

B-cell Line Exchange #262

APRIL 1, 2016

B-cell Lines 523-524

The results for B-cell Line Exchange #262 are summarized in Tables 1 - 2 and individual laboratory results reported for each sample are listed in Tables 3 - 8. We would like to express our appreciation to **Helen Bass, Jane Row-**

lands, and Tracey Rees, Welsh Blood Service, Pontyclun, for generously donating the valuable reference cells examined in this study.

Ter-523. The reported type for this sample from a Caucasian donor is DRB1*04:01-DRB1*10:01-DRB4*01:03-DQA1*01:05-DQA1*03:01-DQB1*03:02-DQB1*05:01-DPA1*01:03-DPB1*04:01-DPB1*06:01/A*02:01-A*25:01-B*15:78-B*38:01-C*03:04-C*12:03. One possible class II haplotype in this cell is DRB1*04:01-B4*01:03-DQA1*03:01-DQB1*03:02, observed in exchange cells Ter 441 (same as Ter 432 and Ter 347) and Ter 419. The other probable class II haplotype is DRB1*10:01-DQA1*01:05-DQB1*05:01, observed in Ter 440 (same as Ter 358 and Ter 305) and Ter 255.

This cell is 14513382, the reference cell for B*15:78, as astutely noted by Dong-Feng Chen. It was also typed previously for class I as extract #481 (2010). In this present typing, the rare B*15:78 allele was assigned by 81%, with 5 labs assigning B*15:78:01. B*15:01 was misassigned by 3 labs. B*15:78 differs from B*15:01 in exon 3 by a single nucleotide substitution at codon 131 (AGC → CGC), which results in an amino acid change from serine to arginine.

DRB1*04:01 and DRB1*10:01 were reported in complete consensus by labs reporting at high resolution. DRB1*04:01:01 and DRB1*10:01:01 were each assigned by 9 labs. DQB1*03:02 and DQB1*05:01 were assigned in complete consensus as the DQB1 types, with 8 labs assigning DQB1*03:02:01 and 7 labs assigning DQB1*05:01:01. DQA1*03:01 was reported by 100%. There was no consensus reached for the second DQA1 type, as 65% of labs assigned DQA1*01:05 and 31% assigned DQA1*01:01. DQA1*01:05:01 was assigned by 1 NGS lab.

Ter-524. The consensus type for this sample of unknown ethnicity is DRB1*04:01-DRB1*11:01-DRB3*02:06-DRB4*01:03-DQA1*03:01-DQA1*05:05-DQB1*03:01-DQB1*03:02-DPA1*01:03-DPA1*02:01-DPB1*04:01-DPB1*14:01/A*02:01-A*24:02-B*07:02-B*51:01-C*07:02-C*14:02. One likely class II association in this cell is DRB1*04:01-B4*01:03-DQA1*03:01-DQB1*03:02, observed in previous exchange cells Ter 441 (same as Ter 432, 419, and 347) and Ter 405 (same as Ter 351). The other likely association may then be DRB1*11:01-DRB3*02:06-DQB1*03:01-DQA1*05:05. The DRB1*11:01-DQB1*03:01 association in this cell is commonly observed across all populations, with the highest frequency among Caucasians (HF=0.05571).

This sample was previously studied as Ter 517 (2015) and Ter 385 (2006), as correctly identified by Rao and Tiercy. As with the 2015 study, good concordance was achieved among labs for all loci in this present typing. In addition, an increased number of labs reported higher resolution typing. DRB1*04:01:01 and DQB1*03:02:01 were each assigned by 8 labs, while DRB1*11:01:01 and DQB1*03:01:01 were each reported by 6 labs. For class I, A*02:01:01, B*51:01:01, C*07:02:01, and C*14:02:01 were all assigned by 5 labs. A*24:02:01:01 and B*07:02:01 were each assigned by 4 labs.

For the first time, NGS results were reported in the Exchange. We would like to thank the NGS labs for graciously sharing their typing results.

The haplotype frequencies used in this report are from the NMDP Bioinformatics website, <http://bioinformatics.nmdp.org/>.

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Table 2: Summary of the 262nd B-cell Line Exchange

