

B-CELL LINE EXCHANGE #274

B-cell Lines 547-548

MARCH 18, 2018

The results for B-cell Line Exchange #274 are summarized in Tables 1 - 2 and individual laboratory results reported for each sample are listed in Tables 3 - 8. The samples in this study were generously provided by **Jean-Marie Tiercy, University Hospital of Geneva, and Doug Smith, Baylor University Medical Center, Dallas.**

Ter-547. The consensus type for this sample from a Caucasian donor is DRB1*04:31-DRB1*16:02-DRB4*01:03-DRB5*02:02-DQA1*01:02-DQA1*03:03-DQB1*03:01-DQB1*05:02-DPA1*01:03-DPB1*04:01/A*02:01-A*31:01-B*18:01-B*51:01-C*07:01-C*15:02. One likely association present is DRB1*16:02-DRB5*02:02-DQA1*01:02-DQB1*05:02, observed most recently in Ter 431 (same as Ter 312 and Ter 248). The association of DRB1*16:02-DQB1*05:02 is observed in Caucasians, with HF=0.00121. The other likely association present is DRB1*04:31-DRB4*01:03-DQA1*03:03-DQB1*03:01.

This cell is GE47192, the reference cell for DRB1*04:31. It has been studied several times in the exchange as Ter 463 (2011), Ter 354 (2005), and Ter 287 (2001), as correctly identified by Chen and Rao. In this present typing, the rare DRB1*04:31 allele was assigned by 100% of labs reporting at high resolution. DRB1*16:02 was assigned as the second DRB1 typed, with 12 labs assigning DRB1*16:02:01. The DQ types were reported as DQA1*01:02 (100%), DQA1*03:03 (95%), DQB1*03:01 (100%), and DQB1*05:02 (100%), with 6 labs assigning DQA1*01:02:02 and DQA1*03:03:01. DQB1*03:01:01 was assigned by 9 labs, and DQB1*05:02:01 was assigned by 10 labs. DPA1*01:03 (100%) and DPB1*04:01 (100%) were reported as the DP types, with 5 labs assigning DPA1*01:03:01 and 9 labs assigning DPB1*04:01:01.

The class I types for this sample were reported as A*02:01, A*31:01, B*18:01, B*51:01, C*07:01, and C*15:02. Each were assigned in complete consensus, with 7 labs assigning A*02:01:01 and C*07:01:01, and 8 labs assigning A*31:01:02, B*18:01:01, B*51:01:01, and C*15:02:01.

We would like to acknowledge and thank the labs performing NGS typing for sharing their results and encourage other NGS labs to share their findings. The haplotype frequencies used in this report are from the NMDP Bioinformatics website, <https://bioinformatics.bethematchclinical.org/>.

Ter-548. The consensus type for this sample from a Caucasian donor is DRB1*03:01-DRB1*04:26-DRB3*01:01-DRB4*01:03-DQA1*03:01-DQA1*05:01-DQB1*02:01-DQB1*03:02-DPA1*01:03-DPB1*03:01-DPB1*04:01/A*32:01-A*68:02-B*08:01-B*44:02-C*01:02-C*07:01. This cell is the HLA identical sibling of the reference cell 34299 (same as Ter 423 and Ter 271). Data from family studies reveal the haplotypes in this cell to be A*68:02-B*44:02-C*07:01-DRB1*04:26-DRB4*01:03-DQA1*03:01-DQB1*03:02 and A*32:01-B*08:01-C*01:02-DRB1*03:01-DQA1*05:01-DQB1*02:01. The DRB1*03:01-DQB1*02:01 association present in this cell is the second most common association observed in Caucasians, with HF=0.12872.

This cell was previously typed in the exchange as Ter 366 (2005) and Ter 259 (2000). In this present study, DRB1*04:26 was assigned by 100% of labs reporting at high resolution. DRB1*03:01 (100%) was assigned as the second DRB1 typed, with 10 labs reporting DRB1*03:01:01. The DQA1 types were assigned in complete consensus as DQA1*03:01, DQA1*05:01, DQB1*02:01, and DQB1*03:02. DQA1*03:01:01 and DQA1*05:01:01 were each assigned by 6 labs, while DQB1*02:01:01 and DQB1*03:02:01 were each assigned by 9 labs and 10 labs, respectively. The reported DP types were DPA1*01:03 (100%), DPB1*03:01 (100%), and DPB1*04:01 (100%), with 5 labs reporting DPA1*01:03:01 and 6 labs assigning DPB1*03:01:01 and DPB1*04:01:01.

A*32:01, A*68:02, B*08:01, B*44:02, C*01:02, and C*07:01 were each assigned in complete consensus, with 8 labs assigning A*32:01:01, A*68:02:01, B*08:01:01, and C*01:02:01. B*44:02:01 was assigned by 6 labs, and C*07:01:01 was assigned by 7 labs.

