

# REPORT OF THE 399<sup>th</sup> CELL EXCHANGE

## JUNE 7, 2017

B-cell Lines	539-540
Cells	1593-1596
Sera	1221-1224

### B-cell Line Exchange #270

The results for B-cell Line Exchange #270 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 **Oxford Transplant Centre, Churchill Hospital, Oxford**, for providing us with valuable reference cells studied in our exchanges.

We would also like to express our appreciation to the labs performing NGS typing for sharing their results and encourage other NGS labs to also share their findings. The haplotype frequencies used in this report are from the NMDP Bioinformatics website, <http://bioinformatics.nmdp.org/>.

**Ter-539.** The reported consensus type for this sample from a Filipino donor is DRB1\*12:02-DRB1\*15:02-DRB3\*03:01-DRB5\*01:01-DQA1\*01:02-DQA1\*06:01-DQB1\*03:01-DQB1\*05:02-DPA1\*02:01-DPA1\*02:02-DPB1\*05:01-DPB1\*14:01/A\*24:02-B\*15:13-B\*48:01-C\*08:01. One possible class II association in this cell is DRB1\*12:02-DRB3\*03:01-DQA1\*06:01-DQB1\*03:01, observed in previous exchange cells, Ter 285 (same as Ter 121) and Ter 258. The other likely association present may be DRB1\*15:02-DRB5\*01:01-DQA1\*01:02-DQB1\*05:02, observed previously in Ter 521 (same as Ter 276) and Ter 516 (same as Ter 433 and Ter 269). The A\*24:02-B\*48:01-DQB1\*05:02 association in this cell is observed exclusively in Asians, with HF =0.00089.

This cell is CAM020, a reference cell for B\*15:13:01. It was previously studied in the workshops as IHW9256 and in the class I DNA Extract Exchange as extract 384 (2007). In this present study, B\*15:13 was assigned in completed consensus, with 7 labs assigning B\*15:13:01. B\*48:01 (100%) was reported as the second A-locus type, with 7 labs reporting B\*48:01:01. A\*24:02 (A\*24:02:01) and C\*08:01 (C\*08:01:01) were also reported in complete consensus. NGS results for A\*24:02 were reported as A\*24:02:01:01. For class II, the assigned DR types were DRB1\*12:02 (100%), DRB1\*15:02 (100%), DRB3\*03:01 (100%), and DRB5\*01:01 (95%), with 10 labs assigning DRB1\*12:02:01, 9 labs assigning DRB1\*15:02:01, and 3 labs assigning DRB3\*03:01:03 and DRB5\*01:01:01 by NGS. DQA1\*01:02, DQA1\*06:01, DQB1\*03:01 and DQB1\*05:02 were reported by 100% of labs reporting at high resolution.

**Ter-540.** The consensus type for this sample from an Asian donor is DRB1\*07:01-DRB1\*12:02-DRB3\*03:01-DRB4\*01:03:01:02N-DQA1\*02:01-DQA1\*06:01-DQB1\*03:01-DQB1\*03:03-DPA1\*02:01-DPA1\*02-DPB1\*04:01-

DPB1\*13:01/A\*24:17-A\*33:03-B\*07:02-B\*15:02-C\*07:02-C\*08:01. A likely class II association present in this cell is DRB1\*07:01-DRB4\*01:03:01:02N-DQA1\*02:01-DQB1\*03:03, observed in previous exchanges cells, Ter 487 (same as Ter 413 and Ter 311) and Ter 451. The other likely class II association present is DRB1\*12:02-DRB3\*03:01-DQA1\*06:01-DQB1\*03:01, observed in Ter 285 (same as Ter 121) and Ter 214 (same as Ter 124 and Ter 54). The A\*24:17-B\*15:02-DRB1\*12:02-DQB1\*03:01 association in this cell is observed most frequently in Asians, with HF=0.00266.