Ter-524

DNA Typing - class II		21 labs High; 26 labs Low-DRB3		25 labs High; 23 labs Low-DQA1		36 High Labs; 33 labs Low-DQB1		13 High Labs; 13 labs Low-DPA1		27 High Labs; 16 labs Low-DPB1	
34 labs High; 37 labs low-DRB1	%(n)	21 labs High; 26 labs Low-DRB3	%(n)	25 labs High; 23 labs Low-DQA1	%(n)	36 High Labs; 33 labs Low-DQB1	%(n)	13 High Labs; 13 labs Low-DPA1	%(n)	27 High Labs; 16 labs Low-DPB1	%(n)
DRB1*04:01:01	24(8)	DRB3*02:06	95(20)	DQA1*03:01:01	4 (1)	DQB1*03:01:01:03	3 (1)	DPA1*01:03:01:02	8 (1)	DPB1*04:01:01:01	7 (2)
DRB1*04:01	76(26)	DRB3*02:02	5 (1)	DQA1*03:01	96(24)	DQB1*03:01:01	14(5)	DPA1*01:03	92(12)	DPB1*04:01:01	11(3)
DRB1*04	100(37)	DRB3*02	73(19)	DQA1*03	100(23)	DQB1*03:01:01G	5 (2)	DPA1*01	100(13)	DPB1*04:01:01G	7 (2)
		DRB3*PRESENT	27(7)			DQB1*03:01	78(28)			DPB1*04:01	74(20)
						DQB1*03(DQ7)	9(3)			DPB1*04(DP401)	38(6)
						DQB1*03	91(30)			DPB1*04	62(10)
34 labs High; 37 labs low-DRB1	%(n)	21 labs High; 26 labs Low-DRB4	%(n)	24 labs High; 23 labs Low-DQA1	%(n)	36 High Labs; 33 labs Low-DQB1	%(n)	13 High Labs; 13 labs Low-DPA1	%(n)	28 High Labs; 17 labs Low-DPB1	%(n)
DRB1*11:01:01	17(6)	DRB4*01:03:01	5 (1)	DQA1*05:05:01:01	4 (1)	DQB1*03:02:01	22(8)	DPA1*02:01:01	8 (1)	DPB1*14:01	100(28)
DRB1*11:01:01G	9 (3)	DRB4*01:01:01G	5 (1)	DQA1*05:01P	4 (1)	DQB1*03:02	78(28)	DPA1*02:01	92(12)	DPB1*14	94(16)
DRB1*11:01	74(25)	DRB4*01:01P	5 (1)	DQA1*05:05	92(22)	DQB1*03(DQ8)	9(3)	DPA1*02	100(13)	DPB1*03	6 (1)
DRB1*11	100(37)	DRB4*01:03	80(17)	DQA1*05	100(23)	DQB1*03	91(30)				
		DRB4*01:01	5 (1)								
		DRB4*01	69(18)								
		DRB4*PRESENT	31(8)								

Serology - class II	
3 LABS- DR	%(n)
DR4	100(3)
DR11	100(3)

3 LABS - DRX	
DR52	100(3)
DR53	100(3)

3 LABS - DQ	
DQ7	67(2)
DQ3	33(1)
DQ8	33(1)
DQ3	67(2)

DNA Typing - class I	
19 labs High; 26 labs low- A	%(n)
A*02:01:01:01	11(2)
A*02:01:01	16(3)
A*02:01:01G	5 (1)
A*02:01	68(13)
A*02	100(26)
19 labs High; 26 labs low- A	%(n)
A*24:02:01:01	21(4)
A*24:02:01G	5 (1)
A*24:02	74(14)
A*24	100(26)

18 labs High; 27 labs low- B	
B*07:02:01	22(4)
B*07:02:01G	11(2)
B*07:02	67(12)
B*07	100(27)
18 labs High; 27 labs low- B	%(n)
B*51:01:01	28(5)
B*51:01	72(13)
B*51	96(26)
B*52	4 (1)

18 labs High; 27 labs low- C	
C*07:02:01:03	11(2)
C*07:02:01	17(3)
C*07:02:01G	17(3)
C*07:02	55(10)
C*07	100(27)
18 labs High; 27 labs low- C	%(n)
C*14:02:01	28(5)
C*14:02	72(13)
C*14	100(27)