Correction: In the Report of the 401st Cell Exchange, the DPA1 consensus results for Ter-543 (B-cell Line Exchange 272) was listed incorrectly as DPA1*03:01. The correct consensus is DPA1*01:03.

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Table 2: Summary of the 274th B-cell Line Exchange

Ter-548

DNA Typing - class II		22 labs High; 23 labs Low-DRB3/4/5		22 labs High; 28 labs Low-DQA1		33 High Labs; 29 labs Low-DQB1		14 High Labs; 13 labs Low-DPA1		28 High Labs; 18 labs Low-DPB1	
34 labs High; 32 labs low-DRB1	%(n)	22 labs High; 23 labs Low-DRB3/4/5	%(n)	22 labs High; 28 labs Low-DQA1	%(n)	33 High Labs; 29 labs Low-DQB1	%(n)	14 High Labs; 13 labs Low-DPA1	%(n)	28 High Labs; 18 labs Low-DPB1	%(n)
DRB1*03:01:01:01	9 (3)	DRB3*01:01:02:01	13(3)	DQA1*03:01:01	27(6)	DQB1*02:01:01	27(9)	DPA1*01:03:01:02	29(4)	DPB1*03:01:01	21(6)
DRB1*03:01:01	21(7)	DRB3*01:01:02:02	5 (1)	DQA1*03:01	73(16)	DQB1*02:01:01G	3 (1)	DPA1*01:03:01	7 (1)	DPB1*03:01:01G	7(2)
DRB1*03:01:01G	6 (2)	DRB3*01:01:02	9 (2)	DQA1*03	100(28)	DQB1*02:01	70(23)	DPA1*01:03	64(9)	DPB1*03:01P	11(3)
DRB1*03:01	64(22)	DRB3*01:01P	5 (1)			DQB1*02	100(29)	DPA1*01	100(13)	DPB1*03:01	61(17)
DRB1*03(DR17)	3 (1)	DRB3*01:01	68(15)							DPB1*03	100(18)
DRB1*03	97(31)	DRB3*01	74(17)								
		DRB3*PRESENT	26(6)								
32 labs High; 31 labs low-DRB1	%(n)	22 labs High; 23 labs Low-DRB3/4/5	%(n)	22 labs High; 28 labs Low-DQA1	%(n)	33 High Labs; 30 labs Low-DQB1	%(n)			28 High Labs; 18 labs Low-DPB1	%(n)
DRB1*04:26	100(32)	DRB4*01:03:01:01	5 (1)	DQA1*05:01:01:02	23(5)	DQB1*03:02:01	30(10)			DPB1*04:01:01:02	3 (1)
DRB1*04	100(31)	DRB4*01:03:01	23(5)	DQA1*05:01:01	4 (1)	DQB1*03:02:01G	3 (1)			DPB1*04:01:01:01	3 (1)
		DRB4*01:01P	5 (1)	DQA1*05:01	73(16)	DQB1*03:02P	3 (1)			DPB1*04:01:01	14(4)
		DRB4*01:03	68(15)	DQA1*05	100(28)	DQB1*03:02	64(21)			DPB1*04:01:01G	7 (2)
		DRB4*01	74(17)			DQB1*03	3 (1)			DPB1*04:01P	11 (3)
		DRB4*PRESENT	26(6)			DQB1*03	97(32)			DPB1*04:01	61(17)
										DPB1*04(DP401)	56(10)
										DPB1*04	44(8)

DNA Typing - class I		21 labs High; 23 labs low- A		21 labs High; 23 labs low- B		21 labs High; 23 labs low- C		21 labs High; 23 labs low- A		21 labs High; 23 labs low- B		21 labs High; 23 labs low- C	
21 labs High; 23 labs low- A	%(n)	21 labs High; 23 labs low- B	%(n)	21 labs High; 23 labs low- C	%(n)	21 labs High; 23 labs low- A	%(n)	21 labs High; 23 labs low- B	%(n)	21 labs High; 23 labs low- C	%(n)	21 labs High; 23 labs low- A	%(n)
A*32:01:01:01	9(2)	B*08:01:01	38(8)	C*01:02:01	38(8)	A*68:02:01:01	24(5)	B*44:02:01:01	20(4)	C*07:01:01:01	9 (2)	A*68:02:01	14(3)
A*32:01:01	29(6)	B*08:01:01G	5 (1)	C*01:02:01G	5 (1)	A*68:02:01	14(3)	B*44:02:01	10(2)	C*07:01:01	24(5)	A*68:02:01G	9 (1)
A*32:01:01G	5 (1)	B*08:01P	5 (1)	C*01:02P	5 (1)	A*68:02:01G	9 (1)	B*44:02:01G	5 (1)	C*07:01:01G	5 (1)	A*68:02P	9 (1)
A*32:01P	5 (1)	B*08:01	52(11)	C*01:02	52(11)	A*68:02P	9 (1)	B*44:02P	5 (1)	C*07:01P	5 (1)	A*68:02	52(11)
A*32:01	52(11)	B*08	100(23)	C*01	100(23)	A*68	100(23)	B*44:02	60(12)	C*07:01	57(12)	A*68	100(23)
A*32	100(23)							B*44	100(24)	C*07	100(23)		