This cell is NDS-NH, a reference cell for A\*24:17. It was previously typed for class II as Ter 256 (2000) and for class I as extracts 334 (2005), 254 (2003), and 122 (2000). In this present study, A\*24:17 was reported in complete consensus. A\*33:03 (100%) was reported as the second A-locus type, with 7 labs assigning A\*33:03:01. B\*07:02, B\*15:02, C\*07:02 and C\*08:01 were also reported in complete consensus. C\*07:02 was assigned as C\*07:02:01:03 by NGS. For class II, DRB1\*07:01 and DRB1\*12:02 were each reported in complete consensus, with 9 labs assigning DRB1\*07:01:01 and 10 labs assigning DRB1\*12:02:01. DRB4\*01:03:01:02N was reported by 91% and DRB3\*03:01 by 100%, with 3 NGS labs assigning DRB3\*03:01:03. Two subtypes of DQB1\*03 were detected in this cell, DQB1\*03:01 (100%) and DQB1\*03:03 (100%). There were also 2 subtypes of DPA1\*02 present. The first, DPA1\*02:01 was reported in complete consensus. Hartzman and Hurley reported the presence of a possible variant, noting "DPA1\*02:01:01:01v has 1 nt change at Intron 1 nt 870 T → G resulting in a non coding change." The assignment of the second DPA1\*02 subtype remained unresolved, as DPA1\*02:07 was reported by 5 labs and DPA1\*02:02 was assigned by 8 labs. It is of interest to note, the sequence for DPA1\*02:02:01 was found to be identical to DPA1\*02:07:01 (IPD-IMGT/HLA Database, March 2017). Labs are encouraged to update their sequencing libraries to ensure they are current.



**Table 2: Summary of the 270<sup>th</sup> B-cell Line Exchange**

**Ter-540**

DNA Typing - class II		<u>32 labs High; 32 labs low-DRB1</u>		<u>21 labs High; 23 labs Low-DRB3/4/5</u>		<u>21 labs High; 23 labs Low-DQA1</u>		<u>31 High Labs; 30 labs Low-DQB1</u>		<u>13 High Labs; 12 labs Low-DPA1</u>		<u>28 High Labs; 16 labs Low-DPB1</u>						
			%(n)		%(n)		%(n)		%(n)		%(n)		%(n)					
DNA Typing - class II	DRB1*07:01:01:02	6	(2)	DRB3*03:01:03	14	(3)	DQA1*02:01:01	5	(1)	DQB1*03:01:01	29	(9)	DPA1*02:01:01:01	8	(1)	DPB1*04:01:01:01	4	(1)
	DRB1*07:01:01	22	(7)	DRB3*03:01	86	(18)	DQA1*02:01	95	(20)	DQB1*03:01	71	(22)	DPA1*02:01:01	15	(2)	DPB1*04:01:01	21	(6)
	DRB1*07:01:01G	6	(2)	DRB3*03	83	(19)	DQA1*02	100	(23)	DQB1*03(DQ7)	3	(1)	DPA1*02:01	77	(10)	DPB1*04:01:01G	11	(3)
	DRB1*07:01	66	(21)	DRB3*PRESENT	17	(4)				DQB1*03	97	(30)	DPA1*02	100	(12)	DPB1*04:01P	4	(1)
	DRB1*07	100	(32)													DPB1*04:01	60	(17)
																DPB1*04(DP401)	37	(6)
																DPB1*04	63	(10)
DNA Typing - class I	DRB1*12:02:01	31	(10)	DRB4*01:03:01:02N	39	(9)	DQA1*06:01:01	19	(4)	DQB1*03:03:02:01	6	(2)	DPA1*02:07:01:01	8	(1)	DPB1*13:01:01	25	(7)
	DRB1*12:02	69	(22)	DRB4*01:03:01N	13	(3)	DQA1*06:01	71	(15)	DQB1*03:03:02	23	(7)	DPA1*02:07:01	8	(1)	DPB1*13:01:01G	18	(5)
	DRB1*12	100	(32)	DRB4*01:03N	39	(9)	DQA1*04:01	10	(2)	DQB1*03:03	71	(22)	DPA1*02:07	23	(3)	DPB1*13:01P	4	(1)
				DRB4*01:03	9	(2)	DQA1*06	91	(21)	DQB1*03(DQ9)	3	(1)	DPA1*02:02	61	(8)	DPB1*13:01	53	(15)
				DRB4*01N	57	(13)	DQA1*04	9	(2)	DQB1*03	97	(29)				DPB1*13	100	(16)
				DRB4*01	26	(6)												
				DRB4*01N	57	(13)												
				DRB4*01	26	(6)												
				DRB4*NULL	4	(1)												
				DRB4*PRESENT	13	(3)												
DNA Typing - class I	A*24:17	100	(21)	B*07:02:01	28	(6)	C*07:02:01:03	19	(4)									
	A*24	100	(24)	B*07:02:01G	5	(1)	C*07:02:01	14	(3)									
				B*07:02	67	(14)	C*07:02:01G	5	(1)									
				B*07	100	(24)	C*07:02	62	(13)									
							C*07	100	(24)									
DNA Typing - class I	A*33:03:01	32	(7)	B*15:02:01	29	(7)	C*08:01:01	33	(7)									
	A*33:03	68	(15)	B*15:02	71	(17)	C*08:01:01G	5	(1)									
	A*33	100	(24)	B*15(B75)	4	(1)	C*08:01	62	(13)									
				B*15	96	(23)	C*08	100	(24)									

