

# B-cell Line Exchange #265

B-cell Lines 529-530

OCTOBER 5, 2016

The results for B-cell Line Exchange #265 are summarized in Tables 1 - 2 and individual laboratory results reported for each sample are listed in Tables 3 - 8. We are most grateful to **Jean-Marie Tiercy, University Hospital of Geneva** and to **Helen Bass, Jane Rowlands, and Tracey Reese, Welsh**

**Blood Service, Pontyclun**, for generously sharing the interesting cells examined in this exchange.

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

**Ter-529.** The reported type for this sample from a Black donor is DRB1\*13:01-DRB1\*15:03-DRB3\*01:01-DRB5\*01:01-DQA1\*01:02-DQA1\*05:05-DQB1\*03:01-DQB1\*06:02-DPA1\*01:03-DPB1\*18:01-DPB1\*104:01/\*03:01-A\*30:09-A\*80:01-B\*07:02-B\*81:01-C\*07:02-C\*18. One likely class II association in this cell is DRB1\*15:03-DRB5\*01:01-DQA1\*01:02-DQB1\*06:02, observed in previous exchange cells, Ter 434 (same as Ter 275 and Ter 146) and Ter 442 (same as Ter 340 and Ter 215). The other likely haplotype present may then DRB1\*13:01-DRB3\*01:01-DQA1\*05:05-DQB1\*03:01. The DRB1\*13:01-DQB1\*03:01 association in this cell is observed exclusively in African American populations, with HF=0.00063.

DRB1\*13:01 (100%) and DRB1\*15:03 (97%) were reported as the B-locus types in this cell, with 5 labs reporting DRB1\*13:01:01 and 6 labs reporting DRB1\*15:03:01. DQB1\*03:01 and DQB1\*06:02 were each reported by 100% of labs reporting at high resolution. DPB1\*18:01 was reported in complete consensus. The assignment of the second DPB1 type was unresolved, as 14 labs assigned DPB1\*104:01, 9 labs assigned DPB1\*03:01, 3 labs assigned DPB1\*03:01:01G, and 1 lab assigned DPB1\*03:01P. DPB1\*104:01 differs from DPB1\*03:01 in exon 4 by a single nucleotide substitution at codon 205 (GTG → ATG), which results in an amino acid change from valine to methionine.

This cell was previously studied several times in the class I DNA extract exchange as ext 530 (2011), ext 329 (2005), and ext 261(2003). In this present study, the rare A\*30 subtype, A\*30:09, was assigned in complete consensus by labs reporting at high resolution. A\*80:01 (100%) was reported as the second A-locus type, with 4 labs assigning A\*80:01:01. B\*07:02 (100%) and B\*81:01 (100%) were the B-locus types. C\*07:02 was assigned by 100%. The assignment of the second C-locus type remained unresolved as C\*18:02 was assigned by 10 labs, C\*18:01 by 5 labs, and C\*18:01:01G by 2

labs. C\*18:02 differs from C\*18:01 in exon 5 by a single nucleotide substitution (GTT → GCT) at codon 295, resulting in an amino acid change from valine to alanine.

**Ter-530.** The reported type for this sample from a Caucasian donor is DRB1\*01:01-DRB1\*01:03-DQA1\*01:01-DQB1\*05:01-DPA1\*01:03-DPA1\*02:01-DPB1\*04:01-DPB1\*10:01-A\*01:01-A\*25:04-B\*08:01-B\*15:01-C\*01:02-C\*07:01. One likely class II association present in this cell is DRB1\*01:01-DQA1\*01:01-DQB1\*05:01, observed in a number of previous exchange cells, most recently Ter 478 (same as Ter 392) and the workshop cell IHW9326 (same as Ter 479 and Ter 461). The other likely haplotype present is DRB1\*01:03-DQA1\*01:01-DQB1\*05:01, observed in Ter 428 (same as Ter 310 and Ter 290) and Ter 497 (same as Ter 387).

This cell was previously typed for class II as Ter 418 (2008), as astutely noted by Rao. As in the 2008 study, the class II subtypes for this cell were all well assigned. Two subtypes of DRB1\*01 were present in this cell. The first, DRB1\*01:01 was reported in complete consensus, with 5 labs (3 NGS + 2 SBT) assigning DRB1\*01:01:01. DRB1\*01:03 (100%) was reported as the second DRB1\*01 subtype. DQA1\*01:01, DQB1\*05:01, DPA1\*01:03, DPA1\*02:01, DPB1\*04:01, and DPB1\*10:01 were also reported in complete consensus by labs reporting at high resolution.

This cell was previously typed in the class I DNA extract exchange as Ext 493 (2010). It was the first time A\*25:04 was typed in the exchange. In this present typing, A\*25:04 was reported by 20/20 labs reporting at high resolution. A\*01:01 was assigned as the second A-locus typed, with 4 labs (3 NGS + 1 SBT) assigning A\*01:01:01:01. B\*08:01 (96%), B\*15:01(100%), C\*01:02 (94%) and C\*07:01(94%) were well assigned.



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Table 1: Summary of the 265<sup>th</sup> B-cell Line Exchange