Table 3a: Individual laboratory results for B-cell #547-Class II

Low resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
87	*04	*16	4*01	5*02	*01	*03	*03	*05	*01	*01	*04(DP401)	*04(DP401)		DPB1*126
206	*04	*16	4*01	5*02	*01	*03	*03	*05	*01	*01	*04			
725	*04	*16	4*PRESENT	5*PRESENT	*01	*03	*03	*05					SSP SSO	
731	*04	*16			*01	*03	*03	*05					SSP SSO SBT	
735	*04	*16	4*01	5*02	*01	*03	*03	*05	*01	*01	*04(DP401)	*04(DP401)	SSP SSO SBT	
747	*04	*16	4*01	5*02	*01	*03	*03	*05	*01	*01	*04	*04	SSP SSO NGS	
771	*04	*16			*01	*03	*03	*05					SSP SSO	
774	*04	*16	4*01	5*02	*01	*03	*03	*05			*04(DP401)		SSP SSO	
779	*04	*16	4*01	5*02	*01	*03	*03	*05	*01		*04(DP401)		SSP SSO	
792	*04	*16	4*01	5*02	*01	*03	*03	*05	*01	*01	*04	*04	SSO SBT	
793	*04	*16	4*PRESENT	5*PRESENT	*01	*03	*03	*05			*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	*05			*04		SSP SSO SBT	
2847	*04	*16											SSO	
3519	*04	*16			*01	*03	*03	*05	*01	*01	*04(DP401)	*04(DP401)	SSP NGS	
3632	*04	*16	4*01	5*02	*01	*03	*03	*05	*01		*04		SSP SSO	
3966													SSP	
4079	*04	*16	4*01	5*02	*01	*03	*03	*05			*04		SSP SSO	
4251	*04	*16	4*01	5*02	*01	*03	*03	*05	*01	*01	*04(DP401)	*04(DP401)	SSO NGS	
4492	*04	*16	4*PRESENT	5*PRESENT	*01	*03	*03	*05	*01	*01	*04(DP401)	*04(DP401)	SSP NGS	
5130	*04	*16	4*01	5*02	*01	*03	*03	*05			*04	*04	SSP SSO NGS	
5214	*04	*16	4*01	5*02	*01	*03	*03 (DQ7)	*05	*01	*01	*04(DP401)		SSO	
5219	*04	*16			*01	*03	*03	*05					SSO	
5451	*04	*16	4*01	5*02	*01	*03	*03	*05					SSP SSO SBT	
5462	*04	*16	4*01	5*02	*01	*03	*03	*05	*01		*04(DP401)		SSO	
5488			4*01	5*02	*01								SSP SSO SBT	
5642	*04	*16	3*PRESENT	5*PRESENT			*03	*05					SSP	
6649	*04	*16	4*PRESENT	5*PRESENT									SSP	
8001	*04	*16	4*PRESENT	5*PRESENT	*01	*03	*03	*05					SSP SSO	
8029	*04	*16			*01	*03	*03	*05					SSO	
8043	*04	*16			*01	*03	*03	*05					SSP SSO	
8068	*04	*16			*01	*03	*03	*05					SSO	
8087	NT												SSO	