**Table 3a: Individual laboratory results for B-cell #539-Class II**

Center	Investigator	Low resolution												METHOD	Other Alleles
		DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1			
5462	Arnold , Paula	*12	*15	3*03	5*01	*01	*06	*03	*05	*02	*02	*05	*14	SSP SSO	
774	Cecka , J. Michael	*12	*15	3*03	5*01	*01	*06	*03	*05	*02	*02	*05	*14	SSP SSO	
3224	Chen , Dong-Feng	*12	*15	3*03	5*01	NT	NT	*03	*05	NT	NT	NT	NT	SSO SBT	
3632	Colombe , Beth W.	*12	*15	3*03	5*01	*01	*06	*03	*05	*02	*02	*05	*14	SSP SSO	
5130	Costeas , Paul A.	*12	*15	3*03	5*01	*01	*06	*03	*05			*05	*14	SSP SSO NGS	
779	Daniel , Claude	*12	*15	3*03	5*01	*01	*06	*03	*05	*02	*02	*05	*14	SSP SSO	
5219	Daniel , Dolly	*12	*15			*01	*06	*03	*05					SSO	
87	Di Paola , Nicholas	*12	*15	3*03	5*01	*01	*06	*03	*05	*02	*02	*05	*14	RT-PCR	
5214	Eckels/CPMC ,	*12	*15	3*03	5*01	*01	*06	*03(DQ7)	*05	*02	*02	*05	*14	SSO	
747	Ferrari-Lacraz , Sylv	*12	*15	3*03	5*01	*01	*06	*03	*05	*02	*02	*05	*14	SSP SSO NGS	
4079	Fort , Marylise	*12	*15					*03	*05					SSP	
792	Gandhi , Manish	*12	*15	3*03	5*01	*01	*06	*03	*05	*02	*02	*05	*14	SSO SBT	
8043	Gideoni , Osnat	*12	*15			*01	*06	*03	*05					SSP SSO	
810	Hamdi , Nuha	*12	*15			*01		*03	*05					SSO	
8087	Hernandez Rosales	*12	*15			*01	*06	*03	*05					SSO	
771	Israel , Shoshana	*12	*15					*03	*05					SSP SSO	
794	Jaatinen , Taina	*12	*15	3*03	5*01	*01	*06	*03	*05	*02		*05	*14	SSP SSO SBT RT-PCR	
5488	Khuu , Hanh				5*01										
725	Lardy , N.M.	*12	*15	3*PRESENT	5*PRESENT	*01	*06	*03	*05					SSO	
6649	Lim , Young Ae	*12	*15	3*PRESENT	5*PRESENT									SSP	
2400	Liu , Chang	*12	*15	3*03	5*01							*05	*14	SSP SSO SBT	
731	Loewenthal , Ron	*12	*15			*01	*06	*03	*05					SSP SSO SBT	
206	McAlack , Robert	*12	*15	3*03	5*01	*01	*06	*03	*05	*02	*02	*05	*14	SSO	
735	Moussa , Omar	*12	*15	3*03	5*01	*01	*06	*03	*05	*02		*05	*14	SSO	
8042	Muncher , Liora	*12	*15	3*03	5*01	NT	NT	*03	*05	NT	NT	NT	NT	SSP SSO	
8001	Rao , Prakash			3*PRESENT	5*PRESENT	*01	*06							SSP SSO	
3519	Renac , Virginie	*12	*15					*03	*05			*05	*14	SSP NGS	
793	Rubocki , Ronald	*12	*15	3*03	5*PRESENT	*01	*06	*03	*05			*05	*14	SSP	
4251	Schiller , Jennifer	*12	*15	3*03	5*01	*01	*06	*03	*05	*02	*02	*05	*14	SSO NGS	
8068	Shanmugam , Hem	*12	*15	3*03	5*01			*03	*05					SSO	
8029	Tarigopula , Anil	*12	*15			*01	*06	*03	*05					SSO	
5451	Tilanus , Marcel G.J	*12	*15	3*03	5*01	*01	*06	*03	*05					SSP SSO SBT	
5642	Varnavidou-Nicolaic	*12	*15	3*PRESENT	5*PRESENT			*03	*05					SSP	
2847	Wakita , Atsushi	*12	*15											SSO	

