

B-cell Line Exchange #259

The results for B-cell Line Exchange #259 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 Rowlands, and Tracy Rees, Welsh Blood Service, Pontyclun, for generously sharing the valuable cells studied in our exchanges.

Ter-517. The consensus type for this sample 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 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 and Ter 347) and Ter 419. The other association most likely present in this cell is DRB1*11:01-B3*02:06-DQA1*05:05-DQB1*03:01.

This cell was previously typed as Ter 385 (2007). In this present retyping, DRB3*02:06 was assigned by 94% of labs reporting at high resolution. Interestingly, 2 labs noted that their results by SSP and SSO differed. By SSP, DRB3*02:06 was identified, however by SSO, DRB3*02:02 was identified instead. DRB3*02:06 differs from DRB3*02:02 by a single nucleotide substitution at codon 37 (TAC → AAC), resulting in an amino acid change from tyrosine to asparagine (1). DRB4*01:03 was reported by 78%, while DRB1*04:01 and DRB1*11:01 were each assigned in complete consensus. In 2007, a number of labs were unable to resolve DQB1*03:01 from DQB1*03:09 and DQB1*03:13. In this present typing, DQB1*03:01 was well assigned by 100%.

The class I types for this sample were reported as A*02:01 (100%), A*24:02 (100%), B*07:02 (100%), B*51:01 (88%), C*07:02 (100%), and C*14:02 (100%).

Ter-518. The consensus type for this sample from a Caucasian donor is DRB1*07:01-DRB1*11:08-DRB3*02:02-DRB4*01:01-DQA1*02:01-DQA1*05:05-DQB1*02:02-DQB1*03:01-DPA1*01:03-DPB1*02:01-DPB1*04:02/A*02:01-A*29:02-B*18:01-B*44:03-C*07:01-C*16:01. One association likely present in this cell is DRB1*07:01-B4*01:01-DQA1*02:01-DQB1*02:02, observed in a number of previous exchange cells, most recently Ter 464 (same as Ter 353) and Ter 457 (same as Ter 364). The other likely association present in this cell is DRB1*11:08-B3*02:02-DQA1*05:05-DQB1*03:01.

This cell is the reference cell for DRB1*11:08:01, known as JL (2). It was previously studied in the workshops as IHW9428 (same as FH40), as well as in the exchange as Ter 386 (2007) and Ter 316 (2003). In this present retyping, DRB1*11:08 was reported in complete consensus by labs reporting at high resolution. DRB1*11:08:01 was assigned by 6 labs. DRB1*07:01 (100%) was reported as the second DRB1 type, with 4 labs assigning DRB1*07:01:01.

Arnold, Gandhi, Gottfried, Hartzman & Hurley, and Kim commented on the presence of a possible new DPB1 allele. Hartzman and Hurley noted that the new allele is a variant of DPB1*02:01:02. The variant differs from DPB1*02:01:02 in exon 3, by a single nucleotide substitution at codon 118, position 441 (ACG → ACA), resulting in a synonymous substitution.

The class I types for this sample were reported as A*02:01 (88%), A*29:02 (88%), B*18:01 (100%), B*44:03 (94%), C*07:01 (100%), and C*16:01 (100%). A*29:02:01, B*44:03:01, C*07:01:09, and C*16:01:01 were each assigned by 3 labs.

References:

1. Hashemi-Tavoularis S, Couture C, Buyse IM. Identification of new DRB1*01 (01022), DRB1*14(DRB1*1428) and DRB3*(DRB3*0206) alleles. Tissue Antigens 1997;50:89-93.
2. Smith AG, Petersdorf EW, Mickelson E, et al. HLA-DRB1 first domain sequences of two new DR11 alleles and one novel DR4 allele. Tissue Antigens 1993;42:533-535.

Table 1: Summary of the 259th B-cell Line Exchange

Ter-517

DNA Typing - class II		32 labs High; 37 labs low-DRB1		18 labs High; 26 labs Low-DRB3		23 labs High; 20 labs Low-DQA1		31 High Labs; 36 labs Low-DQB1		12 High Labs; 14 labs Low-DPA1		28 High Labs; 16 labs Low-DPB1						
			%(n)		%(n)		%(n)		%(n)		%(n)		%(n)					
DNA Typing - class II	DRB1*04:01:01		12(4)	DRB3*02:06		94(17)	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		4 (1)
	DRB1*04:01		88(28)	DRB3*02:02		6 (1)	DQA1*03:01		96(22)	DQB1*03:01:01		3 (1)	DPA1*01:03		83(10)	DPB1*04:01:01		4 (1)
	DRB1*04		100(37)	DRB3*02		69(18)	DQA1*03		100(20)	DQB1*03:01		94(29)	DPA1*01:05		8 (1)	DPB1*04:01:01G		7 (2)
				DRB3*PRESENT		31(8)				DQB1*03(DQ7)		6 (2)	DPA1*01		100(14)	DPB1*04:01P		4 (1)
										DQB1*03		94(34)				DPB1*04:01		81(23)
																DPB1*04(DP401)		44(7)
																DPB1*04		56(9)
DNA Typing - class I	32 labs High; 37 labs low-DRB1		18 labs High/Inter; 25 labs Low-DRB4		21 labs High; 20 labs Low-DQA1		31 High Labs; 35 labs Low-DQB1		12 High Labs; 14 labs Low-DPA1		28 High Labs; 16 labs Low-DPB1							
		%(n)		%(n)		%(n)		%(n)		%(n)		%(n)						
	DRB1*11:01:01		9 (3)	DRB4*01:03		78(14)	DQA1*05:05:01		5 (1)	DQB1*03:02:01		10(3)	DPA1*02:01:01		8 (1)	DPB1*14:01		100(28)
	DRB1*11:01:01G		6 (2)	DRB4*01:01		11(2)	DQA1*05:01:01G		5 (1)	DQB1*03:02		90(28)	DPA1*02:01		83(10)	DPB1*14		100(16)
	DRB1*11:01		85(27)	DRB4*01:01+		11(2)	DQA1*05:05		90(19)	DQB1*03(DQ8)		6 (2)	DPA1*01:11		8 (1)			
	DRB1*11		100(37)	DRB4*02		64(16)	DQA1*05		100(20)	DQB1*03		94(34)	DPA1*02		100(14)			
				DRB4*PRESENT		36(9)												
Serology - class II	3 LABS - DR		DR52		3 LABS - DQ		DQ7		DQ3		DQ8		DQ3					
		%(n)		%(n)		%(n)		%(n)		%(n)		%(n)		%(n)				
	DR4		100(3)		100(3)		67(3)		33(1)		67(3)		33(1)					
	DR11		100(3)															