Table 3a: Individual laboratory results for B-cell #523-Class II

		Low resolution													
Center	Investigator	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
5488	Adams , Sharon			4*01										SSP SSO SBT	
5133	Askar , Medhat	*04	*10	4*01		*01	*03	*03	*05	*01		*04(DP401)	*06	SSO SBT NGS	
774	Cecka , J. Michael	*04	*10	4*01		*01	*03	*03	*05			*04(DP401)	*06	SSP SSO	
9916	Charlton , Ronald	*04	*10	4*PRESENT				*03	*05						
3224	Chen , Dong-Feng	*04	*10	4*01		*01	*03	*03	*05	*01		*04	*06		
3632	Colombe , Beth W	*04	*10	4*01		*01	*03	*03	*05	*01				SSP SSO	
5130	Costeas , Paul A.	*04	*10					*03	*05					SSP SSO	
779	Daniel , Claude	*04	*10	4*01		*01	*03	*03	*05	*01		*04(DP401)	*06	SSO	
5219	Daniel , Dolly	*04	*10					*03	*05						
87	Di Paola , Nicholas	*04	*10	4*01		*01	*03	*03(DQ8)	*05	*01	*01	*04(DP401)	*06	SSP	
5214	Eckels/CPMC ,	*04	*10	4*01		*01	*03	*03(DQ8)	*05	*01			*06	SSO	
4079	Fort , Marylise	*04	*10					*03	*05					SSP SSO	
792	Gandhi , Manish	*04	*10	4*01		*01	*03	*03	*05	*01	*01	*04	*06		
8087	Guerra , Q.F.B. El	*04	*10			*01	*03	*03	*05					SSO	
910	Hahn , Amy B.	*04	*10	4*01	NP			*03	*05						
1694	Hesse , Nicole	*04	*10	4*PRESENT				*03	*05					SSP	
8043	Hod , Reut	*04	*10			*01	*03	*03	*05	*01	*01	*04	*06	SSP SSO	
771	Israel , Shoshana	*04	*10					*03	*05					SSP SBT	
794	Jaatinen , Taina	*04	*10	4*01		*01	*03	*03	*05	*01		*04	*06	SSP SSO SBT RT-PCR	
725	Lardy , N.M.	*04	*10	4*PRESENT		*01	*03	*03	*05					SSP SSO	
278	Lee , Jar-How	*04	*10	4*01	NT	*01	*03	*03	*05	*01	*01	*04	*06		
6649	Lim , Young Ae	*04	*10	4*PRESENT										SSP	
2400	Liu , Chang	*04	*10	4*01	NP	*01	*03	*03	*05			*04	*06	SSP SSO SBT	
731	Loewenthal , Ron	*04	*10					*03	*05					SSP SSO SBT	
206	McAlack , Robert	*04	*10	4*01		*01	*03	*03	*05	*01	*01	*04	*06	SSO	
8042	Muncher , Liora	*04	*10	4*01	NP	NT	NT	*03	*05	NT	NT	NT	NT	SSP SSO	
2847	Murase , Junko	*04	*10											SSO	
54	Pancoska , Carol	*04	*10	4*01		*01	*03	*03(DQ8)	*05	*01		*04	*06		
8001	Rao , Prakash					*01	*03								
3519	Renac , Virginie	*04	*10					*03	*05			*04	*06	SSP SBT	
793	Rubocki , Ronald	*04	*10	4*PRESENT		*01	*03	*03	*05			*04(DP401)	*06		
4251	Schiller , Jennifer	*04	*10	4*01		*01	*03	*03	*05	*01	*01	*04(DP401)	*06	SSO SBT	
8068	Shanmugam , Her	*04	*10	4*PRESENT				*03	*05					SSP	
8029	Tarigopula , Anil	*04	*10			*01	*03	*03	*05					SSO	
747	Tiercy , Jean-Marie	*04	*10	4*01		*01	*03	*03	*05					SSP SSO SBT	
5451	Tilanus , Marcel G	*04	*10	4*01		*01	*03	*03	*05					SSO SBT	
5642	Varnavidou-Nicola	*04	*10	4*PRESENT				*03	*05					SSP	
8052	Yanina Marcos , C	*04	*10			*01	*03	*03	*05					SSO	

Table 3b: Individual laboratory results for B-cell #523-Class II

Center	Investigator	High resolution										METHOD	Other Alleles	
		DRB1	DRB3/4/5	DQA1		DQB1		DPA1		DPB1				
5488	Adams , Sharon	*04:01:01	*10:01:01		*01:05	*03:01	*03:02:01	*05:01:01			*04:01:01	*06:01	SSP SSO SBT	
5462	Arnold , Paula	*04:01	*10:01	4*01:03	*01:01P	*03:01P	*03:02	*05:01	*01:03	*01:03	*04:01	*06:01	SSP SSO SBT RT-PCR	DPA1*01:13
5133	Askar , Medhat	*04:01:01	*10:01:01	4*01:03:01	*01:01	*03:01	*03:02:01	*05:01:01	*01:03		*04:01:01	*06:01	SSO SBT NGS	DQA1*01:04/*01:05/*01:12, DQA1*03:02/*03:03
4492	Caillat-Zucman , S	*04:01:01	*10:01:01	4*01:03	*01:01	*03:01	*03:02:01	*05:01:01	*01:03		*04:01:01	*06:01	SSO NGS	DQA1*01:04/*01:05/*01:12, DQA1*03:02/*03:03
774	Cecka , J. Michael	*04:01	*10:01	4*01:03	*01:05	*03:01	*03:02	*05:01			*04:01	*06:01	SSP SSO	DRB1*04:111/*04:112/*04:117/*04:119N/*04:130/*04:135/*04:155/*04:171/*04:174/*04:175, 4*01:09, DQB1*03:85, DQB1*05:12/*05:18/*05:27/*05:31/*05:32/*05:44/*05:45
8070	Chang , Uckjin	*04:01	*10:01										SBT	
9916	Charlton , Ronald	*04:01:01	*10:01:01	4*01:03			*03:02:01	*05:01:01			*04:01:01	*06:01		DRB4*01:09
3224	Chen , Dong-Feng	*04:01	*10:01	4*01:01:01G	*01:05	*03:01	*03:02	*05:01	*01:03		*04:01	*06:01		
8021	Clark , Brendan	*04:01	*10:01	4*01:03	*01:01	*03:01	*03:02	*05:01	*01:03		*04:01	*06:01	SSO	
3632	Colombe , Beth W								*01:03				SSP SSO	
5130	Costeas , Paul A.	*04:01	*10:01	4*01:03	*01:05	*03:01	*03:02	*05:01					SSP SSO	
779	Daniel , Claude						*03:02		*01:03		*04:01	*06:01	SSO	
5214	Eckels/CPMC ,						*03:02				*04:01:01G		SSO	
3135	Enczmann , J	*04:01	*10:01	4*01:03			*03:02	*05:01			*04:01	*06:01	SSP SSO SBT	
762	Fischer , Gottfried	*04:01	*10:01	4*01:03	*01:05	*03:01	*03:02	*05:01			*04:01	*06:01	SSP SSO SBT	
4079	Fort , Marylise	*04:01	*10:01		*01:05	*03:01	*03:02	*05:01			*04:01	*06:01	SSP SSO	DPB1*334:01/*396:01, DRB1*04:151/*04:171/*04:175, DQB1*03:85, DQB1*05:27
792	Gandhi , Manish	*04:01	*10:01		*01:05	*03:01	*03:02	*05:01			*04:01	*06:01		
910	Hahn , Amy B.						*03:02							
810	Hamdi , Nuha	*04:01	*10:01	4*01:01:01	*01:01	*03:01	*03:02	*05:01					SSO	
8043	Hod , Reut	*04:01	*10:01		*01:05	*03:01	*03:02	*05:01	*01:03	*01:03	*04:01	*06:01	SSP SSO	DPA1*01:13
2344	Hurley , Hartzman	*04:01:01	*10:01:01		*01:05:01	*03:01:01	*03:02:01	*05:01:01:01	*01:03:01:02	*01:03:01:03	*04:01:01:01	*06:01	NGS	DQB1*05:01:01:02, DPB1*04:01:01:02
771	Israel , Shoshana	*04:01	*10:01				*03:02	*05:01					SSP SBT	
794	Jaatinen , Taina	*04:01	*10:01	4*01:03	*01:05	*03:01	*03:02	*05:01	*01:03		*04:01	*06:01	SSP SSO SBT RT-PCR	DQA1*01:01/*01:04/*01:12, DQA1*03:02/*03:03, DPB1*350:01
8086	Keming , Du	*04:01	*10:01		*01:05	*03:01	*03:02	*05:01	*01:03	*01:03	*04:01	*06:01	SSP SSO SBT	
4337	Kim , Tai-Gyu	*04:01	*10:01				*03:02	*05:01			*04:01	*06:01		