**Table 3b: Individual laboratory results for B-cell #539-Class II**

Center	Investigator	High resolution												METHOD	Other Alleles
		DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1			
5462	Arnold , Paula	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	*05:01	*14:01	SSP SSO	DPB1*473:01 DPB1*445:01 DPB1*446:01 DPB1*498:01 DPB1*572:01 DPB1*135:01
5133	Askar , Medhat	*12:02:01	*15:02:01:01	3*03:01:03	5*01:01:01	*01:02:01	*06:01:01	*03:01:01		*02:01:01:01	*02:02:02	*05:01:01	*14:01:01	NGS	DPA1*02:01:01:02 DRB1*15:02:01:02
4492	Caillat-Zucman , S	*12:02:01	*15:02:01	3*03:01	5*01:01	*01:02:01	*06:01:01	*03:01:01	*05:02:01	*02:01	*02:02	*05:01:01	*14:01	SSP SSO NGS	DPA1*02:06
774	Cecka , J. Michael	*12:02	*15:02	3*03:01	5*01:01	*01:02	*06:01	*03:01	*05:02	*02:01	*02:02	*05:01	*14:01	SSP SSO	DRB1*12:26 DRB1*12:31N DRB1*12:32 DRB1*15:44 DRB1*15:47 DRB1*15:60 DRB1*15:80N DRB5*01:16 DRB5*01:17 DQB1*05:53 DQB1*05:59 DQB1*05:65 DRB1*12:42 DRB1*12:37 DRB1*12:45 DRB1*15:101 DQB1*03:92 DQB1*03:93
8070	Chang , Uckjin	*12:02	*15:02											SBT	
9916	Charlton , Ronald	*12:02:01	*15:02:01	3*03:01	5*01:01			*03:01:01	*05:02:01			*05:01:01	*14:01	SSP SBT	
3224	Chen , Dong-Feng	*12:02	*15:02	NT	NT	NT	NT	*03:01	*05:02	NT	NT	NT	NT	SSO SBT	
8021	Clark , Brendan	*12:02	*15:02	3*03:01	5*01:01	*01:02	*06:01	*03:01	*05:02	*02:01	*02:02	*05:01	*14:01	SSO NGS	
3632	Colombe , Beth W.	*12:02	*15:02	3*03:01	5*01:01	*01:02	*06:01	*03:01	*05:02	*02:01	*02:02	*05:01	*14:01	SSP SSO	
5130	Costeas , Paul A.	*12:02	*15:02	3*03:01	5*01:01	*01:02	*06:01	*03:01	*05:02			*05:01	*14:01	SSP SSO NGS	
779	Daniel , Claude					*01:02	*06:01	*03:01	*05:02	*02:01	*02:02	*05:01	*14:01	SSP SSO	
8086	Du , Keming	*12:02	*15:02			*01:02	*06:01	*03:01	*05:02	*02:01	*02:02	*05:01	*14:01	SSO SBT	
5214	Eckels/CPMC ,			3*03:01								*05:01:01G	*14:01:01G	SSO	
3135	Enczmann , J	*12:02	*15:02	3*03:01	5*01:01			*03:01	*05:02			*05:01	*14:01		
747	Ferrari-Lacraz , Syl	*12:02:01	*15:02:01	3*03:01:03	5*01:01:01	*01:02	*06:01	*03:01:01	*05:02:01	*02:01	*02:02	*05:01:01	*14:01	SSP SSO NGS	DQA1*01:08 DQA1*01:11 DPA1*02:06
762	Fischer , Gottfried	*12:02:01	*15:02:01	3*03:01:03	5*01:01	*01:02:01	*06:01:01	*03:01:01	*05:02:01	*02:01:01	*02:02:02	*05:01:01	*14:01	NGS	
4079	Fort , Marylise											*38:01	*14:01	SSP	
792	Gandhi , Manish	*12:02	*15:02					*03:01	*05:02			*05:01	*14:01	SSO SBT	
8043	Gideoni , Osnat	*12:02	*15:02			*01:02	*06:01	*03:01	*05:02					SSP SSO	
810	Hamdi , Nuha			3*03:01	5*01:15		*06:01							SSO	