Ter-529

DNA Typing - class II		DNA Typing - class I	
<b>DNA Typing - class II</b>	<b>35 labs High; 36 labs low-DRB1</b>	<b>21 labs High; 26 labs Low-DRB3/4/5</b>	<b>23 labs High; 26 labs Low-DQA1</b>
	%(n)	%(n)	%(n)
	DRB1*13:01:01	DRB3*01:01:02:01	DQA1*01:02:01:01
	15(5)	5 (1)	4 (1)
	DRB1*13:01:01G	DRB3*01:01:02G	DQA1*01:02:01
	8 (3)	5 (1)	4 (1)
	DRB1*13:01	DRB3*01:01	DQA1*01:02:01G
	77(27)	90(19)	4 (1)
	DRB1*13	DRB3*01	DQA1*01:02
	100(36)	77(20)	78(18)
		DRB3*Present	DQA1*01:01/02+
		23(6)	4 (1)
			DQA1*01:01
			4 (1)
		DQA1*01	
		100(26)	
<b>DNA Typing - class II</b>	<b>35 labs High; 36 labs low-DRB1</b>	<b>21 labs High; 26 labs Low-DRB3/4/5</b>	<b>22 labs High; 26 Labs Low-DQA1</b>
	%(n)	%(n)	%(n)
	DRB1*15:03:01:01	DRB5*01:01:01	DQA1*05:05:01:01
	3 (1)	10(2)	5 (1)
	DRB1*15:03:01	DRB5*01:01	DQA1*05:05:01
	14(5)	90(19)	9 (2)
	DRB1*15:03	DRB5*01	DQA1*05:05
	80(28)	77(20)	86(19)
	DRB1*15:01	DRB5*Present	DQA1*05
	3 (1)	23(6)	100(26)
	DRB1*15		
	100(36)		
<b>DNA Typing - class II</b>	<b>33 High Labs; 34 labs Low-DQB1</b>	<b>14 High Labs; 13 labs Low-DPA1</b>	<b>27 High Labs; 17 labs Low-DPB1</b>
	%(n)	%(n)	%(n)
	DQB1*03:01:01:01	DPA1*01:03:01:02	DPB1*18:01
	3 (1)	7 (1)	100(27)
	DQB1*03:01:01	DPA1*01:03:01	DPB1*18
	6 (2)	14(2)	100(17)
	DQB1*03:01:01G	DPA1*01:03	
	6 (2)	79(11)	
	DQB1*03:01	DPA1*01	
	85(28)	100(13)	
	DQB1*03(DQ7)		
	3 (1)		
	DQB1*03		
	97(33)		
<b>DNA Typing - class II</b>	<b>33 High Labs; 33 labs Low-DQB1</b>	<b>27 High Labs; 17 labs Low-DPB1</b>	
	%(n)	%(n)	
	DQB1*06:02:01	DPB1*03:01:01G	
	12(4)	11(3)	
	DQB1*06:02:01G	DPB1*03:01P	
	3 (1)	4 (1)	
	DQB1*06:02	DPB1*104:01	
	85(28)	52(14)	
	DQB1*06	DPB1*03:01	
	100(33)	33(9)	
		DPB1*03	
		65(11)	
		DPB1*104	
		29(5)	
	DPB1*20		
	6 (1)		
<b>DNA Typing - class I</b>	<b>20 labs High; 24 labs low- A</b>	<b>17 labs High; 26 labs low- B</b>	<b>17 labs High; 26 labs low- C</b>
	%(n)	%(n)	%(n)
	A*30:09	B*07:02:01	C*07:02:01:01
	100(20)	18(3)	12(2)
	A*30	B*07:02:01G	C*07:02:01
	100(24)	6 (1)	6 (1)
		B*07:02	C*07:02:01G
		76(13)	6 (1)
		B*07	C*07:02
		100(26)	76(13)
			C*07
			100(26)
<b>DNA Typing - class I</b>	<b>20 labs High; 24 labs low- A</b>	<b>18 labs High; 26 labs low- B</b>	<b>17 labs High; 26 labs low- C</b>
	%(n)	%(n)	%(n)
	A*80:01:01:02	B*81:01	C*18:01:01G
	10(2)	100(18)	12(2)
	A*80:01:01	B*81	C*18:02
	10(2)	100(26)	59(10)
	A*80:01		C*18:01
	80(16)		29(5)
	A*80		C*18
	100(24)		100(26)

**Table 2: Summary of the 265th B-cell Line Exchange**

Ter-530												
<b>DNA Typing - class II</b>	<b>34 labs High; 36 labs low-DRB1</b>	%(n)			<b>24 labs High; 25 labs Low-DQA1</b>	%(n)	<b>33 High Labs; 34 labs Low-DQB1</b>	%(n)	<b>14 High Labs; 13 labs Low-DPA1</b>	%(n)	<b>27 High Labs; 19 labs Low-DPB1</b>	%(n)
	DRB1*01:01:01	15(5)			DQA1*01:01:01	8(2)	DQB1*05:01:01:01	3 (1)	DPA1*01:03:01:04	14(2)	DPB1*04:01:01:01	4 (1)
	DRB1*01:01:01G	9(3)			DQA1*01:01:01G	4(1)	DQB1*05:01:01	9 (3)	DPA1*01:03	86(12)	DPB1*04:01:01	11(3)
	DRB1*01:01	76(26)			DQA1*01:01P	4(1)	DQB1*05:01:01G	3 (1)	DPA1*01	100(13)	DPB1*04:01:01G	4 (1)
	DRB1*01	100(36)			DQA1*01:01	83(20)	DQB1*05:01	85(28)			DPB1*04:01	81(22)
					DQA1*01	100(25)	DQB1*05	100(34)			DPB1*04(DP401)	42(8)
											DPB1*04	58(11)
<b>DNA Typing - class I</b>	<b>36 labs High; 36 labs low-DRB1</b>	%(n)							<b>14 High Labs; 13 labs Low-DPA1</b>	%(n)	<b>27 High Labs; 19 labs Low-DPB1</b>	%(n)
	DRB1*01:03	100(36)							DPA1*02:01:01	14(2)	DPB1*10:01:01	8 (2)
	DRB1*103	17(6)							DPA1*02:01	86(12)	DPB1*10:01	92(25)
	DRB1*01	83(30)							DPA1*02	100(13)	DPB1*10	100(19)
<b>DNA Typing - class I</b>	<b>18 labs High; 25 labs low- A</b>	%(n)	<b>18 labs High; 26 labs low- B</b>	%(n)	<b>17 labs High; 26 labs low- C</b>	%(n)						
	A*01:01:01:01	22(4)	B*08:01:01	17(3)	C*01:02:01	18(3)						
	A*01:01:01G	6 (1)	B*08:01	78(14)	C*01:02:01G	6 (1)						
	A*01:01	72(13)	B*08:27	4 (1)	C*01:02	70(12)						
	A*01	100(25)	B*08	100(26)	C*01:23	6 (1)						
					C*01	100(26)						
<b>DNA Typing - class I</b>	<b>20 labs High; 24 labs low- A</b>	%(n)	<b>20 labs High; 25 labs low- B</b>	%(n)	<b>17 labs High; 26 labs low- C</b>	%(n)						
	A*25:04	100(20)	B*15:01:01:01	15(3)	C*07:01:01:01	18(3)						
	A*25	100(24)	B*15:01	85(20)	C*07:01:01G	6 (1)						
			B*15(B62)	4 (1)	C*07:01	70(12)						
			B*15	96(24)	C*07:06	6 (1)						
					C*07	100(26)						