Table 2: Summary of the 259th B-cell Line Exchange

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DNA Typing - class II	32 labs High; 36 labs low-DRB1		%(n)
	DRB1*07:01:01:01	3	(1)
	DRB1*07:01:01	9	(3)
	DRB1*07:01:01G	6	(2)
	DRB1*07:01	82	(26)
	DRB1*07	100	(36)
	33 labs High; 36 labs low-DRB1		%(n)
	DRB1*11:08:01	15	(5)
	DRB1*11:08	85	(28)
	DRB1*11	97	(35)
	DRB1*08	3	(1)

18 labs High; 25 labs Low-DRB3		%(n)
DRB3*02:02:01G	6	(1)
DRB3*02:02	94	(17)
DRB3*02	68	(17)
DRB3*PRESENT	32	(8)
18 labs High; 25 labs Low-DRB4		%(n)
DRB4*01:01:01:01	6	(1)
DRB4*01:01:01	6	(1)
DRB4*01:01	88	(16)
DRB4*01	64	(16)
DRB4*PRESENT	36	(9)

23 labs High; 20 labs Low-DQA1		%(n)
DQA1*02:01	96	(22)
DQA1*03:01	4	(1)
DQA1*02	100	(20)
21 labs High; 21 labs Low-DQA1		%(n)
DQA1*05:05:01	5	(1)
DQA1*05:01:01G	5	(1)
DQA1*05:05	85	(18)
DQA1*05:01	5	(1)
DQA1*05	100	(20)

31 High Labs; 35 labs Low-DQB1		%(n)
DQB1*02:02:01	10	(3)
DQB1*02:02	87	(27)
DQB1*03:02	3	(1)
DQB1*02	100	(35)
32 High Labs; 35 labs Low-DQB1		%(n)
DQB1*03:01:01	13	(4)
DQB1*03:01	87	(28)
DQB1*03(DQ7)	3	(1)
DQB1*03	97	(34)

11 High Labs; 14 labs Low-DPA1		%(n)
DPA1*01:03:01	9	(1)
DPA1*01:03	91	(10)
DPA1*01	100	(14)

26 High Labs; 16 labs Low-DPB1		%(n)
DPB1*02:01:02	4	(1)
DPB1*02:01:02G	11	(3)
DPB1*02:01P	4	(1)
DPB1*02:01	77	(20)
DPB1*04:01	4	(1)
DPB1*02	100	(16)
26 High Labs; 16 labs Low-DPB1		%(n)
DPB1*04:02:01	4	(1)
DPB1*04:02:01G	15	(4)
DPB1*04:02P	4	(1)
DPB1*04:02	69	(18)
DPB1*14:01	4	(1)
DPB1*83:01	4	(1)
DPB1*04(DP402)	50	(8)
DPB1*04	50	(8)

Serology - class II	3 LABS- DR		%(n)
	DR7	100	(3)
	DR11	100	(3)

	DR52	100	(3)
	DR53	100	(3)

3 LABS - DQ		%(n)
DQ2	100	(3)
DQ7	100	(3)

DNA Typing - class I	18 labs High; 27 labs low- A		%(n)
	A*02:01:01:01	11	(2)
	A*02:01:01G	5	(1)
	A*02:01	72	(13)
	A*02:34	6	(1)
	A*02:101	6	(1)
	A*02	100	(27)
	18 labs High; 27 labs low- A		%(n)
	A*29:02:01:01	5	(1)
	A*29:02:01	11	(2)
	A*29:02	72	(13)
	A*29:30	6	(1)
A*29:38	6	(1)	
A*29	100	(27)	

17 labs High; 28 labs low- B		%(n)
B*18:01:01:01	6	(1)
B*18:01:01:02	6	(1)
B*18:01:01G	12	(2)
B*18:01	76	(13)
B*18	100	(28)
17 labs High; 28 labs low- B		%(n)
B*44:03:01	18	(3)
B*44:03	76	(13)
B*44:154	6	(1)
B*44	100	(28)

17 labs High; 28 labs low- C		%(n)
C*07:01:09	18	(3)
C*07:01	82	(14)
C*07	100	(28)
17 labs High; 26 labs low- C		%(n)
C*16:01:01	18	(3)
C*16:01	82	(14)
C*16	100	(28)