**Table 3b: Individual laboratory results for B-cell #539-Class II**

High resolution															
Center	Investigator	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
2344	Hurley & Hartzman	*12:02:01	*15:02:01			*01:02:01:01	*06:01:01	*03:01:01:01	*05:02:01	*02:01:01	*02:02:02	*05:01:01	*14:01	NGS	DQA1*01:02:01:02 DQA1*01:02:01:04 DQB1*03:01:01:02 DQB1*03:01:01:03 DQA1*01:02:01:03
771	Israel , Shoshana	*12:02	*15:02					*03:01	*05:02					SSP SSO	
794	Jaatinen , Taina	*12:02	*15:02	3*03:01	5*01:01	*01:02	*06:01	*03:01	*05:02	*02:01	*02:02	*05:01	*14:01	SSP SSO SBT RT-PCR	DQA1*01:11 DPA1*02:06 DPB1*135:01 DQA1*01:08
5488	Khuu , Hanh	*12:02:01	*15:02:01	3*03:01		*01:02	*06:01	*03:01:01	*05:02:01			*05:01:01	*14:01:01		DRB1*12:02:02 DRB1*15:02:06
4337	Kim , Tai-Gyu	*12:02	*15:02					*03:01	*05:02			*05:01	*14:01	SSP SBT	
2400	Liu , Chang	*12:02	*15:02			*01:02	*06:01	*03:01	*05:02			*05:01:01G	*14:01	SSP SSO SBT	
731	Loewenthal , Ron	*12:02:01	*15:02:01					*03:01:01	*05:02:01					SSP SSO SBT	
8042	Muncher , Liora	*12:02	*15:02	3*03:01	5*01:01	NT	NT	*03:01	*05:02	NT	NT	NT	NT	SSP SSO	
3966	Permpikul , Vejbae	*12:02	*15:02	3*03:01	5*01:01			*03:01	*05:02					SSP	
8001	Rao , Prakash	*12:02	*15:02	3*03:01	5*01:01			*03:01	*05:02			*05:01	*14:01	SSP SSO	
3753	Reed , Elaine F.	*12:02:01	*15:02:01G	3*03:01	5*01:01:01	*01:02	*06:01	*03:01:01	*05:02:01	*02:01	*02:02:02G	*05:01:01	*14:01:01	NGS	
3519	Renac , Virginie	*12:02	*15:02	3*03:01	5*01:01	*01:02	*06:01	*03:01	*05:02			*05:01	*14:01	SSP NGS	
793	Rubocki , Ronald					*01:02	*06:01					*05:01	*14:01	SSP	
4251	Schiller , Jennifer	*12:02	*15:02	3*03:01	5*01:01	*01:02	*06:01	*03:01	*05:02	*02:01	*02:02	*05:01	*14:01	SSO NGS	
230	Thoni , Deborah	*12:02	*15:02					*03:01	*05:02			*05:01	*14:01	SBT	
5451	Tilanus , Marcel G.	*12:02:01	*15:02:01											SSP SSO SBT	
5642	Varnavidou-Nicolai	*12:02	*15:02					*03:01	*05:02					SSP	
3511	Zeevi , Adriana	*12:02	*15:02	3*03:01	5*01:01	*01:02	*06:01	*03:01	*05:02			*05:01	*14:01	SSP SSO	

**Table 4: Individual laboratory results for B-cell #539-Class II**

Serology									
CTR	DIRNAME	DRB1		DRB3/4/5		DQB1			
910	Hahn,Amy B.	DR12	DR15	DR51	DR52			DQ7	DQ1