Table 3b: Individual laboratory results for B-cell #547-Class II

High resolution												
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1	DPB1	METHOD	Other Alleles
230	*04:31	*16:01					*03:01	*05:02		*04:01	SBT	
731	*04:31	*16:02:01					*03:01:01G	*05:02:01G			SSP SSO SBT	
735	*04:31	*16:02	4*01:01P	5*02:02P	*01:02	*03:03	*03:01	*05:02		*04:01	SSP SSO SBT	DRB5*01:10
747	*04:31	*16:02:01	4*01:03:01	5*02:02	*01:02:02	*03:03:01	*03:01:01:01	*05:02:01	*01:03:01:02	*04:01:01:01	SSP SSO NGS	
762	*04:31	*16:02:01	4*01:03:01	5*02:02	*01:02:02	*03:03:01	*03:01:01:01	*05:02:01	*01:03:01:02	*04:01:01:01	NGS	
771	*04:31	*16:02					*03:01	*05:02			SSP SSO	
774	*04:31	*16:02	4*01:03	5*02:02	*01:02	*03:03	*03:01	*05:02		*04:01	SSP SSO	DRB4*01:09 DRB4*01:10 DRB5*02:06 DQB1*03:92 DQB1*03:93 DQB1*05:53 DQB1*05:59 DQB1*05:65
779	*04:31				*01:02	*03:03	*03:01	*05:02	*01:03	*04:01	SSP SSO	
792	*04:31	*16:02					*03:01	*05:02		*04:01	SSO SBT	
793					*01:02	*03:03				*04:01	SSP	
794	*04:31	*16:02:01	4*01:03:01	5*02:02:01	*01:02	*03:03	*03:01:01	*05:02:01	*01:03	*04:01:01	SSP SSO NGS RT-PCR	
2344	*04:31	*16:02:01	4*01:03:01:01	5*02:02	*01:02:02	*03:03:01:01	*03:01:01	*05:02:01	*01:03:01:02	*04:01:01:01	NGS	DQB1*03:01:01:01 DQB1*03:01:01:02 DQB1*03:01:01:03 DPB1*04:01:01:02 DPB1*04:01:01:02 DRB4*01:03:01:03
2400	*04:31	*16:02			*01:02	*03:03	*03:01	*05:02		*04:01:01G	SSP SSO SBT	
3135	*04:31	*16:02	4*01:03	5*02:02	*01:02	*03:01	*03:01	*05:02	*01:03	*04:01		DQA1*03:02 DQA1*03:03
3224	*04:31	*16:02:01	4*01:03	5*02:02	NT	NT	*03:01:01G	*05:02:01	NT	NT	SSO SBT	
3511	*04:31	*16:02	4*01:03	5*02:02	*01:02	*03:03	*03:01	*05:02	*01:03	*04:01	SSO	
3519	*04:31	*16:02	4*01:03	5*02:02	*01:02	*03:03	*03:01	*05:02	*01:03	*04:01	SSP NGS	
3632	*04:31	*16:02	4*01:03	5*02:02	*01:02	*03:03	*03:01	*05:02	*01:03	*04:01	SSP SSO	
3753	*04:31	*16:02:01	4*01:03:01	5*02:02	*01:02:02	*03:03:01	*03:01:01	*05:02:01	*01:03:01	*04:01:01	NGS	
3966	*04:31	*16:02	4*01:03	5*02:02			*03:01	*05:02			SSP	
4079	*04:31	*16:02	4*01:03	5*02:02	*01:02	*03:03	*03:01	*05:02		*04:01	SSP SSO	
4251	*04:31	*16:02	4*01:03	5*02:02	*01:02	*03:03	*03:01	*05:02	*01:03	*04:01	SSO NGS	
4337	*04:31	*16:02					*03:01	*05:02		*04:01	SSP SBT	
4492	*04:31	*16:02:01	4*01:03	5*02:02	*01:02:02	*03:03:01	*03:01:01	*05:02:01	*01:03	*04:01:01	SSP NGS	DPA1*01:13
5130	*04:31	*16:02	4*01:03	5*02:02	*01:02	*03:03	*03:01	*05:02		*04:01	SSP SSO NGS	
5133	*04:31	*16:02:01	4*01:03:01	5*02:02:01	*01:02:02	*03:03:01:01	*03:01:01	*05:02:01	*01:03:01:02	*04:01:01	NGS	
5214										*04:01P		SSO
5451	*04:31	*16:02:01									SSP SSO SBT	

Table 3b: Individual laboratory results for B-cell #547-Class II

High resolution												
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1	DPB1	METHOD	Other Alleles
5462	NT	NT	NT	NT	NT	NT	NT	NT	NT			DPB1*279:01 DPB1*418:01 DPB1*455:01N DPB1*459:01 DPB1*464:01 DPB1*468:01 DPB1*475:01 DPB1*553:01 DPB1*554:01 DPB1*569:01 DPB1*643:01 DPB1*614:01 DPB1*476:01 DPB1*479:01 DPB1*485:01 DPB1*486:01 DPB1*497:01 DPB1*658:01 DPB1*500:01 DPB1*427:01 DPB1*456:01 DPB1*425:01 DPB1*522:01+
5488	*04:31	*16:02:01				*03:03	*03:01:01	*05:02:01			*04:01:01	SSO SSO SBT
5642	*04:31	*16:02					*03:01	*05:02				SSP
8001	*04:31	*16:02	4*01:03	5*02:02			*03:01	*05:02			*04:01	SSP SSO
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
8042	*04:31	*16:02	4*01:03	5*02:02			*03:01	*05:02				SSP
8043	*04:31	*16:02			*01:02	*03:03	*03:01	*05:02				SSP SSO
8070	*04:31	*16:02					*03:01	*05:02				SBT
9916	*04:31	*16:02:01	4*01:03:01:01	5*02:02:01	NT	NT	*03:01:01	*05:02:01	NT		*04:01:01	SSP SBT