Table 3a: Individual laboratory results for B-cell #517-Class II

Center	Investigator	Low resolution										METHOD	Other Alleles			
		DRB1	DRB3	DRB4	DQA1	DQB1		DPA*01		DPB1						
5488	Adams , Sharon	*04	*11	3*02	4*01			*03	*03							
774	Cecka , J. Michael	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*02	*04(DP401)	*14	SSP		
9916	Charlton , Ronald	*04	*11	3*PRESENT	4*PRESENT			*03	*03					SSP SBT		
3224	Chen , Dong-Feng	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*02	*04	*14	SSP SSO SBT		
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						SSP SSO		
779	Daniel , Claude	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*02	*04(DP401)	*14	SSP SSO		
5219	Daniel , Dolly	*04	*11					*03	*03					SSO		
1108	DeConinck , Martha	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*02			SSO		
3766	Dunckley , Heather	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*02	*04(DP401)	*14	SSP SSO OTHER		
5214	Eckels/CPMC ,	*04	*11	3*02	4*01	*03	*05	*03(DQ7)	*03(DQ8)	*01	*02	*04(DP401)	*14	SSO	DQA1*01, DPA1*03,	DPA1*01, DPB1*01
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	SSP SSO SBT		
8087	Guerra , Q.F.B. Elb	*04	*11					*03	*03					SSO		
910	Hahn , Amy B.	*04	*11	3*PRESENT	4*PRESENT			*03	*03							
1694	Hesse , Nicole	*04	*11	3*PRESENT	4*PRESENT			*03						SSP		
8043	Hod , Reut	*04	*11					*03	*03							
771	Israel , Shoshana	*04	*11					*03	*03					SSP SSO		
2847	Kihara , Masaaki	*04	*11											SSO		
87	Land , Geoffrey A.	*04	*11	3*PRESENT	4*PRESENT	*03	*05	*03	*03	*01	*02	*04(DP401)	*14	SSP		
725	Lardy , N.M.	*04	*11	3*PRESENT	4*PRESENT	*03	*05	*03						SSP SSO		
278	Lee , Jar-How	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*02	*04	*14	SSP SSO		
6649	Lim , Young Ae	*04	*11	3*PRESENT	4*PRESENT									SSP		
759	Lopez-Cepero , Ma	*04	*11	3*02	4*01	*03	*05	*03(DQ7)	*03(DQ8)	*01	*02	*04(DP401)	*14	SSP		
206	McAlack-Hanau ,	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*02	*04	*14			
8042	Muncher , Liora	*04	*11	NT	NT	NT	NT	*03	*03	NT	NT	NT	NT	SSP SSO		
54	Pancoska , Carol	*04	*11	3*02	4*01	*03	*05	*03		*01	*02	*04	*14			
2400	Phelan , Donna L.	*04	*11	3*02	4*01	*03	*05	*03	*03			*04	*14	SSP SSO SBT		
8001	Rao , Prakash			3*02		*03	*05							SSP SSO		
3519	Renac , Virginie	*04	*11					*03				*04	*14	SSP SBT		
1160	Rosen-Bronson , S	*04	*11	3*02	4*01	*03	*05	*03	*03					SSP SSO SBT		
793	Rubocki , Ronald	*04	*11	3*02	4*PRESENT	*03	*05	*03	*03			*04(DP401)	*14	SSP		
4251	Schiller , Jennifer	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*02	*04	*14	SSO SBT		
8068	Shanmugam , Herr	*04	*11	3*PRESENT	4*PRESENT			*03	*03							
8029	Tarigopula , Anil	*04	*11					*03	*03					SSO		
5451	Tilanus , Marcel G.	*04	*11	3*PRESENT	4*PRESENT			*03						SSP SBT		
5642	Varnavidou-Nicolai	*04	*11					*03	*03					SSP		
8052	Yanina Marcos , Ci	*04	*11	NT	NT	*03	*05	*03	*03	NT	NT	NT	NT	SSO		

Table 3b: Individual laboratory results for B-cell #517-Class II											
Serology											
CTR	DIRNAME	DR4	DR11	DR52	DR53			DQ3	DQ3	OTH1	OTH2
4492	Charron,D.	+	+	+	+			DQ7	+		
910	Hahn,Amy B.	+	+	+	+			+	DQ8		
4908	Kvam,Vonnett	+	+	+	+			DQ7	DQ8		