**Table 3a: Individual laboratory results for B-cell #529-Class II**

Center	Investigator	Low resolution												METHOD	Other Alleles
		DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1			
5488	Adams , Sharon			3*01	5*01	*01	*05							SSP SSO SBT	
5462	Arnold , Paula	*13	*15	3*01	5*01	*01	*05	*03	*06	*01	*01	*18	*104	SSP SSO SBT	
774	Cecka , J. Michael	*13	*15	3*01	5*01	*01	*05	*03	*06	*01		*18	*104	RT-PCR	
9916	Charlton , Ronald K	*13	*15					*03	*06				*03	SSP	DPB1*18 B*55
8021	Clark , Brendan													SSO	DPB1*104
3632	Colombe , Beth W.	*13	*15	3*01	5*01	*01	*05	*03	*06	*01		*18	*104	SSP SSO	
5130	Costeas , Paul A.	*13	*15	3*01	5*01	*01	*05	*03	*06					SSP SSO	
779	Daniel , Claude	*13	*15	3*01	5*01	*01	*05	*03	*06	*01	*01	*18	*03	SSO	
5219	Daniel , Dolly	*13	*15					*03	*06						
8099	Danish , Adel	*13	*15			*01	*05	*03	*06					SSO	
1108	DeConinck , Martha	*13	*15	3*01	5*01	*01	*05	*03	*06	*01	*01	*18	*03	SSO	DPB1*104
87	Di Paola , Nicholas	*13	*15	3*01	5*01	*01	*05	*03	*06	*01	*01	*18	*20	RT-PCR	
5214	Eckels/CPMC ,	*13	*15	3*01	5*01	*01	*05	*03(DQ7)	*06	*01	*01	*18	*03	SSO	
747	Ferrari-Lacraz , Sylv	*13	*15	3*01	5*01	*01	*05	*03	*06			*18	*03	SSP SSO SBT	
4079	Fort , Marylise	*13	*15					*03	*06					SSP SSO	
792	Gandhi , Manish	*13	*15	3*01	5*01	*01	*05	*03	*06	*01		*18	*104	SSP SSO SBT	
8087	Guerra , Q.F.B. Elba	*13	*15			*01	*05	*03	*06						
810	Hamdi , Nuha													SSO	
1694	Hesse , Nicole	*13	*15	3*PRESENT	5*PRESENT			*03	*06					SSP	
8043	Hod , Reut	*13	*15			*01	*05	*03	*06					SSP SSO	
771	Israel , Shoshana	*13	*15					*03	*06					SSP SSO	
794	Jaatinen , Taina	*13	*15	3*01	5*01	*01	*05	*03	*06	*01		*18	*03	SSP SSO SBT	
725	Lardy , N.M.	*13	*15	3*PRESENT	5*PRESENT	*01	*05	*03	*06					RT-PCR	
278	Lee , Jar-How	*13	*15	3*01	5*01	*01	*05	*03	*06	*01	*01	*18	*104	SSO	
6649	Lim , Young Ae	*13	*15	3*PRESENT	5*PRESENT									SSP	
2400	Liu , Chang	*13	*15	3*01	5*01	*01	*05	*03	*06			*18	*03	SSP SSO SBT	
731	Loewenthal , Ron	*13	*15			*01	*05	*03	*06					SSP SSO SBT	
206	McAlack , Robert	*13	*15	3*01	5*01	*01	*05	*03	*06	*01	*01	*18	*03	SSO	
8042	Muncher , Liora	*13	*15	3*01	5*01	NT	NT	*03	*06	NT	NT	NT	NT	SSP SSO	
54	Pancoska , Carol	*13	*15	3*01	5*01	*01	*05	*03	*06	*01		*18	*03	SSO	
3966	Permpikul , Vejbaes													SSP	
8001	Rao , Prakash	*13	*15	3*PRESENT	5*PRESENT	*01	*05							SSP SSO	
3519	Renac , Virginie	*13	*15					*03	*06			*18	*03	SSP SBT	
793	Rubocki , Ronald	*13	*15	3*PRESENT	5*PRESENT	*01	*05	*03	*06			*18		RT-PCR	
4251	Schiller , Jennifer	*13	*15	3*01	5*01	*01	*05	*03	*06	*01	*01	*18	*03	SSP	
8068	Shanmugam , Hem	*13	*15	3*01	5*01			*03	*06					SSO NGS	
8029	Tarigopula , Anil	*13	*15			*01	*05	*03	*06					SSP SSO	
5451	Tilanus , Marcel G.J	*13	*15	3*01	5*01	*01	*05	*03	*06					SSO	
5642	Varnavidou-Nicolaic	*13	*15	3*PRESENT	5*PRESENT			*03	*06					SSO SBT	
2847	Wakita , Atsushi	*13	*15											SSP	
														SSO	

