*08	*13	3*03	NP	*01	*04	*04	*06	*01	*01	*02	*04(DP401)	SSP SSO NGS RT-PCR		
771	*08	*13			*01	*04	*04	*06					SSO NGS		
792	*08	*13	3*03	NP	*01	*04	*04	*06	*01	*01	*02	*04	SSO NGS		
793	*08	*13	3*03		*01	*04	*04	*06	*01	*01			RT-PCR		
794	*08	*13	3*03	NP	*01	*04	*04	*06	*01	*01	*02	*04	SSO NGS RT-PCR		
2400	*08	*13	3*03		*01	*04	*04	*06	*01		*02(DP201)	*04(DP401)	SSO NGS		
2847	*08	*13											SSO		
3519	*08	*13	3*03	3*03	*01	*04	*04	*06	*01	*01	*02(DP201)	*04(DP401)	SSP NGS		
3753	*08	*13	3*03	NP	*01	*04	*04	*06	*01	*01	*02	*04(DP401)	SSO		
5130	*08												NGS RT-PCR		
5214	*08	*13	3*03	NP	*01	*04	*04	*06	*01		*02(DP201)	*04(DP401)	RT-PCR		
5219	*08	*13					*04	*06					SSO NGS		
8043	*08	*13			*01	*04	*04	*06					SSO NGS		
8068	*08	*13			*01	*04	*04	*06					SSO		
8123	*08	*13	3*03		*01	*04	*04	*06	*01	*01	*02(DP201)	*04(DP401)	RT-PCR		

NP = not present

Table 6b: Individual laboratory results for B-cell #644- Class II

Center	High resolution												METHOD	Other Alleles
	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1			
230	*08:01	*13:02	3*03:01		*01:02	*04:01	*04:02	*06:04	*01:03	*01:03	*02:01	*04:01	NGS	
747	*08:01:01	*13:02:01	3*03:01	NP	*01:02:01	*04:01:01	*04:02:01	*06:04:01	*01:03:01	*01:03:01	*02:01:02	*04:01:01	SSP SSO NGS RT-PCR	
762	*08:01	*13:02	3*03:01	NP	*01:02	*04:01	*04:02	*06:04	*01:03	*01:03	*02:01	*04:01	NGS	
771	*08:01	*13:02					*04:02	*06:04			*02:01	*04:01	SSO NGS	
792	*08:01	*13:02	3*03:01	NP	*01:02	*04:01	*04:02	*06:04	*01:03	*01:03	*02:01	*04:01	SSO NGS	
793											*02:01	*04:01	RT-PCR	
794	*08:01:01	*13:02:01	3*03:01	NP	*01:02:01	*04:01:01	*04:02:01	*06:04:01	*01:03:01	*01:03:01	*02:01:02	*04:01:01	SSO NGS RT-PCR	
2344	*08:01:01G	*13:02:01G					*04:02:01G	*06:04:01G			*02:01:02G	*04:01:01G	NGS	
2400	*08:01	*13:02	3*03:01		*01:02	*04:01	*04:02	*06:04	*01:03		*02:01:02G	*04:01:01G	SSO NGS	
3135	*08:01P	*13:02:01	3*03:01P	NP	*01:02	*04:01	*04:02P	*06:04P	*01:03	*01:03	*02:01P	*04:01P		
3224	*08:01	*13:02	3*03:01	NT	*01:02	*04:01	*04:02	*06:04	*01:03	*01:03	*02:01P	*04:01P	NGS	
3511	*08:01	*13:02	3*03:01P	NP	*01:02	*04:01	*04:02	*06:04	*01:03	*01:03	*02:01	*04:01	NGS	
3519	*08:01P	*13:02	3*03:01P	3*03:01P	*01:02	*04:01	*04:02	*06:04	*01:03	*01:03	*02:01P	*04:01P	SSP NGS	DRB1*08:105
3632	*08:01	*13:02	3*03:01	NP	*01:02	*04:01	*04:02	*06:04	*01:03	*01:03	*02:01	*04:01	NGS	
4337	*08:01	*13:02					*04:02	*06:04			*02:01	*04:01	SSP SBT NGS	
5130	*08:01												NGS RT-PCR	
5133	*08:01:01	*13:02:01	3*03:01:01	NP	*01:02:01	*04:01:01	*04:02:01	*06:04:01	*01:03:01	*01:03:01	*02:01:02	*04:01:01	NGS	
5219	*08:01:01	*13:02:01					*04:02:01	*06:04:01			*02:01:02	*04:01:01	SSO NGS	
5451	*08:01:01	*13:02:01	3*03:01:01		*01:02:01	*04:01:01	*04:02:01	*06:04:01	*01:03:01		*02:01:02	*04:01:01	SBT NGS	
5462	*08:01	*13:02	3*03:01	NP	*01:02	*04:01	*04:02	*06:04	*01:03	*01:03	*02:01	*04:01	NGS	
5488	*08:01:01	*13:02:01	3*03:01:01	NP	*01:02:01	*04:01:01	*04:02:01	*06:04:01	*01:03:01	*01:03:01	*02:01:02	*04:01:01	SSO SBT NGS	
8001	*08:01	*13:02	3*03:01		*01:02	*04:01	*04:02	*06:04	*01:03		*02:01	*04:01	NGS	DRB1*08:105
8038	*08:01:01	*13:02:01	3*03:01:01	NP	*01:02:01	*04:01:01	*04:02:01:04	*06:04:01:01	*01:03P	*01:03P	*02:01P	*04:01P	NGS	
8043	*08:01	*13:02	3*03:01		*01:02	*04:01	*04:02	*06:04	*01:03		*02:01	*04:01	SSO NGS	
8122	*08:01	*13:02	3*01:01	NP	*01:02	*04:01	*04:02	*06:04	*01:03	*01:03	*02:01	*04:01	NGS	DPB1*939:01 DPB1*1226:01