Table 3b: Individual laboratory results for B-cell #523-Class II

Center	Investigator	High resolution											METHOD	Other Alleles
		DRB1		DRB3/4/5	DQA1		DQB1		DPA1		DPB1			
278	Lee , Jar-How	*04:01	*10:01	4*01:03	*01:01	*03:01	*03:02	*05:01	*01:03	*01:03	*04:01	*06:01		
2400	Liu , Chang	*04:01	*10:01		*01:05	*03:01	*03:02	*05:01			*04:01	*06:01	SSP SSO SBT	
731	Loewenthal , Ron	*04:01:01	*10:01:01				*03:02:01	*05:01:01					SSP SSO SBT	
8042	Muncher , Liora	*04:01	*10:01	4*01:03	NT	NT	*03:02	*05:01	NT	NT	NT	NT	SSP SSO	
3966	Permpikul , Vejbae	*04:01	*10:01	4*01:03			*03:02	*05:01					SSP	
8001	Rao , Prakash	*04:01	*10:01	4*01:03			*03:02	*05:01			*04:01	*06:01		
3753	Reed , Elaine F.	*04:01:01	*10:01:01	4*01:01 /*01:03+	*01:01	*03:01	*03:02:01	*05:01:01	*01:03	*01:03	*04:01:01:01	*06:01	SSO NGS	DQA1*01:04/*01:05/*01:12, DQA1*03:02/*03:03
3519	Renac , Virginie	*04:01	*10:01	4*01:03	*01:05	*03:01	*03:02	*05:01			*04:01	*06:01	SSP SBT	
793	Rubocki , Ronald				*01:05	*03:01:01G					*04:01	*06:01		
4251	Schiller , Jennifer	*04:01	*10:01				*03:02	*05:01			*04:01:01G	*06:01	SSO SBT	
747	Tiercy , Jean-Marie	*04:01:01	*10:01:01	4*01:03	*01:01	*03:01	*03:02:01	*05:01:01G			*04:01	*06:01	SSP SSO SBT	DQA1*01:04/*01:05/*01:12, DQA1*03:02/*03:03
5451	Tilanus , Marcel G	*04:01:01	*10:01:01										SSO SBT	
5642	Varnavidou-Nicola	*04:01	*10:01				*03:02	*05:01					SSP	
3511	Zeevi , Adriana	*04:01	*10:01	4*01:03	*01:05	*03:01	*03:02	*05:01			*04:01	*06:01	SSP SSO	

Table 4: Individual laboratory results for B-cell #523-Class II

Serology									
CTR	DIRNAME	DR4	DR10	DR53	DQ1	DQ3		OTH1	OTH2
4492	Charron,D.	+	+	+	DQ5	DQ8			
910	Hahn,Amy B.	+	+	+	+	+			
4908	Kvam,Vonnet	+	+	+	+	+			