**Table 3b: Individual laboratory results for B-cell #529-Class II**

Intermediate/High resolution														
Center	Investigator	DRB1		DRB3/4/5		DQA1		DQB1		DPA1	DPB1		METHOD	Other Alleles
5488	Adams , Sharon	*13:01:01	*15:03:01					*03:01	*06:02		*18:01	*104:01	SSP SSO SBT	
5462	Arnold , Paula	*13:01	*15:03	3*01:01	5*01:01	NT	NT	*03:01	*06:02	*01:03	*18:01	*104:01	SSP SSO SBT RT-PCR	DRB3*01:16 DRB5*01:16 DRB3*01:19 DRB5*01:17 DPA1*01:13 DRB5*01:15 DRB3*01:17
5133	Askar , Medhat	*13:01:01	*15:03:01	3*01:01:02:01	5*01:01:01	*01:02:01	*05:05:01	*03:01:01	*06:02:01	*01:03:01	*18:01	*104:01	NGS	
4492	Caillat-Zucman , Sc	*13:01:01	*15:03:01	3*01:01	5*01:01	*01:01/*02+	*05:05	*03:01:01	*06:02:01	*01:03	*18:01	*104:01	SSO NGS	DPA1*01:13 DQA1*05:09 DQA1*05:11
774	Cecka , J. Michael	*13:01	*15:03	3*01:01	5*01:01	*01:02	*05:05	*03:01	*06:02	*01:03	*18:01	*104:01	SSP SSO	DRB3*01:16 DQB1*03:92 DPA1*01:13 DQB1*03:93 DQB1*06:84 DQB1*06:107 DQB1*06:109 DQB1*06:111 DQB1*06:113 DQB1*06:114 DQB1*06:116 DQB1*06:117 DQB1*06:127 DRB1*13:166 DRB1*13:173 DRB1*13:186
8070	Chang , Uckjin	*13:01	*15:01										SSP SBT	
3224	Chen , Dong-Feng	*13:01:01G	*15:03	3*01:01:02G	5*01:01:01	*01:02	*05:05:01	*03:01	*06:02	*01:03:01	*18:01	*104:01	SSP SBT	
8021	Clark , Brendan	*13:01	*15:03	3*01:01	5*01:01	*01:01	*05:05	*03:01	*06:02	*01:03	*18:01	*03:01	SSO	
3632	Colombe , Beth W.	*13:01	*15:03	3*01:01	5*01:01	*01:02	*05:05	*03:01	*06:02	*01:03	*18:01	*104:01	SSP SSO	
5130	Costeas , Paul A.	*13:01	*15:03	3*01:01	5*01:01	*01:02	*05:05	*03:01	*06:02				SSP SSO	
779	Daniel , Claude	*13:01	*15:03	3*01:01	5*01:01	*01:02		*03:01	*06:02	*01:03	*18:01	*03:01:01G	SSO	
5214	Eckels/CPMC ,									*01:03	*18:01	*03:01:01G		
3135	Enczmann , J	*13:01	*15:03	3*01:01	5*01:01			*03:01	*06:02		*18:01	*03:01		
747	Ferrari-Lacraz , Syl	*13:01:01G	*15:03	3*01:01	5*01:01			*03:01:01G	*06:02:01G		*18:01	*03:01	SSP SSO SBT	
762	Fischer , Gottfried	*13:01	*15:03	3*01:01	5*01:01	*01:02	*05:05	*03:01	*06:02		*18:01	*03:01	SBT	DPB1*104:01 DRB1*13:117 DRB3*01:16 DRB3*01:02 DRB3*01:04 DQB1*03:19 DQB1*03:29
4079	Fort , Marylise	*13:01	*15:03			*01:02	*05:05	*03:01	*06:02		*18:01	*03:01	SSP SSO	DQA1*01:08 DQA1*01:09 DQA1*01:11 DQA1*05:09 DQA1*05:11 DPB1*104:01
792	Gandhi , Manish	*13:01	*15:03			*01:02	*05:05	*03:01	*06:02		*18:01	*104:01	SSP SSO SBT	
810	Hamdi , Nuha	*13:01	*15:03	3*01:01	5*01:01	*01:02	*05:05	*03:01	*06:02				SSO	
8043	Hod , Reut	*13:01	*15:03			*01:02	*05:05	*03:01	*06:02				SSP SSO	
2344	Hurley , Hartzman&	*13:01:01	*15:03:01:01			*01:02:01:01	*05:05:01:01	*03:01:01:01	*06:02:01	*01:03:01:02	*18:01	*104:01	SSO NGS	DQA1*01:02:01:02 DQA1*01:02:01:03 DQA1*05:05:01:03 DQB1*03:01:01:02 DQA1*01:02:01:04 DQB1*03:01:01:03 DQA1*05:05:01:02
771	Israel , Shoshana	*13:01	*15:03					*03:01	*06:02				SSP SSO	

**Table 3b: Individual laboratory results for B-cell #529-Class II**

Intermediate/High resolution														
Center	Investigator	DRB1		DRB3/4/5		DQA1		DQB1		DPA1	DPB1		METHOD	Other Alleles
794	Jaatinen , Taina	*13:01	*15:03	3*01:01	5*01:01	*01:02	*05:05	*03:01	*06:02	*01:03	*18:01	*03:01	SSP SSO SBT RT-PCR	DQA1*01:11 DQA1*05:09 DPA1*01:13 DQA1*01:08 DQA1*01:09 DQA1*05:11 DPB1*104:01 DRB1*13:105 DRB1*13:117 DRB1*13:190 DRB1*13:166 DRB3*01:16 DRB5*01:15
8086	Keming , Du	*13:01	*15:03			*01:02	*05:05	*03:01	*06:02	*01:03	*18:01	*104:01	SSP SSO SBT	DRB1*13:105 DRB1*13:112 DRB1*13:117 DRB1*13:173 DRB1*13:121 DRB1*13:166
4337	Kim , Tai-Gyu	*13:01	*15:03					*03:01	*06:02		*18:01	*104:01	SSP SBT	
278	Lee , Jar-How	*13:01	*15:03	3*01:01	5*01:01	*01:02	*05:05	*03:01	*06:02	*01:03	*18:01	*104:01		
2400	Liu , Chang	*13:01	*15:03			*01:02	*05:05	*03:01	*06:02		*18:01	*03:01P	SSP SSO SBT	
731	Loewenthal , Ron	*13:01:01G	*15:03:01					*03:01:01G	*06:02:01				SSP SSO SBT	
8042	Muncher , Liora	*13:01	*15:03	3*01:01	5*01:01	NT	NT	*03:01	*06:02	NT	NT	NT	SSP SSO	
3966	Permpikul , Vejbaes	*13:01	*15:03	3*01:01	5*01:01			*03:01	*06:02				SSP	
8001	Rao , Prakash	*13:01	*15:03	3*01:01	5*01:01			*03:01	*06:02		*18:01	*03:01	SSP SSO	DPB1*104:01
3753	Reed , Elaine F.	*13:01	*15:03	3*01:01	5*01:01	*01:02:01G	*05:05	*03:01	*06:02	*01:03	*18:01	*03:01	SSO SBT	DQB1*03:69 DQB1*06:48 DQA1*01:01:03 DRB3*01:04 DPB1*293:01 DPB1*222:01 DQB1*06:82 DQA1*05:09 DQB1*03:29 DQB1*03:74 DRB5*01:15 DPB1*104:01 DPB1*329:01 DQA1*05:11 DQB1*06:122 DRB3*01:16 DPB1*270:01 DPA1*01:13
3519	Renac , Virginie	*13:01	*15:03	3*01:01	5*01:01	*01:02	*05:05	*03:01	*06:02		*18:01	*03:01	SSP SBT RT-PCR	DRB1*13:117 DPB1*104:01
793	Rubocki , Ronald					*01:02	*05:05				*18:01	*03:01:01G	SSP	
4251	Schiller , Jennifer	*13:01	*15:03			*01:02	*05:05	*03:01	*06:02	*01:03	*18:01	*104:01	SSO NGS	
5451	Tilanus , Marcel G.	*13:01:01	*15:03:01										SSO SBT	
5642	Varnavidou-Nicolaid	*13:01	*15:03					*03:01	*06:02				SSP	DRB1*15:94
3511	Zeevi , Adriana	*13:01	*15:03	3*01:01	5*01:01	*01:02	*05:05	*03:01	*06:02		*18:01	*104:01	SSP SSO	