**Table 5: Individual laboratory results for B-cell #539-Class I**

Center	Investigator	Low resolution						High/Intermediate resolution						METHOD	Other Alleles
		HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
5462	Arnold , Paula	*24		*15	*48	*08		NT		NT	NT	NT		SSP SSO	
5133	Askar , Medhat							*24:02:01:01		*15:13:01	*48:01:01	*08:01:01		NGS	
4492	Caillat-Zucman , So							*24:02:01:01	*24:02:01:01	*15:13:01	*48:01:01	*08:01:01	*08:01:01	SSP SSO NGS	
774	Cecka , J. Michael	*24		*15	*48	*08				*15:13				SSP SSO	
8070	Chang , Uckjin													SBT	
9916	Charlton , Ronald K							*24:02		*15:13:01	*48:01:01	*08:01:01		SSP SBT	
3224	Chen , Dong-Feng	*24		*15	*48	*08		*24:02:01		*15:13	*48:01	*08:01:01G		SSO SBT	
8021	Clark , Brendan							*24:02		*15:13	*48:01	*08:01		SSO NGS	
3632	Colombe , Beth W.													SSP SSO	
5130	Costeas , Paul A.	*24	*24	*15	*48	*08	*08	*24:02	*24:02	*15:13	*48:01	*08:01	*08:01	SSP SSO NGS	
779	Daniel , Claude	*24		*15	*48	*08				*15:13				SSP SSO	
5219	Daniel , Dolly	*24	*24	*15	*48	*08	*08							SSO	
87	Di Paola , Nicholas	*24	*24	*15	*48	*08	*08							RT-PCR	
8086	Du , Keming							*24:02	*24:02	*15:13	*48:01	*08:01	*08:01	SSO SBT	
5214	Eckels/CPMC ,	*24		*15(B77)	*48	*08								SSO	
3135	Enczmann , J							*24:02	*24:02	*15:13	*48:01	*08:01	*08:01		
747	Ferrari-Lacruz , Sylv	*24	*24	*15	*48	*08	*08	*24:02:01:01	*24:02:01:01	*15:13:01	*48:01:01	*08:01:01	*08:01:01	SSP SSO NGS	
762	Fischer , Gottfried													NGS	
4079	Fort , Marylise													SSP	
792	Gandhi , Manish	*24		*15	*48	*08		*24:02		*15:13	*48:01	*08:01		SSO SBT	
8043	Gideoni , Osnat													SSP SSO	
910	Hahn , Amy B.														
810	Hamdi , Nuha	*24	*24		*48	*08	*12			*15:13				SSO	
8087	Hernandez Rosales	*24	*24	*40	*48	*08	*08							SSO	
2344	Hurley & Hartzman							*24:02:01:01	*24:02:01:01	*15:13:01	*48:01:01	*08:01:01	*08:01:01	NGS	
771	Israel , Shoshana													SSP SSO	
794	Jaatinen , Taina	*24		*15	*48	*08		*24:02		*15:13	*48:01	*08:01		SSP SSO SBT RT-PCR	C*08:99 C*08:102 C*08:22
5488	Khuu , Hanh							*24:02:01		*15:13:01	*48:01:01	*08:01:01			
4337	Kim , Tai-Gyu							*24:02	*24:02	*15:13	*48:01	*08:01	*08:01	SSP SBT	
725	Lardy , N.M.													SSO	
6649	Lim , Young Ae													SSP	
2400	Liu , Chang	*24		*15	*48	*08		*24:02		*15:13	*48:01	*08:01		SSP SSO SBT	
731	Loewenthal , Ron													SSP SSO SBT	
206	McAlack , Robert	*24		*15	*48	*08								SSO	
735	Moussa , Omar	*24		*15	*48	*08								SSO	
8042	Muncher , Liora	*24	*24	*15	*48	*08	*08	*24:02	*24:02	*15:13	*48:01	*08:01	*08:01	SSP SSO	
3966	Permpikul , Vejbaes	*24	*24	*15	*48	*08	*08			*15:13				SSP	
8001	Rao , Prakash													SSP SSO	
3753	Reed , Elaine F.							*24:02:01	*24:02:01	*15:13:01	*48:01:01	*08:01:01	*08:01:01	NGS	
3519	Renac , Virginie	*24		*15	*48	*08		*24:02		*15:13	*48:01	*08:01		SSP NGS	
793	Rubocki , Ronald	*24		*15	*48	*08								SSP	
4251	Schiller , Jennifer	*24	*24	*15	*48	*08	*08	*24:02	*24:02	*15:13	*48:01	*08:01	*08:01	SSO NGS	