Table 5: Individual laboratory results for B-cell #523-Class I

Center	Investigator	Low Resolution						Intermediate/High resolution						METHOD	Other Alleles
		HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
5488	Adams , Sharon					*03	*12	*02:01	*25:01	*15:78:01	*38:01:01			SSP SSO SBT	A*02:346, A*25:13
5133	Askar , Medhat	*02	*25	*15	*38	*03	*12	*02:01:01	*25:01:01	*15:78:01	*38:01:01	*03:04:01	*12:03:01	SSO SBT NGS	
4492	Caillat-Zucman , S							*02:01:01	*25:01:01	*15:78:01	*38:01:01	*03:04:01	*12:03:01	SSO NGS	
774	Cecka , J. Michael	*02	*25	*15	*38	*03	*12			*15:78				SSP SSO	
9916	Charlton , Ronald	*02	*25	*15	*38	*03	*12	*02:01:01:01	*25:01:01	*15:78:01	*38:01:01	*03:04:01	*12:03:01:01		
3224	Chen , Dong-Feng	*02	*25	*15	*38	*03	*12	*02:01	*25:01	*15:78	*38:01	*03:04	*12:03:01G		
8021	Clark , Brendan	*02	*25	*15	*38	*03	*12							SSO	
5130	Costeas , Paul A.	*02	*25	*15	*38	*03	*12	*02:01	*25:01	*15:78	*38:01	*03:04	*12:03	SSP SSO	
779	Daniel , Claude	*02	*25	*15	*38	*03	*12					*03:04		SSO	
5219	Daniel , Dolly	*02	*25	*15	*38	*03	*12								
87	Di Paola , Nicholas	*02	*25	*15 (B62)	*38	*03 (Cw10)	*12							SSP	
5214	Eckels/CPMC ,	*02	*25	*15 (B62)	*38	*03 (Cw10)	*12			*15:01				SSO	
3135	Enczmann , J							*02:01	*25:01	*15:78	*38:01	*03:04	*12:03	SSP SSO SBT	A*02:01L
792	Gandhi , Manish	*02	*25	*15	*38	*03	*12	*02:01	*25:01	*15:78	*38:01	*03:04	*12:03		
8087	Guerra , Q.F.B. El	*02	*25	*15	*38	*03	*12							SSO	
810	Hamdi , Nuha							*02:01	*25:01	*15:33	*38:01	*03:04	*12:03	SSO	
1694	Hesse , Nicole	*02	*25	*15	*38	*03	*12							SSP	
2344	Hurley , Hartzman							*02:01:01:01	*25:01:01	*15:01:01:01	*38:01:01	*03:04:01:01	*12:03:01:01	NGS	C*03:04:01:02, C*12:03:01:02
794	Jaatinen , Taina	*02	*25	*15	*38	*03	*12	*02:01	*25:01	*15:78	*38:01	*03:04	*12:03	SSP SSO SBT RT-PCR	
8086	Keming , Du							*02:01	*25:01	*15:78	*38:01	*03:04	*12:03	SSP SSO SBT	
4337	Kim , Tai-Gyu							*02:01	*25:01	*15:78	*38:01	*03:04	*12:03		
278	Lee , Jar-How	*02	*25	*15	*38	*03	*12	*02:01	*25:01	*15:01	*38:01	*03:04	*12:03		
2400	Liu , Chang	*02	*25	*15	*38	*03	*12	*02:01	*25:01	*15:78	*38:01	*03:04	*12:03	SSP SSO SBT	
206	McAlack , Robert	*02	*25	*15	*38	*03	*12							SSO	
8042	Muncher , Liora	*02	*25	*15	*38	*03	*12	*02:01	*25:01	*15:78	*38:01	*03:04	*12:03	SSP SSO	
2847	Murase , Junko	*02	*25	*15	*38	*03	*12							SSO	
54	Pancoska , Carol	*02	*25	*15	*38	*03	*12								
3966	Permpikul , Vejbae	*02	*25	*15	*38	*03	*12							SSP	
3753	Reed , Elaine F.							*02:01:01:01	*25:01:01	*15:78:01	*38:01:01	*03:04:01:01	*12:03:01:01	SSO NGS	
3519	Renac , Virginie	*02	*25	*15	*38	*03	*12	*02:01	*25:01	*15:78	*38:01	*03:04	*12:03	SSP SBT	
4251	Schiller , Jennifer	*02	*25	*15	*38	*03	*12	*02:01	*25:01	*15:78	*38:01	*03:04	*12:03:01G	SSO SBT	
8068	Shanmugam , Her	*02	*25	*15	*38	*03	*12							SSP	
8029	Tarigopula , Anil	*02	*25	*15	*38	*03	*12							SSO	
8052	Yanina Marcos , C	*02	*25	*15	*38	*03	*12							SSO	