Table 4: Individual laboratory results for B-cell #529-Class II									
Serology									
CTR	DIRNAME	DR13	DR15	DR51	DR52	DQ1	DQ7	OTH1	OTH2
910	Hahn,Amy B.	+	+	+	+	+	+	DR18	
4908	Kvam,Vonnett	+	+	+	+	+	+		
54	Pancoska,Carol	+	+	+	+	DQ6	+		

**Table 5: Individual laboratory results for B-cell #529-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	*81	*07	*18	*30:09	*80:01:01					SSP SSO SBT	
5462	Arnold , Paula	NT						NT						SSP SSO SBT	
5133	Askar , Medhat							*30:09	*80:01:01	*07:02:01	*81:01	*07:02:01	*18:02	RT-PCR	
4492	Caillat-Zucman , Sc							*30:09	*80:01:01:02	*07:02:01	*81:01	*07:02:01:01	*18:02	NGS	
774	Cecka , J. Michael	*30	*80	*07	*81	*07	*18				*81:01			SSO NGS	
8070	Chang , Uckjin													SSP SSO	
9916	Charlton , Ronald K	*30	*80	*07	*81	*07	*18							SSP SBT	
3224	Chen , Dong-Feng							*30:09	*80:01	*07:02:01G	*81:01	*07:02:01G	*18:01:01G	SSP	
8021	Clark , Brendan			*07	*81	*07	*18	*30:09	*80:01					SSP SBT	B*07:202 B*07:80
3632	Colombe , Beth W.													SSO	
5130	Costeas , Paul A.	*30	*80	*07	*81	*07	*18	*30:09	*80:01	*07:02	*81:01	*07:02	*18:01	SSP SSO	A*30:51 C*18:02
779	Daniel , Claude	*30	*80	*07	*81	*07	*18	*30:09	*80:01					SSO	
5219	Daniel , Dolly	*30	*80	*07	*81	*07	*18								
8099	Danish , Adel	*30	*80	*07	*81	*07	*18							SSO	
1108	DeConinck , Martha	*30	*80	*07	*81	*07	*18							SSO	
87	Di Paola , Nicholas	*30	*80	*07	*81	*07	*18							RT-PCR	
3135	Enczmann , J							*30:09	*80:01	*07:02	*81:01	*07:02	*18:01		
5214	Eckels/CPMC ,	*30	*80	*07	*81	*07	*18							SSO	
747	Ferrari-Lacraz , Sylv													SSP SSO SBT	
762	Fischer , Gottfried													SBT	
4079	Fort , Marylise													SSP SSO	
792	Gandhi , Manish	*30	*80	*07	*81	*07	*18	*30:09	*80:01	*07:02	*81:01	*07:02	*18:02	SSP SSO SBT	
8087	Guerra , Q.F.B. Elb	*30	*80	*07	*81	*07	*18								
810	Hamdi , Nuha							*30:09	*80:01	*07:02	*81:01	*07:02	*18:01	SSO	
1694	Hesse , Nicole	*30	*80	*07	*81	*07	*18							SSP	
8043	Hod , Reut													SSP SSO	
2344	Hurley , Hartzman&							*30:09	*80:01:01:02	*07:02:01	*81:01	*07:02:01:01	*18:02		C*07:02:01:02 C*07:02:01:03 C*07:02:01:04 C*07:02:01:05
771	Israel , Shoshana													SSP SSO	
794	Jaatinen , Taina	*30	*80	*07	*81	*07	*18	*30:09	*80:01	*07:02	*81:01	*07:02	*18:01	SSP SSO SBT	B*07:61 B*07:161N B*81:02 C*07:50 C*07:349
8086	Keming , Du							*30:09	*80:01	*07:02	*81:01	*07:02	*18:02	RT-PCR	
4337	Kim , Tai-Gyu							*30:09	*80:01	*07:02	*81:01	*07:02	*18:01	SSP SSO SBT	
725	Lardy , N.M.													SSP SBT	
278	Lee , Jar-How	*30	*80	*07	*81	*07	*18	*30:09	*80:01	*07:02	*81:01	*07:02	*18:02	SSO	
6649	Lim , Young Ae													SSP	
2400	Liu , Chang	*30	*80	*07	*81	*07	*18	*30:09	*80:01	*07:02	*81:01	*07:02	*18:02	SSP SSO SBT	
731	Loewenthal , Ron													SSP SSO SBT	
206	McAlack , Robert	*30	*80	*07	*81	*07	*18							SSO	
8042	Muncher , Liora	*30	*80	*07	*81	*07	*18	*30:09	*80:01	*07:02	*81:01	*07:02	*18:02	SSP SSO	