Table 4: Individual laboratory results for B-cell #517-Class II															
Center	Investigator	High/Intermediate resolution											METHOD	Other Alleles	
		DRB1		DRB3	DRB4	DQA1		DQB1		DPA*01		DPB1			
5488	Adams , Sharon					*03:01	*05:05					*04:01:01	*14:01		
4691	Al Ajlan , Abdulaziz	*04:01	*11:01											SSO	DRB1*11:97/11:100/11:117
5462	Arnold , Paula	NT	NT	3*02:06	4*01:03	NT	NT	*03:01	*03:02	NT	NT	*04:01	*14:01	SSP SSO SBT	
774	Cecka , J. Michael	*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	DRB1*04:111/04:112/04:115/04:117/04:119N/04:123/04:130/04:135+, DRB1*11:91/11:94/11:97/11:99/11:100/11:101/11:106/11:108+, DQB1*03:27/*03:28/*03:29/*03:35/*03:42/*03:44/*03:47/*03:49+
8070	Chang , Uckjin	*04:01	*11:01											SBT	
9916	Charlton , Ronald K	*04:01:01	*11:01:01	3*02:06	4*01:03			*03:01:01	*03:02:01					SSP SBT	DQB1*03:69/03:70
4492	Charron , Dominiqu	*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	DRB1*04:171, DRB1*11:97/11:100/11:117/11:154/11:155/11:157/11:158/11:166, DQA1*05:09/05:11, DQB1*03:73/03:92/03:93/03:94/03:114/03:115/03:116, DQB1*03:106/03:107/*03:125/*03:146
3224	Chen , Dong-Feng	*04:01:01	*11:01:01G	3*02:06	4*01:03	*03:01	*05:01:01G	*03:01	*03:02:01	*01:03	*02:01	*04:01:01G	*14:01	SSP SSO SBT	
8021	Clark , Brendan	*04:01	*11:01	3*02:02	4*01:01/01:03	*03:01	*05:05	*03:01	*03:02			*04:01	*14:01	SSP SSO	
3632	Colombe , Beth W.	*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			3*02:06		*03:01	*05:05	*03:01	*03:02	*01:03	*02:01	*04:01	*14:01	SSP SSO	
3766	Dunckley , Heather											*04:01	*14:01	SSP SSO OTHER	
5214	Eckels/CPMC ,					*03:01				*01:03	*02:01	*04:01	*14:01	SSO	
3135	Enczmann , J	*04:01	*11:01	3*02:06	4*01:03			*03:01	*03:02			*04:01	*14:01		
762	Fischer , Gottfried	*04:01	*11:01	3*02:06	4*01:01	*03:01	*05:05	*03:01	*03:02			*04:01	*14:01		DRB1*04:64, DRB1*11:30/11:95/11:97/11:100/11:117/11:144, DQB1*03:19/03:29
4079	Fort , Marylise	*04:01	*11:01			*03:01	*05:05	*03:01	*03:02			*04:01	*14:01	SSP SSO	DRB1*04:151/04:171/04:175, DQA1*05:09/05:11, DQB1*03:106/03:114
792	Gandhi , Manish	*04:01	*11:01			*03:01	*05:05	*03:01	*03:02			*04:01	*14:01	SSP SSO SBT	
810	Hamdi , Nuha	*04:01	*11:01	3*02:06	4*01:01	*03:01	*05:05	*03:01	*03:02					SSO	

Table 4: Individual laboratory results for B-cell #517-Class II															
Center	Investigator	High/Intermediate resolution												METHOD	Other Alleles
		DRB1		DRB3	DRB4	DQA1		DQB1		DPA*01		DPB1			
8043	Hod , Reut	*04:01	*11:01			*03:01	*05:05	*03:01	*03:02	*01:03	*02:01	*04:01	*14:01		
2344	Hurley , Hartzman&	*04:01:01	*11:01:01			*03:01:01	*05:05:01	*03:01:01:03	*03:02:01	*01:03:01:02	*02:01:01	*04:01:01:01	*14:01	OTHER	DPB1*04:01:01:02
771	Israel , Shoshana	*04:01	*11:01					*03:01	*03:02					SSP SSO	
8086	Jie , Pan	*04:01	*11:01			*03:01	*05:05	*03:01	*03:02	*01:03	*02:01	*04:01	*14:01	SSO SBT	
4337	Kim , Tai-Gyu	*04:01	*11:01					*03:01	*03:02			*04:01	*14:01	SBT	
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	SSP SSO	
274	Lo , Raymundo W.	*04:01	*11:01			*03:01	*05:05	*03:01	*03:02	*01:05	*01:11	*04:01	*14:01		
8042	Muncher , Liora	*04:01	*11:01	NT	NT	NT	NT	*03:01	*03:02	NT	NT	NT	NT	SSP SSO	
3966	Permpikul , Vejbaes	*04:01	*11:01	3*02:06	4*01:03			*03:01	*03:02					SSP	
2400	Phelan , Donna L.	*04:01	*11:01			*03:01	*05:05	*03:01	*03:02			*04:01P	*14:01	SSP SSO SBT	
8001	Rao , Prakash	*04:01	*11:01		4*01:03			*03:01	*03:02			*04:01	*14:01	SSP SSO	
3753	Reed , Elaine F.	*04:01	*11:01	3*02:06	4*01:01/ 01:03/ 01:06	*03:01	*05:05	*03:01	*03:02	*01:03	*02:01	*04:01	*14:01	SSO SBT	DRB3*02:28/*02:29N, DQA1*05:09/05:11, DQB1*03:14/*03:113
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
1160	Rosen-Bronson , Sa	*04:01	*11:01	3*02:06	4*01:03	*03:01		*03:01	*03:02			*04:01	*14:01	SSP SSO SBT	DQB1*03:14/*03:113, DRB1*04:35, DRB1*11:37
793	Rubocki , Ronald											*04:01	*14:01	SSP	
4251	Schiller , Jennifer	*04:01	*11:01:01G					*03:01	*03:02			*04:01:01G	*14:01	SSO SBT	
5451	Tilanus , Marcel G.	*04:01:01	*11:01:01											SSP SBT	
5642	Varnavidou-Nicolaïd	*04:01	*11:01					*03:01	*03:02					SSP	DRB1*04:111/04:112, DRB1*11:74/11:75, DQB1*03:22/03:92
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		