**Table 5: Individual laboratory results for B-cell #539-Class I**

		Low resolution						High/Intermediate resolution							
Center	Investigator	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C		METHOD	Other Alleles
8068	Shanmugam , Hem	*24		*15	*48	*08								SSO	
8029	Tarigopula , Anil	*24	*24	*15	*48	*08	*08							SSO	
230	Thoni , Deborah							*24:02		*15:13	*48:01	*08:01		SBT	
5451	Tilanus , Marcel G..													SSP SSO SBT	
5642	Varnavidou-Nicolaic													SSP	
2847	Wakita , Atsushi	*24		*15	*48	*08								SSO	
3511	Zeevi , Adriana							*24:02	*24:02	*15:13	*48:01	*08:01	*08:01	SSP SSO	



**Table 6a: Individual laboratory results for B-cell #540-Class II**

		Low resolution													
Center	Investigator	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
5462	Arnold , Paula	*07	*12	3*03	4*01N	*02	*06	*03	*03	*02	*02	*04(DP401)	*13	SSP SSO	
774	Cecka , J. Michael	*07	*12	3*03	4*01	*02	*06	*03	*03	*02	*02	*04	*13	SSP SSO	
3224	Chen , Dong-Feng	*07	*12	3*03	4*01N	NT	NT	*03	*03	NT	NT	NT	NT	SSO SBT	
3632	Colombe , Beth W.	*07	*12	3*03	4*01N	*02	*06	*03	*03	*02	*02	*04	*13	SSP SSO	
5130	Costeas , Paul A.	*07	*12	3*03	4*01	*02	*06	*03	*03			*04	*13	SSP SSO NGS	
779	Daniel , Claude	*07	*12	3*03	4*01N	*02	*06	*03	*03	*02	*02	*04(DP401)	*13	SSP SSO	
5219	Daniel , Dolly	*07	*12			*02	*06	*03	*03					SSO	
87	Di Paola , Nicholas	*07	*12	3*03	4*01N	*02	*06	*03	*03	*02	*02	*04(DP401)	*13	RT-PCR	
5214	Eckels/CPMC ,	*07	*12	3*03	4*01N	*02	*06	*03(DQ7)	*03(DQ9)	*02	*02	*04	*13	SSO	
747	Ferrari-Lacraz , Sylv	*07	*12	3*03	4*01	*02	*04	*03	*03	*02	*02	*04	*13	SSP SSO NGS	
4079	Fort , Marylise	*07	*12					*03	*03					SSP	
792	Gandhi , Manish	*07	*12	3*03	4*01N	*02	*06	*03	*03	*02	*02	*04	*13	SSO SBT	
8043	Gideoni , Osnat	*07	*12			*02	*06	*03	*03					SSP SSO	
910	Hahn , Amy B.														
810	Hamdi , Nuha	*07	*12					*03	*03					SSO	
8087	Hernandez Rosales	*07	*12			*02	*06	*03	*03					SSO	
771	Israel , Shoshana	*07	*12					*03						SSP SSO	
794	Jaatinen , Taina	*07	*12	3*03	4*01	*02	*06	*03		*02		*04	*13	SSP SSO SBT RT-PCR	
5488	Khuu , Hanh														
725	Lardy , N.M.	*07	*12	3*PRESENT	4*PRESENT	*02	*04	*03						SSO	
6649	Lim , Young Ae	*07	*12	4*PRESENT	3*PRESENT									SSP	
2400	Liu , Chang	*07	*12	3*03	4*01N	*02	*06	*03	*03			*04	*13	SSP SSO SBT	
731	Loewenthal , Ron	*07	*12			*02	*06	*03	*03					SSP SSO SBT	
206	McAlack , Robert	*07	*12	3*03	4*01N	*02	*06	*03	*03	*02	*02	*04	*13	SSO	
735	Moussa , Omar	*07	*12	3*03	4*01N	*02	*06	*03	*03	*02		*04	*13	SSO	DPB1*107
8042	Muncher , Liora	*07	*12	3*03	4*01	NT	NT	*03	*03	NT	NT	NT	NT	SSP SSO	
3966	Permpikul , Vejbaes													SSP	
8001	Rao , Prakash			3*PRESENT	4*01N	*02	*06							SSP SSO	
3519	Renac , Virginie	*07	*12					*03				*04(DP401)	*13	SSP NGS	
793	Rubocki , Ronald	*07	*12	3*03	4*NULL	*02	*06	*03	*03			*04(DP401)	*13	SSP	
4251	Schiller , Jennifer	*07	*12	3*03	4*01N	*02	*06	*03	*03	*02	*02	*04(DP401)	*13	SSO NGS	
8068	Shanmugam , Hem	*07	*12	3*03	4*01			*03						SSO	
8029	Tarigopula , Anil	*07	*12			*02	*06	*03	*03					SSO	
5451	Tilanus , Marcel G.J	*07	*12	3*03	4*01N	*02	*06	*03						SSP SSO SBT	
5642	Varnavidou-Nicolaic	*07	*12	3*PRESENT	4*PRESENT			*03	*03					SSP	
2847	Wakita , Atsushi	*07	*12											SSO	