NP = not present

Table 7: Individual laboratory results for B-cell #644 - Class I

Center	Low resolution						High resolution						METHOD	Other Alleles
	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
230							*02:82N	*68:01	*40:01	*44:02	*03:04	*05:01	NGS	
747							*02:82N	*68:01:01	*40:01:02	*44:02:01	*03:04:01	*05:01:01	SSP SSO NGS RT-PCR	
725	*02	*68	*40(B60)	*44	*03(Cw10)	*05							SSO	
747	*02	*68	*40(B60)	*44	*03(Cw10)	*05							SSP SSO NGS RT-PCR	
762							*02:82N	*68:01	*40:01	*44:02	*03:04	*05:01	NGS	A*68:164
771	*02	*68	*40	*44	*03	*05	*02:82N	*68:01	*40:01	*44:02	*03:04	*05:01	SSO NGS	
792	*02	*68	*40(B60)	*44	*03(Cw10)	*05	*02:82N	*68:01	*40:01	*44:02	*03:04	*05:01	SSO NGS	
793	*02	*68	*40(B60)	*44	*03(Cw10)	*05							RT-PCR	
794	*02	*68	*40	*44	*03	*05	*02:82N	*68:01:01	*40:01:02	*44:02:01	*03:04:01	*05:01:01	SSO NGS RT-PCR	
2344							*02:82N	*68:01:01	*40:01:02	*44:02:01	*03:04:01	*05:01:01	NGS	
2400		*68	*40(B60)	*44	*03(Cw10)	*05	*02:82N	*68:01	*40:01	*44:02	*03:04	*05:01	SSO NGS	
2847	*02	*68	*40	*44	*03	*05							SSO	
3135							*02:82N	*68:01P	*40:01P	*44:02P	*03:04P	*05:01P		
3224							*02:82N	*68:01	*40:01	*44:02	*03:04	*05:01	NGS	
3511							*02:82N	*68:01	*40:01	*44:02	*03:04	*05:01	NGS	
3519	*02	*68	*40	*44	*03	*05	*02:82N	*68:01	*40:01	*44:02	*03:04	*05:01	SSP NGS	
3632							*02:82N	*68:01	*40:01	*44:02	*03:04	*05:01	NGS	
3753	*02	*68	*40(B60)	*44	*03(Cw10)	*05							SSO	
4337							*02:82N	*68:01	*40:01	*44:02	*03:04	*05:01	SSP SBT NGS	
5130	*02	*68	*40	*44	*03	*05	*02:82N	*68:01	*40:01	*44:02	*03:04	*05:01	NGS RT-PCR	
5133							*02:82N	*68:01:01	*40:01:02	*44:02:01:01	*03:04:01:01	*05:01:01:02	NGS	
5214	*02	*68	*40(B60)	*44	*03(Cw10)	*05							RT-PCR	
5219	*02	*68	*40	*44	*03	*05	NT	*68:01:01	*40:01:02	*44:02:01	*03:04:01	*05:01:01	SSO NGS	
5451							*02:82N	*68:01:01	*40:01:02	*44:02:01	*03:04:01	*05:01:01	SBT NGS	
5462							*02:82N	*68:01	*40:01	*44:02	*03:04	*05:01	NGS	
5488							*02:82N	*68:01:01	*40:01:02	*44:02:01	*03:04:01	*05:01:01	SSO SBT NGS	
8001							*02:01	*68:01	*40:01	*44:02	*03:04	*05:01	NGS	
8038							*02:82N	*68:01:01:02	*40:01:02	*44:02:01	*03:04:01	*05:01:01	NGS	
8043	*02	*68	*40	*44	*03	*05	*02:82N	*68:01	*40:01	*44:02	*03:04	*05:01	SSO NGS	
8068	*02	*68	*40	*44	*03	*05							SSO	
8122							*02:82N	*68:01	*40:01	*44:02	*03:04	*05:01	NGS	
8123	*02	*68	*40(B60)	*44	*03(Cw10)	*05							RT-PCR	