Table 5: Individual laboratory results for B-cell #517-Class I															
Center	Investigator	Low Resolution						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						
4691	Al Ajan , Abdulaziz	*02	*24	*07	*51	*07	*14							SSO	
5462	Arnold , Paula							*02:01	*24:02	*07:02	*51:01	*07:02	*14:02	SSP SSO SBT	B*07:61, B*07:161N
774	Cecka , J. Michael	*02	*24	*07	*51	*07	*14							SSP	
9916	Charlton , Ronald K	*02	*24	*07	*51	*07	*14	*02:01:01	*24:02	*07:02:01	*51:01:01	*07:02:01	*14:02:01	SSP SBT	
4492	Charron , Dominique							*02:01	*24:02	*07:02	*51:01	*07:02	*14:02	SSP SSO	A*02:266/02:294/02:327/02:329/02:357/02:397/02:469, A*24:144/24:154/24:265/24:266/24:268/24:270/24:272/24:275, B*07:104/07:128/07:129/07:130/07:156/07:212/07:217, B*51:167/51:168/51:171/51:174, C*07:159/07:195/07:245/07:305/07:306/07:319/07:320/07:321+, C*14:50/14:51/14:59/14:62/14:66
3224	Chen , Dong-Feng	*02	*24	*07	*51	*07	*14	*02:01:01G	*24:02:01G	*07:02:01G	*51:01:01	*07:02:01G	*14:02	SSP SSO SBT	
8021	Clark , Brendan	*02	*24	*07	*51	*07	*14							SSP 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	A*02:29, C*07:67
779	Daniel , Claude	*02	*24	*07	*51	*07	*14							SSP SSO	
5219	Daniel , Dolly	*02	*24	*07	*51	*07	*14							SSO	
1108	DeConinck , Martha	*02	*24	*07	*51	*07	*14							SSO	
3766	Dunckley , Heather	*02	*24	*07	*51	*07	*14							SSP SSO OTHER	
5214	Eckels/CPMC ,	*02	*24	*07	*51	*07	*14								
3135	Enczmann , J							*02:01	*24:02	*07:02	*51:01	*07:02	*14:02		
792	Gandhi , Manish	*02	*24	*07	*51	*07	*14	*02:01	*24:02	*07:02	*51:01	*07:02	*14:02	SSP SSO SBT	
8087	Guerra , Q.F.B. Elb	*02	*24	*07	*51	*07	*14							SSO	
810	Hamdi , Nuha							*02:01	*24:02	*07:02	*51:154	*07:02	*14:02	SSO	A*02:01L
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	OTHER	
8086	Jie , Pan							*02:01	*24:02	*07:02	*51:01	*07:02	*14:02	SSO SBT	
2847	Kihara , Masaaki	*02	*24	*07	*51	*07	*14							SSO	
4337	Kim , Tai-Gyu							*02:01	*24:02	*07:02	*51:01	*07:02	*14:02	SBT	
87	Land , Geoffrey A.	*02	*24	*07	*51	*07	*14							SSP	
278	Lee , Jar-How	*02	*24	*07	*51	*07	*14	*02:01	*24:02	*07:02	*51:01	*07:02	*14:02	SSP SSO	
274	Lo , Raymundo W.							*02:01	*24:02	*07:02	*51:43	*07:02	*14:02		
206	McAlack-Hanau ,	*02	*24	*07	*51	*07	*14								
8042	Muncher , Liora	*02	*24	*07	*51	*07	*14	*02:01	*24:02	*07:02	*51:01	*07:02	*14:02	SSP SSO	
54	Pancoska , Carol	*02	*24	*07	*51	*07	*14								
3966	Permpikul , Vejbaes	*02	*24	*07	*51	*07	*14							SSP	
2400	Phelan , Donna L.	*02	*24	*07	*51	*07	*14	*02:01	*24:02	*07:02	*51:01	*07:02	*14:02	SSP SSO SBT	

Table 5: Individual laboratory results for B-cell #517-Class I															
Center	Investigator	Low Resolution						High resolution						METHOD	Other Alleles
		HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
3753	Reed , Elaine F.							*02:01	*24:02	*07:02	*51:01	*07:02	*14:02	SSO SBT	B*07:37/07:50/07:51/07:61/07:161 N/07:172/07:349, C*14:06/14:13/14:18
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 , Hem	*02	*24	*07	*51	*07	*14								
8029	Tarigopula , Anil	*02	*24	*07	*51	*07	*14							SSO	
5451	Tilanus , Marcel G.													SSP SBT	
8052	Yanina Marcos , Cir	*02	*24	*07	*51	*07	*14							SSO	