Table 5: Individual laboratory results for B-cell #529-Class I															
Center	Investigator	Low resolution						High resolution						METHOD	Other Alleles
		HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
54	Pancoska , Carol	*30	*80	*07	*81	*07	*18							SSO	
3966	Permpikul , Vejbaes	*30	*80	*07	*81	*07	*18							SSP	
8001	Rao , Prakash													SSP SSO	
3519	Renac , Virginie	*30	*80	*07	*81	*07	*18							SSP SBT RT-PCR	
3753	Reed , Elaine F.							*30:09	*80:01	*07:02	*81:01	*07:02	*18:01:01G	SSO SBT	B*07:80 B*07:161N C*07:50 C*07:349 B*07:61 B*07:202 B*81:02
3519	Renac , Virginie							*30:09	*80:01	*07:02	*81:01	*07:02	*18:02	SSP SBT RT- PCR	B*81:02
793	Rubocki , Ronald													SSP	
4251	Schiller , Jennifer	*30	*80	*07	*81	*07	*18	*30:09	*80:01	*07:02	*81:01	*07:02	*18:02	SSO NGS	
8068	Shanmugam , Hem	*30	*80	*07	*81	*07	*18							SSP SSO	
8029	Tarigopula , Anil	*30	*80	*07	*81	*07	*18							SSO	
5451	Tilanus , Marcel G.													SSO SBT	
5642	Varnavidou-Nicolaic													SSP	
2847	Wakita , Atsushi	*30	*80	*07	*81	*07	*18							SSO	
3511	Zeevi , Adriana													SSP SSO	

**Table 6a: Individual laboratory results for B-cell #530-Class II**

		Low resolution													
Center	Investigator	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
5462	Arnold , Paula	*01	*01	NP	NP	*01		*05		*01	*02	*04(DP401)	*10	SSP SSO SBT RT-PCR	
774	Cecka , J. Michael	*01	*01			*01		*05		*01	*02	*04	*10	SSP SSO	
9916	Charlton , Ronald K	*01						*05				*04	*10	SSP	DQB1*03
3632	Colombe , Beth W.	*01	*01			*01		*05		*01	*02	*04	*10	SSP SSO	
5130	Costeas , Paul A.	*01	*01			*01	*01	*05	*05					SSP SSO	
779	Daniel , Claude	*01	*01			*01		*05		*01	*02	*04(DP401)	*10	SSO	
5219	Daniel , Dolly	*01	*01					*05	*05						
8099	Danish , Adel	*01	*01			*01	*01	*05	*05					SSO	
1108	DeConinck , Martha	*01	*103			*01	*01	*05	*05	*01	*02	*04(DP401)	*10	SSO	
87	Di Paola , Nicholas	*01	*103			*01	*01	*05	*05	*01	*02	*04(DP401)	*10	RT-PCR	
5214	Eckels/CPMC ,	*01	*103			*01		*05		*01	*02	*04(DP401)	*10	SSO	
747	Ferrari-Lacraz , Sylv	*01	*01			*01	*01	*05	*05			*04	*10	SSP SSO SBT	
4079	Fort , Marylise	*01	*01					*05						SSP SSO	
792	Gandhi , Manish	*01	*103			*01		*05		*01	*02	*04	*10	SSP SSO SBT	
8087	Guerra , Q.F.B. Elba	*01	*01			*01	*01	*05	*05						
1694	Hesse , Nicole	*01	*01					*05						SSP	
8043	Hod , Reut	*01	*01			*01		*05						SSP SSO	
771	Israel , Shoshana	*01						*05						SSP SSO	
794	Jaatinen , Taina	*01		NP		*01		*05		*01	*02	*04	*10	SSP SSO SBT RT-PCR	
725	Lardy , N.M.	*01				*01		*05						SSO	
278	Lee , Jar-How	*01	*01	NT	NT	*01	*01	*05	*05	*01	*02	*04	*10		
6649	Lim , Young Ae	*01												SSP	
2400	Liu , Chang	*01	*01	NP	NP	*01	*01	*05	*05			*04	*10	SSP SSO SBT	
731	Loewenthal , Ron	*01	*01			*01		*05						SSP SSO SBT	
206	McAlack , Robert	*01	*01			*01	*01	*05	*05	*01	*02	*04	*10	SSO	
8042	Muncher , Liora	*01	*01	NP	NP	NT	NT	*05	*05	NT	NT	NT	NT	SSP SSO	
54	Pancoska , Carol	*01	*103			*01		*05		*01	*02	*04(DP401)	*10	SSO	
8001	Rao , Prakash	*01	*01			*01		*05				*04	*10	SSP SSO	
3519	Renac , Virginie	*01	*103					*05				*04(DP401)	*10	SSP SBT RT-PCR	
793	Rubocki , Ronald	*01				*01		*05				*04(DP401)	*10	SSP	
4251	Schiller , Jennifer	*01	*01			*01	*01	*05	*05	*01	*02	*04	*10	SSO NGS	
8068	Shanmugam , Hem	*01						*05						SSP SSO	
8029	Tarigopula , Anil	*01	*01			*01	*01	*05	*05					SSO	
5451	Tilanus , Marcel G.J.	*01	*01			*01		*05						SSO SBT	
5642	Varnavidou-Nicolaic	*01	*01					*05						SSP	
2847	Wakita , Atsushi	*01	*01											SSO	