Table 8a: Individual laboratory results for B-cell #645- Class II

Low resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
725	*04	15	4*01	5*01	*01	*03	*03(DQ8)	*06	*01		*04(DP401)	*23	SSO	
747	*04	15	4*01	5*01	*01	*03	*03(DQ8)	*06	*01	*01	*04(DP401)	*04(DP401)	SSP SSO NGS	
771	*04	15			*01	*03	*03	*06					RT-PCR	
792	*04	15	4*01	5*01	*01	*03	*03(DQ8)	*06	*01	*01	*04	*04	SSO NGS	
793	*04	15	4*01	5*01	*01	*03	*03(DQ8)	*06	*01	*01			RT-PCR	
794	*04	15	4*01	5*01	*01	*03	*03	*06	*01	*01	*04	*04	SSO NGS	
2400	*04	15	4*01	5*01	*01	*03	*03(DQ8)	*06	*01		*04(DP401)		RT-PCR	
2847	*04	15											SSO	
3519	*04	15	4*01	5*01	*01	*03	*03	*06	*01	*01	*04(DP401)	*04(DP401)	SSP NGS	
3753	*04	15	4*01	5*01	*01	*03	*03(DQ8)	*06	*01	*01	*04(DP401)	*04(DP401)	SSO	
5130	*04	15	4*01	5*01	*01	*03	*03	*06	*01	*01	*04	*04	NGS RT-PCR	
5214	*04	15	4*01	5*01	*01	*03	*03(DQ8)	*06	*01		*04(DP401)		RT-PCR	
5219	*04	15					*03	*06					SSO NGS	
8043	*04	15			*01	*03	*03	*06					SSO NGS	
8068	*04	15			*01	*03	*03	*06					SSO	
8123	*04	15	4*01	5*01	*01	*03	*03(DQ8)	*06	*01	*01	*04(DP401)	*04(DP401)	RT-PCR	