Table 4: Individual laboratory results for B-cell #547-Class II

Serology										
CTR	DRB1		DRB3/4/5		DQB1		Others			
910	DR4	DR16	DR53	DR51			DQ7	DQ1	DR15	

Table 5: Individual laboratory results for B-cell #547-Class I

Low resolution							High resolution						METHOD	Other Alleles
Center	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
87	*02	*31	*18	*51	*07	*15								
206	*02	*31	*18	*51	*07	*15								
230							*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	SBT	
725	*02	*31	*18	*51	*07	*15							SSP SSO	
731													SSP SSO SBT	
735	*02	*31	*18	*51	*07	*15	*02:01P	*31:01P	*18:01	*51:01P	*07:01P	*15:02P	SSP SSO SBT	
747	*02	*31	*18	*51	*07	*15	*02:01:01:01	*31:01:02:01	*18:01:01	*51:01:01	*07:01:01:01	*15:02:01	SSP SSO NGS	
774	*02	*31	*18	*51	*07	*15							SSP SSO	
779	*02	*31	*18	*51	*07	*15							SSP SSO	
792	*02	*31	*18	*51	*07	*15	*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	SSO SBT	A*02:01:01:02L
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							*02:01:01:01	*31:01:02:01	*18:01:01	*51:01:01	*07:01:01:01	*15:02:01:01	NGS	
2400	*02	*31	*18	*51	*07	*15	*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	SSP SSO SBT	
2847	*02	*31	*18	*51	*07	*15							SSO	
3135							*02:01	*31:01	*18:01	*51:01	*07:01	*15:02		A*02:01L C*07:06 C*07:18
3224							*02:01:01G	*31:01:02G	*18:01:01G	*51:01:01G	*07:01:01G	*15:02:01G	SSO SBT	
3511							*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	SSO	
3519	*02	*31	*18	*51	*07	*15	*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	SSP NGS	
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	
4251	*02	*31	*18	*51	*07	*15	*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	SSO NGS	
4337							*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	SSP SBT	
4492	*02	*31	*18	*51	*07	*15	*02:01:01	*31:01:02:01	*18:01:01	*51:01:01	*07:01:01	*15:02:01	SSP NGS	
5130	*02	*31	*18	*51	*07	*15	*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	SSP SSO NGS	A*02:01L
5133							*02:01:01:01	*31:01:02:01	*18:01:01	*51:01:01	*07:01:01	*15:02:01:01	NGS	
5214	*02	*31	*18	*51	*07	*15							SSO	
5219	*02	*31	*18	*51	*07	*15							SSO	
5462	*02	*31	*18	*51	*07	*15	NT	NT	NT	NT	NT	NT	SSO	
5488							*02:01:01	*31:01:02	*18:01:01	*51:01:01	*07:01	*15:02:01	SSP SSO SBT	A*31:119 C*07:40 B*18:26 B*18:01:03 B*51:01:35 B*51:37 C*07:09 C*07:16 C*07:96:02 C*07:165 C*07:196 C*15:03 C*15:07 C*15:02:05 C*15:62 C*15:63 C*15:31 C*15:72
8021							*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	SSO NGS	
8029	*02	*31	*18	*51	*07	*15							SSO	
8042							*02:01	*31:01	*18:01	*51:01	*07:01	*15:02	SSP	
8068	*02	*31	*18	*51	*07	*15							SSO	
9916							*02:01	*31:01:02	*18:01:01	*51:01:01	*07:01:01	*15:02:01	SSP SBT	