**Table 6b: Individual laboratory results for B-cell #530-Class II**

Center	Investigator	High resolution										METHOD	Other Alleles
		DRB1	DRB3/4/5	DQA1	DQB1		DPA1		DPB1				
5488	Adams , Sharon	*01:01:01	*01:03		*01:01	*05:01:01				*04:01:01	*10:01	SSP SSO SBT	
5462	Arnold , Paula	*01:01	*01:03	NP	*01:01P	*05:01		*01:03	*02:01	*04:01	*10:01	SSP SSO SBT RT-PCR	DPA1*01:13 DQA1*01:04 DQA1*01:12 DQA1*01:05
5133	Askar , Medhat	*01:01:01	*01:03		*01:01:01	*05:01:01		*01:03:01:04	*02:01:01	*04:01:01	*10:01:01	NGS	
4492	Caillat-Zucman , Sc	*01:01:01	*01:03		*01:01	*05:01:01		*01:03	*02:01	*04:01:01	*10:01:01	SSO NGS	DQA1*01:04 DQA1*01:05 DQA1*01:12 DPA1*01:13
774	Cecka , J. Michael	*01:01	*01:03		*01:01	*05:01		*01:03	*02:01	*04:01	*10:01	SSP SSO	DQB1*05:55 DQB1*05:58 DQB1*05:71 DQB1*05:72 DQB1*05:74 DQB1*05:75 DQB1*05:76 DQA1*01:12 DRB1*01:40N DRB1*01:50 DRB1*01:62N DRB1*01:64 DRB1*01:65 DRB1*01:67 DQB1*05:61 DQB1*05:68 DQB1*05:70 DRB1*01:39N DQB1*05:48 DQB1*05:49 DQB1*05:54
8070	Chang , Uckjin	*01:01	*01:03									SSP SBT	
3224	Chen , Dong-Feng	*01:01:01G	*01:03	NT	*01:01	*05:01		*01:03	*02:01	*04:01	*10:01	SSP SBT	
8021	Clark , Brendan	*01:01	*01:03		*01:01	*05:01		*01:03	*02:01	*04:01	*10:01	SSO	
3632	Colombe , Beth W.	*01:01	*01:03		*01:01	*05:01		*01:03	*02:01	*04:01	*10:01	SSP SSO	
5130	Costeas , Paul A.	*01:01	*01:03		*01:01	*05:01	*05:01					SSP SSO	
779	Daniel , Claude		*01:03			*05:01		*01:03	*02:01	*04:01	*10:01	SSO	
5214	Eckels/CPMC ,		*01:03						*02:01	*04:01:01G			
3135	Enczmann , J	*01:01	*01:03			*05:01	*05:01			*04:01	*10:01		
747	Ferrari-Lacraz , Syl	*01:01:01G	*01:03			*05:01	*05:01:01G			*04:01	*10:01	SSP SSO SBT	
762	Fischer , Gottfried	*01:01	*01:03		*01:01	*05:01				*04:01	*10:01	SBT	DRB1*01:50 DRB1*01:67
4079	Fort , Marylise	*01:01	*01:03		*01:01	*05:01				*04:01	*10:01	SSP SSO	DQA1*01:04 DQA1*01:05 DQA1*01:12 DRB1*01:65
792	Gandhi , Manish	*01:01	*01:03		*01:01	*05:01				*04:01	*10:01	SSP SSO SBT	
810	Hamdi , Nuha	*01:01	*01:03		*01:01	*05:01	*05:01					SSO	
8043	Hod , Reut	*01:01	*01:03		*01:01	*05:01						SSP SSO	
2344	Hurley , Hartzman&	*01:01:01	*01:03		*01:01:01	*05:01:01:01	*05:01:01:01	*01:03:01:04	*02:01:01	*04:01:01:01	*10:01	SSO NGS	DPB1*04:01:01:02 DQB1*05:01:01:02 DQB1*05:01:01:02
771	Israel , Shoshana	*01:01	*01:03			*05:01						SSP SSO	
794	Jaatinen , Taina	*01:01	*01:03	NP	*01:01	*05:01		*01:03	*02:01	*04:01	*10:01	SSP SSO SBT RT-PCR	DRB1*01:50 DRB1*01:71 DPA1*01:13 DRB1*01:67 DQA1*01:04 DQA1*01:05 DQA1*01:12 DPB1*459:01 DPB1*464:01

**Table 6b: Individual laboratory results for B-cell #530-Class II**

		High resolution											
Center	Investigator	DRB1		DRB3/4/5	DQA1	DQB1		DPA1		DPB1		METHOD	Other Alleles
8086	Keming , Du	*01:01	*01:03		*01:01	*05:01	*05:01	*01:03	*02:01	*04:01	*10:01	SSP SSO SBT	DRB1*01:39N DRB1*01:49 DRB1*01:50 DPA1*01:06 DPA1*02:03 DRB1*01:07 DRB1*01:40N
4337	Kim , Tai-Gyu	*01:01	*01:03			*05:01	*05:01			*04:01	*10:01	SSP SBT	
278	Lee , Jar-How	*01:01	*01:03		*01:01	*05:01	*05:01	*01:03	*02:01	*04:01	*10:01		
2400	Liu , Chang	*01:01	*01:03		*01:01	*05:01	*05:01			*04:01	*10:01	SSP SSO SBT	
731	Loewenthal , Ron	*01:01:01G	*01:03			*05:01:01G						SSP SSO SBT	
8042	Muncher , Liora	*01:01	*01:03	NP	NT	*05:01	*05:01	NT	NT	NT	NT	SSP SSO	
3966	Permpikul , Vejbaes	*01:01	*01:03			*05:01	*05:01					SSP	
8001	Rao , Prakash	*01:01	*01:03			*05:01				*04:01	*10:01	SSP SSO	
3753	Reed , Elaine F.	*01:01	*01:03	NP	*01:01:01G	*05:01	*05:01	*01:03	*02:01	*04:01	*10:01	SSO SBT	DPA1*01:13
3519	Renac , Virginie	*01:01	*01:03		*01:01	*05:01				*04:01	*10:01	SSP SBT RT-PCR	
793	Rubocki , Ronald				*01:01					*04:01	*10:01	SSP	
4251	Schiller , Jennifer	*01:01	*01:03		*01:01	*05:01	*05:01	*01:03	*02:01	*04:01	*10:01	SSO NGS	
5451	Tilanus , Marcel G.	*01:01:01	*01:03									SSO SBT	
5642	Varnavidou-Nicolaïd	*01:01	*01:03			*05:01						SSP	DRB1*01:39N DRB1*01:22 DRB1*01:25
3511	Zeevi , Adriana	*01:01	*01:03		*01:01	*05:01				*04:01	*10:01	SSP SSO	

Table 7: Individual laboratory results for B-cell #530-Class II									
Serology									
CTR	DIRNAME	DR1	DR103		DQ1			OTH1	OTH2
910	Hahn,Amy B.	+			+				
4908	Kvam,Vonnett	+			+				
54	Pancoska,Carol	+	+		+				