Table 6a: Individual laboratory results for B-cell #524-Class II

Center	Investigator	Low resolution												METHOD	Other Alleles
		DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1			
5488	Adams , Sharon	*04	*11	3*02	4*01									SSP SSO SBT	
5133	Askar , Medhat	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*02	*04(DP401)	*14	SSO SBT NGS	
774	Cecka , J. Michae	*04	*11	3*02	4*01	*03	*05	*03	*03			*04(DP401)	*14	SSP SSO	
9916	Charlton , Ronald	*04	*11	3*PRESENT	4*PRESENT			*03	*03						
3224	Chen , Dong-Feng	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*02	*04	*14		
3632	Colombe , Beth W	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*02	*04	*14	SSP SSO	
5130	Costeas , Paul A.	*04	*11					*03	*03					SSP SSO	
779	Daniel , Claude	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*02	*04(DP401)	*14	SSO	
5219	Daniel , Dolly	*04	*11					*03	*03						
87	Di Paola , Nichola	*04	*11	3*02	4*01	*03	*05	*03(DQ7)	*03(DQ8)	*01	*02	*04(DP401)	*14	SSP	
5214	Eckels/CPMC ,	*04	*11	3*02	4*01	*03	*05	*03(DQ7)	*03(DQ8)	*01	*02		*14	SSO	
4079	Fort , Marylise	*04	*11					*03	*03					SSP SSO	
792	Gandhi , Manish	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*02	*04	*14		
8087	Guerra , Q.F.B. El	*04	*11			*03	*05	*03	*03					SSO	
910	Hahn , Amy B.	*04	*11	3*PRESENT	4*01			*03	*03						
1694	Hesse , Nicole	*04	*11	3*PRESENT	4*PRESENT			*03						SSP	
8043	Hod , Reut	*04	*11			*03	*05	*03	*03	*01	*02	*04	*14	SSP SSO	
771	Israel , Shoshana	*04	*11					*03						SSP SBT	
794	Jaatinen , Taina	*04	*11	3*02	4*01	*03	*05	*03		*01	*02	*04	*14	SSP SSO SBT RT-PCR	
725	Lardy , N.M.	*04	*11	3*PRESENT	4*PRESENT	*03	*05	*03						SSP SSO	
278	Lee , Jar-How	*04	*11	3*02	4*PRESENT	*03	*05	*03	*03	*01	*02	*04	*14		
6649	Lim , Young Ae	*04	*11	3*PRESENT	4*PRESENT									SSP	
2400	Liu , Chang	*04	*11	3*02	4*01	*03	*05	*03	*03			*04	*14	SSP SSO SBT	
731	Loewenthal , Ron	*04	*11					*03	*03					SSP SSO SBT	
206	McAlack , Robert	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*02	*04	*14	SSO	
8042	Muncher , Liora	*04	*11	3*02	4*01	NT	NT	*03	*03	NT	NT	NT	NT	SSP SSO	
2847	Murase , Junko	*04	*11											SSO	
54	Pancoska , Carol	*04	*11	3*02	4*01	*03	*05	*03(DQ7)	*03(DQ8)	*01	*02	*04	*03		
8001	Rao , Prakash					*03	*05								
3519	Renac , Virginie	*04	*11					*03				*04	*14	SSP SBT	
793	Rubocki , Ronald	*04	*11	3*02	4*PRESENT	*03	*05	*03	*03			*04(DP401)	*14		
4251	Schiller , Jennifer	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*02	*04(DP401)	*14	SSO SBT	
8068	Shanmugam , Her	*04	*11	3*PRESENT	4*PRESENT			*03	*03					SSP	
8029	Tarigopula , Anil	*04	*11			*03	*05	*03	*03					SSO	
747	Tiercy , Jean-Mari	*04	*11	3*02	4*01	*03	*05	*03	*03					SSP SSO SBT	
5451	Tilanus , Marcel G	*04	*11	3*02	4*01	*03	*05	*03	*03					SSO SBT	
5642	Varnavidou-Nicola	*04	*11	3*PRESENT	4*PRESENT			*03	*03					SSP	
8052	Yanina Marcos , C	*04	*11			*03	*05	*03	*03					SSO	

Table 6b: Individual laboratory results for B-cell #524-Class II

Center	Investigator	High resolution/Intermediate											METHOD	Other Alleles	
		DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1			
5488	Adams , Sharon					*03:01	*05:05	*03:01:01	*03:02:01			*04:01:01	*14:01	SSP SSO SBT	DQB1*03:14:02, DQB1*03:113
5462	Arnold , Paula	*04:01	*11:01	3*02:06	4*01:03	*03:01	*05:01P	*03:01	*03:02	*01:03	*02:01	*04:01	*14:01	SSP SSO SBT RT-PCR	DPA1*01:13
5133	Askar , Medhat	*04:01:01	*11:01:01	3*02:06	4*01:03:01	*03:01	*05:05	*03:01:01	*03:02:01	*01:03	*02:01		*14:01	SSO SBT NGS	DQA1*05:09, DQA1*05:11
4492	Caillat-Zucman , S	*04:01:01	*11:01:01	3*02:06	4*01:03	*03:01	*05:05	*03:01:01	*03:02:01	*01:03	*02:01	*04:01:01	*14:01	SSO NGS	DQA1*05:09, DQA1*05:11
774	Cecka , J. Michael	*04:01	*11:01	3*02:06	4*01:03	*03:01	*05:05	*03:01	*03:02				*14:01	SSP SSO	DRB1*04:171/ *04:175, DRB1*11:97/*11:100 /*11:117/*11:157/*11 :158, DRB4*01:09, DQB1* 03:27/ *03:28/*03:29/*03:35 /*03:42/*+
8070	Chang , Uckjin	*04:01	*11:01											SBT	
9916	Charlton , Ronald	*04:01:01	*11:01:01	3*02:06	4*01:03			*03:01:01	*03:02:01			*04:01:01	*14:01		DRB4*01:09
3224	Chen , Dong-Fen	*04:01	*11:01:01G	3*02:06	4*01:01P	*03:01	*05:05	*03:01	*03:02	*01:03	*02:01	*04:01	*14:01		
8021	Clark , Brendan	*04:01	*11:01	3*02:06	4*01:03	*03:01	*05:05	*03:01	*03:02	*01:03	*02:01	*04:01	*14:01	SSO	
3632	Colombe , Beth V	*04:01	*11:01	3*02:06	4*01:03	*03:01	*05:05	*03:01	*03:02	*01:03	*02:01	*04:01	*14:01	SSP SSO	
5130	Costeas , Paul A.	*04:01	*11:01	3*02:06	4*01:03	*03:01	*05:05	*03:01	*03:02					SSP SSO	
779	Daniel , Claude					*03:01		*03:01	*03:02	*01:03	*02:01	*04:01	*14:01	SSO	
5214	Eckels/CPMC ,							*03:01	*03:02			*04:01:01G		SSO	
3135	Enczmann , J	*04:01	*11:01	3*02:06	4*01:03			*03:01	*03:02			*04:01	*14:01	SSP SSO SBT	
762	Fischer , Gottfried	*04:01	*11:01	3*02:06	4*01:03	*03:01	*05:05	*03:01	*03:02			*04:01	*14:01	SSP SSO SBT	DRB1*11:97, DQB1*03:19 /*03:29/*03:84N/ *03:115
4079	Fort , Marylise	*04:01	*11:01			*03:01	*05:05	*03:01	*03:02			*04:01	*14:01	SSP SSO	DPB1*334:01/ *396:01, DQB1*03:04/*03:27/ *03:44/*03:47/ *03:114, DQB1*03:63/*03:64/ *03:67/*03:68/ *03:106, DQA1*05:09 /*05:11, DRB1*04:63
792	Gandhi , Manish	*04:01	*11:01			*03:01	*05:05	*03:01	*03:02			*04:01	*14:01		