Table 6a: Individual laboratory results for B-cell #548-Class II

Low resolution															
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles	
87	*03	*04	3*01	4*01	*03	*05	*02	*03	*01	*01	*03	*04(DP401)			
206	*03	*04	3*01	4*01	*03	*05	*02	*03	*01	*01	*03	*04			
725	*03	*04	3*PRESENT	4*PRESENT	*03	*05	*02	*03					SSP SSO		
731	*03	*04			*03	*05	*02	*03					SSP SSO SBT		
735	*03	*04	3*01	4*01	*03	*05	*02	*03	*01	*01	*03	*04(DP401)	SSP SSO SBT		
747	*03	*04	3*01	4*01	*03	*05	*02	*03	*01	*01	*03	*04	SSP SSO NGS		
771	*03	*04			*03	*05	*02	*03					SSP SSO		
774	*03	*04	3*01	4*01	*03	*05	*02	*03			*03	*04(DP401)	SSP SSO		
779	*03	*04	3*01	4*01	*03	*05	*02	*03	*01	*01	*03	*04(DP401)	SSP SSO		
792	*03	*04	3*01	4*01	*03	*05	*02	*03	*01	*01	*03	*04	SSO SBT		
793	*03	*04	3*PRESENT	4*PRESENT	*03	*05	*02	*03			*03	*04(DP401)	SSP		
794	*03	*04	3*01	4*01	*03	*05	*02	*03	*01		*03	*04	SSP SSO NGS RT-PCR		
2400	*03	*04	3*01	4*01	*03	*05	*02	*03			*03	*04	SSP SSO SBT		
2847	*03	*04											SSO		
3519	*03	*04			*03	*05	*02	*03	*01	*01	*03	*04(DP401)	SSP NGS		
3632	*03	*04	3*01	4*01	*03	*05	*02	*03	*01		*03	*04	SSP SSO		
3966													SSP		
4079	*03	*04	3*01	4*01	*03	*05	*02	*03			*03	*04	SSP SSO		
4251	*03	*04	3*01	4*01	*03	*05	*02	*03	*01	*01	*03	*04(DP401)	SSO NGS		
4492	*03	*04	3*PRESENT	4*PRESENT	*03	*05	*02	*03	*01	*01	*03	*04(DP401)	SSP NGS		
5130	*03	*04	3*01	4*01	*03	*05	*02	*03			*03	*04	SSP SSO NGS		
5214	*03 (DR17)	*04	3*01	4*01	*03	*05	*02	*03 (DQ8)	*01	*01	*03	*04(DP401)	SSO		
5219	*03	*04			*03	*05	*02	*03					SSO		
5451	*03	*04	3*01	4*01	*03	*05	*02	*03					SSP SSO SBT		
5462	*03	*04	3*01	4*01	*03	*05	*02	*03	*01		*03	*04(DP401)	SSO		
5488			3*01	4*01									SSP SSO SBT		
5642	*03	*04	3*PRESENT	4*PRESENT			*02	*03					SSP		
6649	*03	*04	3*PRESENT	4*PRESENT									SSP		
8001	*03	*04	3*PRESENT	4*PRESENT	*03	*05	*02	*03					SSP SSO		
8029	*03	*04			*03	*05	*02	*03					SSO		
8043	*03	*04			*03	*05	*02	*03					SSP SSO		
8068	*03	*04			*03	*05	*02	*03					SSO		
8087	*03	*04			*03	*05	*02	*03					SSO		

Table 6b: Individual laboratory results for B-cell #548-Class II

High resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
230	*03:01	*04:26					*02:01	*03:02			*03:01	*04:01	SBT	
731	*03:01:01G	*04:26					*02:01:01G	*03:02:01G					SSP SSO SBT	
735	*03:01	*04:26	3*01:01P	4*01:01P	*03:01	*05:01	*02:01	*03:02P			*03:01P	*04:01P	SSP SSO SBT	DRB5*01:10
747	*03:01:01:01	*04:26	3*01:01:02:01	4*01:03:01	*03:01:01	*05:01:01:02	*02:01:01	*03:02:01	*01:03:01:02	*01:03:01:03	*03:01:01	*04:01:01:02	SSP SSO NGS	DPB1*124:01 DPB1*350:01
762	*03:01:01:01	*04:26	3*01:01:02:01	4*01:03:01	*03:01:01	*05:01:01:02	*02:01:01	*03:02:01	*01:03:01:02	*01:03:01:03	*03:01:01	*04:01:01	NGS	DPB1*124:01 DPB1*350:01
771	*03:01	*04:26					*02:01	*03:02					SSP SSO	
														DRB1*03:68N DRB1*03:83 DRB1*03:104 DRB1*03:112 DRB3*01:16 DRB3*01:17 DRB3*01:19 DRB4*01:09 DRB4*01:10 DQB1*02:05 DQB1*02:07 DQB1*02:14 DQB1*02:15 DQB1*02:16 DQB1*02:18N DQB1*02:23 DQB1*02:24 DQB1*02:30 DQB1*02:31 DQB1*02:32 DQB1*02:33 DQB1*02:37 DQB1*02:38 DQB1*02:39 DQB1*02:08 DQB1*02:09+
774	*03:01	*04:26	3*01:01	4*01:03	*03:01	*05:01	*02:01	*03:02			*03:01	*04:01	SSP SSO	
779	*03:01				*03:01	*05:01	*02:01	*03:02	*01:03	*01:03	*03:01	*04:01	SSP SSO	
792	*03:01	*04:26					*02:01	*03:02			*03:01	*04:01	SSO SBT	
793					*03:01	*05:01					*03:01	*04:01	SSP	
794	*03:01:01	*04:26	3*01:01:02	4*01:03:01	*03:01	*05:01	*02:01:01	*03:02:01	*01:03		*03:01:01	*04:01:01	SSP SSO NGS RT-PCR	
														DPB1*124:01 DPB1*04:01:01:02 DPB1*350:01 DRB3/4/5*3*01:01:0 2:02 DRB3/4/5*4*01:03:0 1:03
2344	*03:01:01:01	*04:26	3*01:01:02:01	4*01:03:01:01	*03:01:01	*05:01:01:02	*02:01:01	*03:02:01	*01:03:01:02	*01:03:01:03	*03:01:01	*04:01:01:01	NGS	
2400	*03:01	*04:26			*03:01	*05:01	*02:01	*03:02			*03:01	*04:01	SSP SSO SBT	