**Table 8: Individual laboratory results for B-cell #530-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			*08	*15	*01	*07	*01:01:01:01	*25:04					SSP SSO SBT	
5462	Arnold , Paula	NT						NT						SSP SSO SBT RT-PCR	
5133	Askar , Medhat							*01:01:01:01	*25:04	*08:01:01	*15:01:01:01	*01:02:01	*07:01:01:01	NGS	
4492	Caillat-Zucman , So							*01:01:01:01	*25:04	*08:01:01	*15:01:01:01	*01:02:01	*07:01:01:01	SSO NGS	DQA1*01:04 DQA1*01:05 DQA1*01:12 DPA1*01:13
774	Cecka , J. Michael	*01	*25	*08	*15	*01	*07			*08:01	*15:01			SSP SSO	B*08:19N B*08:109 B*08:121 B*08:127 B*08:131 B*15:01:01:02N B*15:102 B*15:104 B*15:140 B*15:146 B*15:201 B*15:227 B*15:228 B*15:247 B*15:317 B*15:320 B*15:321Q
8070	Chang , Uckjin													SSP SBT	
9916	Charlton , Ronald K	*01	*25	*08	*15	*01	*07							SSP	
3224	Chen , Dong-Feng							*01:01	*25:04	*08:01	*15:01	*01:02:01G	*07:01:01G	SSP SBT	
8021	Clark , Brendan	*01		*08	*15	*01	*07		*25:04					SSO	
3632	Colombe , Beth W.													SSP SSO	
5130	Costeas , Paul A.	*01	*25	*08	*15	*01	*07	*01:01	*25:04	*08:01	*15:01	*01:02	*07:01	SSP SSO	B*15:70
779	Daniel , Claude	*01	*25	*08	*15	*01	*07		*25:04		*15:01			SSO	
5219	Daniel , Dolly	*01	*25	*08	*15	*01	*07								
8099	Danish , Adel	*01	*25	*08	*15	*01	*07							SSO	
1108	DeConinck , Martha	*01	*25	*08	*15	*01	*07							SSO	
87	Di Paola , Nicholas	*01	*25	*08	*15	*01	*07							RT-PCR	
5214	Eckels/CPMC ,	*01	*25	*08	*15 (B62)	*01	*07							SSO	
3135	Enczmann , J							*01:01	*25:04	*08:01	*15:01	*01:02	*07:01		C*07:06 C*07:18
747	Ferrari-Lacruz , Sylv													SSP SSO SBT	
762	Fischer , Gottfried													SBT	
4079	Fort , Marylise													SSP SSO	
792	Gandhi , Manish	*01	*25	*08	*15	*01	*07	*01:01	*25:04	*08:01	*15:01	*01:02	*07:06	SSP SSO SBT	
8087	Guerra , Q.F.B. Elb	*01	*25	*08	*15	*01	*07								
810	Hamdi , Nuha							*01:01	*25:04	*08:27	*15:01	*01:23	*07:01	SSO	
1694	Hesse , Nicole	*01	*25	*08	*15	*01	*07							SSP	
8043	Hod , Reut													SSP SSO	
2344	Hurley , Hartzman&							*01:01:01:01	*25:04	*08:01:01	*15:01:01:01	*01:02:01	*07:01:01:01	SSO NGS	
771	Israel , Shoshana													SSP SSO	
794	Jaatinen , Taina	*01	*25	*08	*15	*01	*07	*01:01	*25:04	*08:01	*15:01	*01:02	*07:01	SSP SSO SBT RT-PCR	C*01:85 C*07:343 C*07:419
8086	Keming , Du							*01:01	*25:04	*08:01	*15:01	*01:02	*07:01	SSP SSO SBT	C*07:150Q

**Table 8: Individual laboratory results for B-cell #530-Class I**

Center	Investigator	Low resolution						High resolution						METHOD	Other Alleles
		HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
4337	Kim , Tai-Gyu							*01:01	*25:04	*08:01	*15:01	*01:02	*07:01	SSP SBT	
725	Lardy , N.M.													SSO	
278	Lee , Jar-How	*01	*25	*08	*15	*01	*07	*01:01	*25:04	*08:01	*15:01	*01:02	*07:01		
6649	Lim , Young Ae													SSP	
2400	Liu , Chang	*01	*25	*08	*15	*01	*07	*01:01:01G	*25:04	*08:01	*15:01	*01:02	*07:01	SSP SSO SBT	
731	Loewenthal , Ron													SSP SSO SBT	
206	McAlack , Robert	*01	*25	*08	*15	*01	*07							SSO	
8042	Muncher , Liora	*01	*25	*08	*15	*01	*07	*01:01	*25:04	*08:01	*15:01	*01:02	*07:01	SSP SSO	
54	Pancoska , Carol	*01	*25	*08	*15	*01	*07							SSO	
3966	Permpikul , Vejbaes	*01	*25	*08		*01	*07				*15:01			SSP	
8001	Rao , Prakash													SSP SSO	
3753	Reed , Elaine F.							*01:01	*25:04	*08:01	*15:01	*01:02	*07:01	SSO SBT	B*08:21 B*15:70 B*15:78 C*01:85 C*07:16 C*07:18 B*08:04 B*08:12 B*08:56 B*08:71 B*15:07 B*15:30 B*15:50 B*15:251 B*15:324 C*01:22 C*01:54 C*01:58 C*01:60 C*07:176 C*07:248 C*07:250 C*07:343 B*08:23 B*08:37 B*08:89 B*15:56 B*15:63 B*15:142 C*07:06 C*07:40 C*07:141 B*08:35 B*08:50 B*08:110 B*15:236 C*01:12 C*01:17
3519	Renac , Virginie	*01	*25	*08	*15	*01	*07	*01:01	*25:04	*08:01	*15:01	*01:02	*07:01	SSP SBT	
793	Rubocki , Ronald													RT-PCR	
4251	Schiller , Jennifer	*01	*25	*08	*15	*01	*07	*01:01	*25:04	*08:01	*15:01	*01:02	*07:01	SSP	
8068	Shanmugam , Hem	*01	*25	*08	*15	*01	*07							SSO NGS	
8029	Tarigopula , Anil	*01	*25	*08	*15	*01	*07							SSP SSO	
5451	Tilanus , Marcel G.J													SSO	
5642	Varnavidou-Nicolaic													SSO SBT	
2847	Wakita , Atsushi	*01	*25	*08	*15	*01	*07							SSP	
3511	Zeevi , Adriana													SSO	
														SSP SSO	