Table 6b: Individual laboratory results for B-cell #524-Class II

Center	Investigator	High resolution/Intermediate												METHOD	Other Alleles	
		DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1				
910	Hahn , Amy B.							*03:01	*03:02							
810	Hamdi , Nuha	*04:01	*11:01	3*02:06	4*01:01	*03:01	*05:05	*03:01	*03:02					SSO		
8043	Hod , Reut	*04:01	*11:01			*03:01	*05:05	*03:01	*03:02	*01:03	*02:01	*04:01	*14:01	SSP SSO		
2344	Hurley , Hartzmar	*04:01:01	*11:01:01			*03:01:01	*05:05:01:01	*03:01:01:03	*03:02:01	*01:03:01:02	*02:01:01	*04:01:01:01	*14:01	NGS	DQA1*05:05:01:02, DQB1*05:05:01:03	
771	Israel , Shoshana	*04:01	*11:01					*03:01	*03:02					SSP SBT		
794	Jaatinen , Taina	*04:01	*11:01	3*02:06	4*01:03	*03:01	*05:05	*03:01	*03:02	*01:03	*02:01	*04:01	*14:01	SSP SSO SBT RT-PCR	DQA1*05:09/ *05:11, DPB1*350:01, DRB1*11:97/ *11:100	
8086	Keming , Du	*04:01	*11:01			*03:01	*05:05	*03:01	*03:02	*01:03	*02:01	*04:01	*14:01	SSP SSO SBT		
4337	Kim , Tai-Gyu	*04:01	*11:01					*03:01	*03:02			*04:01	*14:01			
278	Lee , Jar-How	*04:01	*11:01	3*02:06	4*01:03	*03:01	*05:05	*03:01	*03:02	*01:03	*02:01	*04:01	*14:01			
2400	Liu , Chang	*04:01	*11:01			*03:01	*05:05	*03:01	*03:02			*04:01	*14:01	SSP SSO SBT		
731	Loewenthal , Roi	*04:01:01	*11:01:01G					*03:01:01G	*03:02:01					SSP SSO SBT		
8042	Muncher , Liora	*04:01	*11:01	3*02:06	4*01:03	NT	NT	*03:01	*03:02	NT	NT	NT	NT	SSP SSO		
3966	Permpikul , Vejba	*04:01	*11:01	3*02:02	4*01:03			*03:01	*03:02					SSP		
8001	Rao , Prakash	*04:01	*11:01	3*02:06	4*01:03			*03:01	*03:02			*04:01	*14:01			
3753	Reed , Elaine F.	*04:01:01	*11:01:01	3*02:06	4*01:01:01G	*03:01	*05:05	*03:01:01	*03:02:01	*01:03	*02:01	*04:01:01:01	*14:01	SSO NGS	DRB3*02:28/ *02:29N, DQA1*05:09/ *05:11, DPA1*01:13	
3519	Renac , Virginie	*04:01	*11:01	3*02:06	4*01:03	*03:01	*05:05	*03:01	*03:02			*04:01	*14:01	SSP SBT	DRB1*11:97	
793	Rubocki , Ronald					*03:01	*05:05					*04:01	*14:01			
4251	Schiller , Jennifer	*04:01	*11:01:01G					*03:01	*03:02			*04:01:01G	*14:01	SSO SBT		
747	Tiercy , Jean-Mar	*04:01:01	*11:01	3*02:06	4*01:03	*03:01	*05:05	*03:01:01G	*03:02:01			*04:01	*14:01	SSP SSO SBT	DQA1*05:09/ *05:11	
5451	Tilanus , Marcel	*04:01:01	*11:01:01											SSO SBT		
5642	Varnavidou-Nicol	*04:01	*11:01					*03:01	*03:02					SSP		
3511	Zeevi , Adriana	*04:01	*11:01	3*02:06	4*01:03	*03:01	*05:05	*03:01	*03:02			*04:01	*14:01	SSP SSO		