Table 6b: Individual laboratory results for B-cell #548-Class II

High resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
3135	*03:01	*04:26	3*01:01	4*01:03	*03:01	*05:01	*02:01	*03:02	*01:03	*01:03	*03:01	*04:01		
3224	*03:01:01G	*04:26	3*01:01	4*01:03	NT	NT	*02:01	*03:02:01	NT	NT	NT	NT	SSO SBT	
3511	*03:01	*04:26	3*01:01	4*01:03	*03:01	*05:01	*02:01	*03:02	*01:03		*03:01	*04:01	SSO	
3519	*03:01	*04:26	3*01:01	4*01:03	*03:01	*05:01	*02:01	*03:02	*01:03	*01:03	*03:01	*04:01	SSP NGS	
3632	*03:01	*04:26	3*01:01	4*01:03	*03:01	*05:01	*02:01	*03:02	*01:03		*03:01	*04:01	SSP SSO	
3753	*03:01:01	*04:26	3*01:01:02	4*01:03:01	*03:01:01	*05:01:01	*02:01:01	*03:02:01	*01:03:01	*01:03:01	*03:01:01G	*04:01:01G	NGS	
3966	*03:01	*04:26	3*01:01	4*01:03			*02:01	*03:02					SSP	
4079	*03:01	*04:26	3*01:01	4*01:03	*03:01	*05:01	*02:01	*03:02			*03:01	*04:01	SSP SSO	
4251	*03:01	*04:26	3*01:01	4*01:03	*03:01	*05:01	*02:01	*03:02	*01:03	*01:03	*03:01:01G	*04:01:01G	SSO NGS	
4337	*03:01	*04:26					*02:01	*03:02			*03:01	*04:01	SSP SBT	
4492	*03:01:01	*04:26	3*01:01	4*01:03	*03:01:01	*05:01:01:02	*02:01:01	*03:02:01	*01:03	*01:03	*03:01:01	*04:01:01	SSP NGS	DPA1*01:13
5130	*03:01	*04:26	3*01:01	4*01:03	*03:01	*05:01	*02:01	*03:02			*03:01	*04:01	SSP SSO NGS	DRB1*04:01
5133	*03:01:01	*04:26	3*01:01:02:02	4*01:03:01	*03:01:01	*05:01:01:02	*02:01:01	*03:02:01	*01:03:01:02	*01:03:01:03	*03:01:01	*04:01:01	NGS	
5214											*03:01P	*04:01P		
5451	*03:01:01	*04:26											SSP SSO SBT	
5462	NT	NT	NT	NT	NT	NT	NT	NT	NT		*03:01P	*04:01P	SSO	DPB1*104:01 DPB1*124:01 DPB1*350:01 DPB1*459:01 DPB1*464:01 DPB1*534:01 DPB1*615:01 DPB1*618:01
5488	*03:01:01	*04:26			*03:01	*05:01	*02:01:01	*03:02:01			*03:01	*04:01	SSP SSO SBT	DPB1*350:01 DPB1*124:01
5642	*03:01	*04:26					*02:01	*03:02					SSP	
8001	*03:01	*04:26	3*01:01	4*01:03			*02:01	*03:02			*03:01:01G	*04:01	SSP SSO	
8021	*03:01	*04:26	3*01:01	4*01:03	*03:01	*05:01	*02:01	*03:02	*01:03		*03:01	*04:01	SSO NGS	
8042	*03:01	*04:26	3*01:01	4*01:03			*02:01	*03:02					SSP	
8043	*03:01	*04:26			*03:01	*05:01	*02:01	*03:02					SSP SSO	
8070	*03:01						*02:01	*03:02					SBT	
9916	*03:01:01	*04:26	3*01:01	4*01:03	NT	NT	*02:01:01	*03:02:01	NT	NT	*03:01	*04:01	SSP SBT	