Table 6a: Individual laboratory results for B-cell #518-Class II

Center	Investigator	Low resolution												METHOD	Other Alleles		
		DRB1	DRB3	DRB4	DQA1		DQB1		DPA1		DPB1						
5488	Adams , Sharon			3*02	4*01												
4691	Al Ajan , Abdulaziz							*02	*03								SSO
774	Cecka , J. Michael	*07	*11	3*02	4*01	*02	*05	*02	*03	*01		*02	*04(DP402)				SSP
9916	Charlton , Ronald K	*07	*11	3*PRESENT	4*PRESENT			*02	*03								SSP SBT
3224	Chen , Dong-Feng	*07	*11	3*02	4*01	*02	*05	*02	*03	*01		*02	*04				SSP SSO SBT
3632	Colombe , Beth W.	*07	*11	3*02	4*01	*02	*05	*02	*03	*01		*02	*04				SSP SSO
5130	Costeas , Paul A.	*07	*11					*02	*03								SSP SSO
779	Daniel , Claude	*07	*11	3*02	4*01	*02	*05	*02	*03	*01		*02	*04(DP402)				SSP SSO
5219	Daniel , Dolly	*07	*11					*02	*03								SSO
1108	DeConinck , Martha	*07	*11	3*02	4*01	*02	*05	*02	*03	*01	*01						SSO
3766	Dunckley , Heather	*07	*11	3*02	4*01	*02	*05	*02	*03	*01		*02	*04(DP402)				SSP SSO OTHER
5214	Eckels/CPMC ,	*07	*11	3*02	4*01	*02	*05	*02	*03	*01		*02	*04(DP402)				DRB1*08, DQA1*01, DPA1*03, DPB1*01
4079	Fort , Marylise	*07	*08					*02	*03								SSP SSO
792	Gandhi , Manish	*07	*11	3*02	4*01	*02	*05	*02	*03	*01	*01	*02	*04				SSP SSO SBT
8087	Guerra , Q.F.B. Elb	*07	*11					*02	*03								SSO
910	Hahn , Amy B.	*07	*11	3*PRESENT	4*PRESENT			*02	*03								
1694	Hesse , Nicole	*07	*11	3*PRESENT	4*PRESENT			*02	*03								SSP
8043	Hod , Reut	*07	*11					*02	*03								
771	Israel , Shoshana	*07	*11					*02	*03								SSP SSO
2847	Kihara , Masaaki	*07	*11														SSO
87	Land , Geoffrey A.	*07	*11	3*PRESENT	4*PRESENT	*02	*05	*02	*03	*01	*01	*02	*04(DP402)				SSP
725	Lardy , N.M.	*07	*11	3*PRESENT	4*PRESENT	*02	*05	*02	*03								SSP SSO
278	Lee , Jar-How	*07	*11	3*02	4*01	*02	*05	*02	*03	*01		*02	*04				SSP SSO
6649	Lim , Young Ae	*07	*11	3*PRESENT	4*PRESENT												SSP
759	Lopez-Cepero , Ma	*07	*11	3*02	4*01	*02	*05	*02	*03(DQ7)	*01		*02	*04(DP402)				SSP
206	McAlack-Hanau ,	*07	*11	3*02	4*01	*02	*05	*02	*03	*01		*02	*04				
8042	Muncher , Liora	*07	*11	NT	NT	NT	NT	*02	*03	NT	NT	NT	NT				SSP SSO
54	Pancoska , Carol	*07	*11	3*02	4*01	*02	*05	*02	*03	*01		*02	*04				
2400	Phelan , Donna L.	*07	*11	3*02	4*01	*02	*05	*02	*03			*02	*04				SSP SSO SBT
8001	Rao , Prakash					*02	*05										SSP SSO
3519	Renac , Virginie	*07	*11					*02	*03			*02	*04				SSP SBT
1160	Rosen-Bronson , Sa	*07	*11	3*02	4*01	*02	*05	*02	*03								SSP SSO SBT
793	Rubocki , Ronald	*07	*11	3*02	4*PRESENT	*02	*05	*02	*03			*02	*04(DP402)				SSP
4251	Schiller , Jennifer	*07	*11	3*02	4*01	*02	*05	*02	*03	*01	*01	*02	*04(DP402)				SSO SBT
8068	Shanmugam , Hem	*07	*11	3*PRESENT	4*PRESENT			*02	*03								
8029	Tarigopula , Anil	*07	*11					*02	*03								SSO
5451	Tilanus , Marcel G.	*07	*11	3*PRESENT	4*PRESENT			*02	*03								SSP SBT
5642	Varnavidou-Nicolaïd	*07	*11					*02	*03								SSP
8052	Yanina Marcos , Cir	*07	*11	NT	NT	*02	*05	*02	*03	NT	NT	NT	NT				SSO

Table 6b: Individual laboratory results for B-cell #518-Class II											
Serology											
CTR	DIRNAME	DR7	DR11	DR52	DR53			DQ2	DQ7	OTH1	OTH2
4492	Charron,D.	+	+	+	+			+	+		
910	Hahn,Amy B.	+	+	+	+			+	+		
4908	Kvam,Vonnett	*	*	*	*			*	*		

Table 7: Individual laboratory results for B-cell #518-Class II																
Center	Investigator	High resolution											METHOD	Other Alleles		
		DRB1	DRB3	DRB4	DQA1		DQB1		DPA1		DPB1					
5488	Adams , Sharon	*07:01:01	*11:08:01				*02:01	*05:05	*02:02:01	*03:01:01			*02:01	*04:02		
4691	Al Ajlan , Abdulaziz	*07:01	*11:08												SSO	
5462	Arnold , Paula	NT	NT	3*02:02	4*01:01		NT	NT	*02:02	*03:01	NT	NT	*02:01P	*04:02P	SSP SSO SBT	DRB3*02:28/02:29N, DPB1*105:01, DPB1*416:01
774	Cecka , J. Michael	*07:01	*11:08	3*02:02	4*01:01		*02:01	*05:05	*02:02	*03:01	*01:03		*02:01	*04:02	SSP	DRB1*07:18/07:19/07:20 /07:21/07:23/07:24/07:25 /07:27+, DRB3*02:26/02:28/02:29 N, DQB1*02:06/02:10/02:11 /02:12/02:17/02:25, DQB1*03:21/03:22/03:24 /03:27/03:28/03:29/03:35 /03:36+
8070	Chang , Uckjin	*07:01	*11:08												SBT	
9916	Charlton , Ronald K	*07:01:01	*11:08:01	3*02:02	4*01:01:01:01				*02:02:01	*03:01:01					SSP SBT	
4492	Charron , Dominique	*07:01	*11:08	3*02:02	4*01:01		*02:01	*05:05	*02:02	*03:01	*01:03		*02:01	*04:02	SSP SSO	DRB1*07:31/07:33/07:34 , DQA1*05:09/05:11, DQB1*02:12, DQB1*03:27/03:28/03:29 /03:35/03:42/03:44/03:47 /03:49/03:50, DPB1*416:01, DPB1*105:01
3224	Chen , Dong-Feng	*07:01:01G	*11:08:01	3*02:02:01G	4*01:01:01		*02:01	*05:01:01G	*02:02	*03:01:01	*01:03		*02:01:02G	*04:02:01G	SSP SSO SBT	
8021	Clark , Brendan	*07:01	*11:08	3*02:02	4*01:01		*02:01	*05:05	*02:02	*03:01			*02:01	*04:02	SSP SSO	DRB4*01:03
3632	Colombe , Beth W.	*07:01	*11:08	3*02:02	4*01:01		*02:01	*05:05	*02:02	*03:01	*01:03		*02:01	*04:02	SSP SSO	
5130	Costeas , Paul A.	*07:01	*11:08	3*02:02	4*01:01		*02:01	*05:05	*02:02	*03:01					SSP SSO	DQB1*03:27
779	Daniel , Claude		*11:08				*02:01	*05:05		*03:01	*01:03		*02:01	*04:02	SSP SSO	
3766	Dunckley , Heather						*02:01						*02:01	*04:02	SSP SSO OTHER	
3135	Enczmann , J	*07:01	*11:08	3*02:02	4*01:01				*02:02	*03:01			*02:01	*04:02		