Table 7: Individual laboratory results for B-cell #524-Class II

	Serology								
CTR	DIRNAME	DR4	DR11	DR52	DR53	DQ3	DQ3	OTH1	OTH2
4492	Charron,D.	+	+	+	+	DQ7	DQ8		
910	Hahn,Amy B.	+	+	+	+	DQ7	+		
4908	Kvam,Vonnet	+	+	+	+	+			

Table 8: Individual laboratory results for B-cell #524-Class I

Center	Investigator	Low Resolution						Intermediate/High resolution						METHOD	Other Alleles
		HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
5488	Adams , Sharon			*07	*51	*07	*14	*02:01	*24:02					SSP SSO SBT	
5133	Askar , Medhat	*02	*24	*07	*51	*07	*14	*02:01:01	*24:02:01:01	*07:02:01	*51:01:01	*07:02:01	*14:02:01	SSO SBT NGS	
4492	Caillat-Zucman , S							*02:01:01	*24:02:01:01	*07:02:01	*51:01:01	*07:02:01	*14:02:01	SSO NGS	
774	Cecka , J. Michael	*02	*24	*07	*51	*07	*14							SSP SSO	
9916	Charlton , Ronald	*02	*24	*07	*51	*07	*14	*02:01:01	*24:02	*07:02	*51:01:01	*07:02:01	*14:02:01		A*23:66
3224	Chen , Dong-Feng	*02	*24	*07	*51	*07	*14	*02:01:01G	*24:02:01G	*07:02:01G	*51:01	*07:02:01G	*14:02		
8021	Clark , Brendan	*02	*24	*07	*51	*07	*14							SSO	
5130	Costeas , Paul A.	*02	*24	*07	*51	*07	*14	*02:01	*24:02	*07:02	*51:01	*07:02	*14:02	SSP SSO	
779	Daniel , Claude	*02	*24	*07	*51	*07	*14							SSO	
5219	Daniel , Dolly	*02	*24	*07	*51	*07	*14								
87	Di Paola , Nicola	*02	*24	*07	*51	*07	*14							SSP	
5214	Eckels/CPMC ,	*02	*24	*07	*51	*07	*14							SSO	
3135	Enczmann , J							*02:01	*24:02	*07:02	*51:01	*07:02	*14:02	SSP SSO SBT	A*02:01L
792	Gandhi , Manish	*02	*24	*07	*51	*07	*14	*02:01	*24:02	*07:02	*51:01	*07:02	*14:02		
8087	Guerra , Q.F.B. El	*02	*24	*07	*52	*07	*14							SSO	
810	Hamdi , Nuha							*02:01	*24:02	*07:02	*51:01	*07:02	*14:02	SSO	
1694	Hesse , Nicole	*02	*24	*07	*51	*07	*14							SSP	
2344	Hurley , Hartzman							*02:01:01:01	*24:02:01:01	*07:02:01	*51:01:01	*07:02:01:03	*14:02:01	NGS	
794	Jaatinen , Taina	*02	*24	*07	*51	*07	*14	*02:01	*24:02	*07:02	*51:01	*07:02	*14:02	SSP SSO SBT RT-PCR	B*07:61/*07:161N, C*07:50/*07:349
8086	Keming , Du							*02:01	*24:02	*07:02	*51:01	*07:02	*14:02	SSP SSO SBT	
4337	Kim , Tai-Gyu							*02:01	*24:02	*07:02	*51:01	*07:02	*14:02		
278	Lee , Jar-How	*02	*24	*07	*51	*07	*14	*02:01	*24:02	*07:02	*51:01	*07:02	*14:02		
2400	Liu , Chang	*02	*24	*07	*51	*07	*14	*02:01	*24:02	*07:02	*51:01	*07:02:01G	*14:02	SSP SSO SBT	
206	McAlack , Robert	*02	*24	*07	*51	*07	*14							SSO	
8042	Muncher , Liora	*02	*24	*07	*51	*07	*14	*02:01	*24:02	*07:02	*51:01	*07:02	*14:02	SSP SSO	
2847	Murase , Junko	*02	*24	*07	*51	*07	*14							SSO	
54	Pancoska , Carol	*02	*24	*07	*51	*07	*14								
3966	Permpikul , Vejba	*02	*24	*07	*51	*07	*14							SSP	
3753	Reed , Elaine F.							*02:01:01:01	*24:02:01:01	*07:02:01	*51:01:01	*07:02:01:03	*14:02:01	SSO NGS	
3519	Renac , Virginie	*02	*24	*07	*51	*07	*14	*02:01	*24:02	*07:02	*51:01	*07:02	*14:02	SSP SBT	
4251	Schiller , Jennifer	*02	*24	*07	*51	*07	*14	*02:01	*24:02	*07:02:01G	*51:01	*07:02:01G	*14:02	SSO SBT	
8068	Shanmugam , Hel	*02	*24	*07	*51	*07	*14							SSP	
8029	Tarigopula , Anil	*02	*24	*07	*51	*07	*14							SSO	
8052	Yanina Marcos , C	*02	*24	*07	*51	*07	*14							SSO	