Table 8b: Individual laboratory results for B-cell #645 - Class II

Center	High resolution												METHOD	Other Alleles
	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1			
230	*04:01	*15:04	4*01:03	5*01:01	*01:02	*03:01	*03:02	*06:02	*01:03	*01:03	*04:01	*04:01	NGS	
747	*04:01:01	*15:04	4*01:03	5*01:01	*01:02:01	*03:01:01	*03:02:01	*06:02:01	*01:03:01	*01:03:01	*04:01:01	*04:01:01	SSP SSO NGS	
762	*04:01	*15:04	4*01:03	5*01:01	*01:02	*03:01	*03:02	*06:02	*01:03	*01:03	*04:01	*04:01	RT-PCR	
771	*04:01	*15:04					*03:02	*06:02			*04:01	*04:01	NGS	
792	*04:01	*15:04	4*01:03	5*01:01	*01:02	*03:01	*03:02	*06:02	*01:03	*01:03	*04:01	*04:01	SSO NGS	
793											*04:01	*04:01	SSO NGS	
794	*04:01:01	*15:04	4*01:03	5*01:01	*01:02:01	*03:01:01	*03:02:01	*06:02:01	*01:03:01	*01:03:01	*04:01:01	*04:01:01	RT-PCR	
2344	*04:01:01G	*15:04					*03:02:01G	*06:02:01G			*04:01:01G	*04:01:01G	NGS	
2400	*04:01	*15:04	4*01:03	5*01:01	*01:02	*03:01	*03:02	*06:02	*01:03		*04:01:01G		SSO NGS	DQB1*03:289 DQB1*03:416
3135	*04:01P	*15:04	4*01:03:01	5*01:01	*01:02	*03:01:01G	*03:02P	*06:02P	*01:03	*01:03	*04:01P	*04:01P		
3224	*04:01	*15:04	4*01:03	5*01:01P	*01:02	*03:01	*03:02	*06:02	*01:03	*01:03	*04:01P	*04:01P	NGS	
3511	*04:01	*15:04	4*01:01P	5*01:01P	*01:02	*03:01	*03:02	*06:02	*01:03	*01:03	*04:01	*04:01	NGS	
3519	*04:01P	*15:04	4*01:03	5*01:01	*01:02	*03:01	*03:02	*06:02	*01:03	*01:03	*04:01P	*04:01P	SSP NGS	
3632	*04:01	*15:04	4*01:03	5*01:01	*01:02	*03:01	*03:02	*06:02	*01:03	*01:03	*04:01	*04:01	NGS	
4337	*04:01	*15:04					*03:02	*06:02			*04:01	*04:01	SSP SBT NGS	
5130	*04:01	*15:04	4*01:03	5*01:01	*01:02	*03:01	*03:02	*06:02	*01:03	*01:03	*04:01:01G	*04:01:01G	NGS RT-PCR	
5133	*04:01:01	*15:04	4*01:03:01	5*01:01:01	*01:02:01	*03:01:01	*03:02:01	*06:02:01	*01:03:01	*01:03:01	*04:01:01	*04:01:01	NGS	
5219	*04:01:01	*15:04					*03:02:01	*06:02:01			*04:01:01	*04:01:01	SSO NGS	
5451	*04:01:01	*15:04	4*01:03:01	5*01:01:01	*01:02:01	*03:01:01	*03:02:01	*06:02:01	*01:03:01		*04:01:01		SBT NGS	
5462	*04:01	*15:04	4*01:03	5*01:01	*01:02	*03:01	*03:02	*06:02	*01:03	*01:03	*04:01	*04:01	NGS	
5488	*04:01:01	*15:04	4*01:03:01	5*01:01:01	*01:02:01	*03:01:01	*03:02:01	*06:02:01	*01:03:01	*01:03:01	*04:01:01	*04:01:01	SSO SBT NGS	
8001	*04:01	*15:04	4*01:03	5*01:01	*01:02	*03:01	*03:02	*06:02	*01:03		*04:01		NGS	
8038	*04:01:01	*15:04	4*01:01P	5*01:01P	*01:02:01	*03:01:01	*03:02:01:01	*06:02:01	*01:03P	*01:03P	*04:01P	*04:01P	NGS	
8043	*04:01	*15:04	4*01:03	5*01:01	*01:02	*03:01	*03:02	*06:02	*01:03		*04:01		SSO NGS	
8122	*04:01	*15:04	4*01:03	5*01:01	*01:02	*03:01	*03:02	*06:02	*01:03	*01:03	*04:01	*04:01	NGS	DPB1*939:01 DPB1*1226:01