Table 7: Individual laboratory results for B-cell #518-Class II															
Center	Investigator	High resolution											METHOD	Other Alleles	
		DRB1		DRB3	DRB4	DQA1		DQB1		DPA1		DPB1			
762	Fischer , Gottfried	*07:01	*11:08	3*02:02	4*01:01	*02:01	*05:05	*02:02	*03:01			*02:01	*04:02		DRB1*07:34, DRB3*02:28/02:29N/02:1 2, DRB4*01:06, DQB1*03:19/03:29, DPB1*105:01
4079	Fort , Marylise	*07:01	*11:08			*02:01	*05:05	*02:02	*03:01			*02:01	*04:02	SSP SSO	DPB1*105:01, DQA1*05:09/05:11, DQB1*03:114
792	Gandhi , Manish	*07:01	*11:08			*02:01	*05:05	*02:02	*03:01			*02:01:02G	*04:02:01G	SSP SSO SBT	
810	Hamdi , Nuha	*07:01	*11:08	3*02:02	4*01:01	*02:01	05:01	*02:02	*03:01					SSO	DRB1*07:31/07:33/*07:3 4, DRB3*02:28/02:29N, DRB4*01:03/01:06
8043	Hod , Reut	*07:01	*11:08			*02:01	*05:05	*02:02	*03:01	*01:03	*01:03	*02:01	*04:02		
2344	Hurley , Hartzman&	*07:01:01:01	*11:08:01			*02:01	*05:05:01	*02:02:01	*03:01:01	*01:03:01	*01:03:01	*02:01:02	*04:02:01	OTHER	DRB1*07:01:01:02
771	Israel , Shoshana	*07:01	*11:08					*02:02	*03:01					SSP SSO	
8086	Jie , Pan					*03:01	*05:05	*03:02	*03:01	*01:03	*02:01	*04:01	*14:01	SSO SBT	
4337	Kim , Tai-Gyu	*07:01	*11:08					*02:02	*03:01			*02:01	*04:02	SBT	
278	Lee , Jar-How	*07:01	*11:08	3*02:02	4*01:01	*02:01	*05:05	*02:02	*03:01	*01:03		*02:01	*04:02	SSP SSO	
274	Lo , Raymundo W.	*07:01	*11:08			*02:01	*05:05	*02:02	*03:01	*01:03	*01:03	*02:01	*83:01		
8042	Muncher , Liora	*07:01	*11:08	NT	NT	NT	NT	*02:02	*03:01	NT	NT	NT	NT	SSP SSO	
3966	Permpikul , Vejbaes	*07:01	*11:08	3*02:02	4*01:01			*02:02	*03:01					SSP	
2400	Phelan , Donna L.	*07:01	*11:08			*02:01	*05:05	*02:02	*03:01			*02:01	*04:02:01G	SSP SSO SBT	
8001	Rao , Prakash	*07:01	*11:08	3*02:02	4*01:01			*02:02	*03:01			*02:01	*04:02	SSP SSO	
3753	Reed , Elaine F.	*07:01	*11:08	3*02:02	4*01:01	*02:01	*05:05	*02:02	*03:01	*01:03	*01:03	*02:01	*04:02	SSO SBT	DRB3*02:28/02:29N, DRB4*01:03/01:06, DQA1*05:09/05:11
3519	Renac , Virginie	*07:01	*11:08	3*02:02	4*01:01	*02:01	*05:05	*02:02	*03:01			*02:01	*04:02	SSP SBT	DRB1*07:34
1160	Rosen-Bronson , Sa	*07:01	*11:08	3*02:02	4*01:01	*02:01		*02:02	*03:01					SSP SSO SBT	DRB1*07:23/07:26N
793	Rubocki , Ronald											*02:01	*04:02	SSP	
4251	Schiller , Jennifer	*07:01:01G	*11:08					*02:02	*03:01			*02:01:02G	*04:02:01G	SSO SBT	
5451	Tilanus , Marcel G.J.	*07:01:01	*11:08:01											SSP SBT	
5642	Varnavidou-Nicolaic	*07:01	*11:08					*02:02	*03:01					SSP	DRB1*07:18/07:19, DQB1*03:22
3511	Zeevi , Adriana	*07:01	*11:08	3*02:02	4*01:01	*02:01	*05:05	*02:02	*03:01			*02:01	*04:02		