Table 7: Individual laboratory results for B-cell #548-Class II

Serology										
CTR	DRB1		DRB3/4/5		DQB1		Others			
910	DR17	DR4	DR52	DR53			DQ2	DQ8	DR18	

Table 8: Individual laboratory results for B-cell #548-Class I

Low resolution							High resolution						METHOD	Other Alleles
Center	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
87	*32	*68	*08	*44	*01	*07								
206	*32	*68	*08	*44	*01	*07								
230							*32:01	*68:02	*08:01	*44:02	*01:02	*07:01	SBT	
725	*32	*68	*08	*44	*01	*07							SSP SSO	
731													SSP SSO SBT	
735	*32	*68	*08	*44	*01	*07	*32:01P	*68:02P	08:01P	*44:02P	*01:02P	*07:01P	SSP SSO SBT	
747	*32	*68	*08	*44	*01	*07	*32:01:01	*68:02:01:01	*08:01:01	*44:02:01:01	*01:02:01	*07:01:01:01	SSP SSO NGS	
774	*32	*68	*08	*44	*01	*07							SSP SSO	
779	*32	*68	*08	*44	*01	*07							SSP SSO	
792	*32	*68	*08	*44	*01	*07	*32:01	*68:02	*08:01	*44:02	*01:02	*07:01	SSO SBT	B*44:02:01:02S
793	*32	*68	*08	*44	*01	*07							SSP	
794	*32	*68	*08	*44	*01	*07	*32:01:01	*68:02:01	*08:01:01	*44:02:01	*01:02:01	*07:01:01	SSP SSO NGS	
2344							*32:01:01:01	*68:02:01:01	*08:01:01	*44:02:01:01	*01:02:01	*07:01:01:01	RT-PCR	
2400	*32	*68	*08	*44	*01	*07	*32:01	*68:02	*08:01	*44:02	*01:02	*07:01	NGS	
2847	*32	*68	*08	*44	*01	*07	*32:01	*68:02	*08:01	*44:02	*01:02	*07:01	SSP SSO SBT	
3135							*32:01	*68:02	*08:01	*44:02	*01:02	*07:01	SSO	C*07:06 C*07:18
3224							*32:01:01G	*68:02:01G	*08:01:01G	*44:02:01G	*01:02:01G	*07:01:01G	SSO SBT	
3511							*32:01	*68:02	*08:01	*44:02	*01:02	*07:01	SSO	
3519	*32	*68	*08	*44	*01	*07	*32:01	*68:02	*08:01	*44:02	*01:02	*07:01	SSP NGS	
3632													SSP SSO	
3753							*32:01:01	*68:02:01	*08:01:01	*44:02:01	*01:02:01	*07:01:01	NGS	
3966	*32	*68	*08	*44	*01	*07							SSP	
4251	*32	*68	*08	*44	*01	*07	*32:01	*68:02	*08:01	*44:02	*01:02	*07:01	SSO NGS	
4337							*32:01	*68:02	*08:01	*44:02	*01:02	*07:01	SSP SBT	
4492	*32	*68	*08	*44	*01	*07	*32:01:01	*68:02:01:01	*08:01:01	*44:02:01:01	*01:02:01	*07:01:01	SSP NGS	
5130	*32	*68	*08	*44	*01	*07	*32:01	*68:02	*08:01	*44:02	*01:02	*07:01	SSP SSO NGS	
5133							*32:01:01:01	*68:02:01:01	*08:01:01	*44:02:01:01	*01:02:01	*07:01:01	NGS	
5214	*32	*68	*08	*44	*01	*07							SSO	
5219	*32	*68	*08	*44	*01	*07							SSO	
5462	*32	*68	*08	*44	*01	*07	NT	NT	NT	NT	NT	NT	SSO	
5488				*44			*32:01:01	*68:02:01	*08:01:01		*01:02:01	*07:01	SSP SSO SBT	B*08:50 B*08:71 B*08:122 C*01:17 C*01:127 C*07:40 C*07:248 C*07:16 C*07:141:02 C*01:02:04 C*01:54 C*01:58 C*01:60
8021							*32:01	*68:02	*08:01	*44:02	*01:02	*07:01	SSO NGS	
8029	*32	*68	*08	*44	*01	*07							SSO	
8042							*32:01	*68:02	*08:01	*44:02	*01:02	*07:01	SSP	C*01:27
8068	*32	*68	*08	*44	*01	*07							SSO	
8087	*32	*68	*08	*44	*01	*07							SSO	
9916							*32:01:01	*68:02:01:01	*08:01:01	*44:02	*01:02:01	*07:01:01	SSP SBT	