Table 9: Individual laboratory results for B-cell #645 - Class I

Center	Low resolution						High resolution						METHOD	Other Alleles
	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
230							*02:01	*03:01	*14:02	*15:01	*03:04	*08:02	NGS	
725	*02	*03	*14(B65)	*15(B62)	*03(Cw10)	*08							SSO	
747	*02	*03	*14(B65)	*15(B62)	*03(Cw10)	*08	*02:01:01	*03:01:01	*14:02:01	*15:01:01	*03:04:01	*08:02:01	SSP SSO NGS RT-PCR	
762							*02:01	*03:01	*14:02	*15:01	*03:04	*08:02	NGS	
771	*02	*03	*14	*15	*03	*08	*02:01	*03:01	*14:02	*15:01	*03:04	*08:02	SSO NGS	
792	*02	*03	*14(B65)	*15(B62)	*03(Cw10)	*08	*02:01	*03:01	*14:02	*15:01	*03:04	*08:02	SSO NGS	
793	*02	*03	*14(B65)	*15(B62)	*03(Cw10)	*08							RT-PCR	
794	*02	*03	*14	*15	*03	*08	*02:01:01	*03:01:01	*14:02:01	*15:01:01	*03:04:01	*08:02:01	SSO NGS RT-PCR	
2344							*02:01:01	*03:01:01	*14:02:01	*15:01:01	*03:04:01	*08:02:01	NGS	
2400	*02	*03	*14(B65)	*15(B62)	*03(Cw10)	*08	*02:01	*03:01	*14:02	*15:01	*03:04	*08:02	SSO NGS	
2847	*02	*03	*14	*15	*03	*08							SSO	
3135							*02:01P	*03:01P	*14:02:01G	*15:01P	*03:04P	*08:02P		
3224							*02:01	*03:01	*14:02	*15:01	*03:04	*08:02	NGS	
3511							*02:01	*03:01	*14:02	*15:01	*03:04	*08:02	NGS	
3519	*02	*03	*14	*15	*03	*08	*02:01	*03:01	*14:02	*15:01	*03:04	*08:02	SSP NGS	
3632							*02:01	*03:01	*14:02	*15:01	*03:04	*08:02	NGS	
3753	*02	*03	*14(B65)	*15(B62)	*03(Cw10)	*08							SSO	
4337							*02:01	*03:01	*14:02	*15:01	*03:04	*08:02	SSP SBT NGS	
5130	*02	*03	*14	*15	*03	*08	*02:01	*03:01	*14:02	*15:01	*03:04	*08:02	NGS RT-PCR	
5133							*02:01:01:01	*03:01:01:01	*14:02:01	*15:01:01:01	*03:04:01:01	*08:02:01:01	NGS	
5214	*02	*03	*14(B65)	*15(B62)	*03(Cw10)	*08							RT-PCR	
5219	*02	*03	*14	*15	*03	*08	*02:01:01	*03:01:01	*14:02:01	*15:01:01	*03:04:01	*08:02:01	SSO NGS	
5451							*02:01:01	*03:01:01	*14:02:01	*15:01:01	*03:04:01	*08:02:01	SBT NGS	
5462							*02:01	*03:01	*14:02	*15:01	*03:04	*08:02	NGS	
5488							*02:01:01	*03:01:01	*14:02:01	*15:01:01	*03:04:01	*08:02:01	SSO SBT NGS	
8001							*02:01	*03:01	*14:02	*15:01	*03:04	*08:02	NGS	
8038							*02:01:01	*03:01:01	*14:02:01	*15:01:01	*03:04:01	*08:02:01	NGS	
8043	*02	*03	*14	*15	*03	*08	*02:01	*03:01	*14:02	*15:01	*03:04	*08:02	SSO NGS	
8068	*02	*03	*14	*15	*03	*08							SSO	C*05
8122							*02:01	*03:01	*14:02	*15:01	*03:04	*08:02	NGS	
8123	*02	*03	*14(B65)	*15(B62)	*03(Cw10)	*08							RT-PCR	