Table 8: Individual laboratory results for B-cell #518-Class I

Center	Investigator	Low Resolution						High resolution						METHOD	Other Alleles
		HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
5488	Adams , Sharon			*18	*44	*07	*16	*02:01	*29:02						
4691	Al Ajlan , Abdulaziz	*02	*29	*18	*44	*07	*16							SSO	
5462	Arnold , Paula							*02:01	*29:02	*18:01	*44:03	*07:01	*16:01	SSP SSO SBT	B*18:11/ B*44:203
774	Cecka , J. Michael	*02	*29	*18	*44	*07	*16							SSP	
9916	Charlton , Ronald K	*02	*29	*18	*44	*07	*16	*02:01:01:01	*29:02:01	*18:01:01:02	*44:03:01	*07:01:09	*16:01:01	SSP SBT	
4492	Charron , Dominique							*02:01	*29:02	*18:01	*44:03	*07:01	*16:01	SSP SSO	A*02:266/02:294/02:327/02:329/02:357/02:397/02:469/02:483+, A*29:65, B*18:62/18:99/18:100/18:104/44:163/44:193/44:198N/44:203, C*07:103/*07:131/*07:166/*07:303/*07:310/*07:311/*07:313/07:362, C*16:59/16:71/16:72
3224	Chen , Dong-Feng	*02	*29	*18	*44	*07	*16	*02:01:01G	*29:02:01	*18:01:01G	*44:03:01	*07:01:09	*16:01:01	SSP SSO SBT	
8021	Clark , Brendan	*02	*29	*18	*44	*07	*16							SSP SSO	
5130	Costeas , Paul A.	*02	*29	*18	*44	*07	*16	*02:01	*29:02	*18:01	*44:03	*07:01	*16:01	SSP SSO	A*29:26, C*07:58
779	Daniel , Claude	*02	*29	*18	*44	*07	*16							SSP SSO	
5219	Daniel , Dolly	*02	*29	*18	*44	*07	*16							SSO	
1108	DeConinck , Martha	*02	*29	*18	*44	*07	*16							SSO	
3766	Dunckley , Heather	*02	*29	*18	*44	*07	*16							SSP SSO OTHER	
5214	Eckels/CPMC ,	*02	*29	*18	*44	*07	*16								
3135	Enczmann , J							*02:01	*29:02	*18:01	*44:03	*07:01	*16:01		
792	Gandhi , Manish	*02	*29	*18	*44	*07	*16	*02:01	*29:02	*18:01	*44:03	*07:01	*16:01	SSP SSO SBT	
8087	Guerra , Q.F.B. Elb	*02	*29	*18	*44	*07	*16							SSO	
810	Hamdi , Nuha							*02:101	*29:38	*18:01	*44:03	*07:01	*16:01	SSO	A*02:167/02:227N, A*29:41, B*18:36/*18:53, B*44:03/44:163, C*07:02/07:05/07:27, C*16:21/16:65/16:73
1694	Hesse , Nicole	*02	*29	*18	*44	*07	*16							SSP	
2344	Hurley , Hartzman&							*02:01:01:01	*29:02:01:01	*18:01:01:01	*44:03:01	*07:01:09	*16:01:01	OTHER	
2847	Kihara , Masaaki	*02	*29	*18	*44	*07	*16							SSO	
4337	Kim , Tai-Gyu							*02:01	*29:02	*18:01	*44:03	*07:01	*16:01	SBT	
87	Land , Geoffrey A.	*02	*29	*18	*44	*07	*16							SSP	
278	Lee , Jar-How	*02	*29	*18	*44	*07	*16	*02:01	*29:02	*18:01	*44:03	*07:01	*16:01	SSP SSO	
274	Lo , Raymundo W.							*02:34	*29:30	*18:01	*44:154	*07:01	*16:01		
206	McAlack-Hanau ,	*02	*29	*18	*44	*07	*16								
8042	Muncher , Liora	*02	*29	*18	*44	*07	*16	*02:01	*29:02	*18:01	*44:03	*07:01	*16:01	SSP SSO	
54	Pancoska , Carol	*02	*29	*18	*44	*07	*16								
3966	Permpikul , Vejbaes	*02	*29	*18	*44	*07	*16							SSP	
2400	Phelan , Donna L.	*02	*29	*18	*44	*07	*16	*02:01	*29:02	*18:01	*44:03	*07:01	*16:01	SSP SSO SBT	

Table 8: Individual laboratory results for B-cell #518-Class I

Center	Investigator	Low Resolution						High resolution						METHOD	Other Alleles
		HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
3753	Reed , Elaine F.							*02:01	*29:02	*18:01	*44:03	*07:01	*16:01	SSO SBT	A*02:34/02:174/02:190/02:334, A*29:09/29:22/29:34/29:69, B*18:09/18:11/18:17N/18:20/18:25/1 8:36/18:43/18:49, B*44:45/44:46/44:103/44:109/44:163/ 44:188/44:203, C*07:16/07:26/07:40/07:53, C*16:15/16:21/16:26/16:35
3519	Renac , Virginie	*02	*29	*18	*44	*07	*16	*02:01	*29:02	*18:01	*44:03	*07:01	*16:01	SSP SBT	
4251	Schiller , Jennifer	*02	*29	*18	*44	*07	*16	*02:01	*29:02	*18:01:01G	*44:03	*07:01	*16:01	SSO SBT	
8068	Shanmugam , Hem	*02	*29	*18	*44	*07	*16								
8029	Tarigopula , Anil	*02	*29	*18	*44	*07	*16							SSO	
5451	Tilanus , Marcel G.													SSP SBT	
8052	Yanina Marcos , Cir	*02	*29	*18	*44	*07	*16							SSO	
3511	Zeevi , Adriana														