**Table 6b: Individual laboratory results for B-cell #540-Class II**

High resolution															
Center	Investigator	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
5462	Arnold , Paula	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	*04:01P	*13:01P	SSP SSO	DPB1*350:01 DPB1*534:01 DPB1*107:01 DPB1*133:01 DPB1*518:01 DPB1*459:01 DPB1*464:01 DPB1*519:01
5133	Askar , Medhat	*07:01:01	*12:02:01	3*03:01:03	4*01:03:01:02N	*02:01:01	*06:01:01	*03:01:01	*03:03:02	*02:01:01:01	*02:07:01	*04:01:01	*13:01:01	NGS	DPA1*02:01:01:02 DPB1*133:01 DPB1*107:01 DPB1*350:01
4492	Caillat-Zucman , S	*07:01:01	*12:02:01	3*03:01	4*01:03:01:02N	*02:01	*06:01:01	*03:01:01	*03:03:02:01	*02:01	*02:02	*04:01:01	*13:01:01	SSP SSO NGS	DPB1*107:01 DPA1*02:06
774	Cecka , J. Michael	*07:01	*12:02	3*03:01	4*01:03:01N	*02:01	*06:01	*03:01	*03:03	*02:01	*02:02	*04:01	*13:01	SSP SSO	DRB1*12:26 DRB1*12:31N DRB1*12:32 DRB1*12:42 DRB1*12:45 DQB1*03:92 DQB1*03:93
8070	Chang , Uckjin	*07:01	*12:02											SBT	
9916	Charlton , Ronald	*07:01:01	*12:02:01	3*03:01	4*01:03:01:02N			*03:01:01	*03:03:02			*04:01:01	*13:01:01	SSP SBT	DPB1*133:01 DPB1*350:01
3224	Chen , Dong-Feng	*07:01:01G	*12:02	NT	4*01:03:01N	NT	NT	*03:01	*03:03	NT	NT	NT	NT	SSO SBT	
8021	Clark , Brendan	*07:01	*12:02	3*03:01	4*01:03:01:02N	*02:01	*06:01	*03:01	*03:03	*02:01	*02:02	*04:01	*13:01	SSO NGS	
3632	Colombe , Beth W	*07:01	*12:02	3*03:01	4*01:03N	*02:01	*06:01	*03:01	*03:03	*02:01	*02:02	*04:01	*13:01	SSP SSO	
5130	Costeas , Paul A.	*07:01	*12:02	3*03:01	4*01:03:01:02N	*02:01	*06:01	*03:01	*03:03			*04:01	*13:01	SSP SSO NGS	
779	Daniel , Claude				4*01:03:01:02N	*02:01	*06:01	*03:01	*03:03	*02:01	*02:02	*04:01	*13:01	SSP SSO	
8086	Du , Keming	*07:01	*12:02			*02:01	*06:01	*03:01	*03:03	*02:01	*02:02	*04:01	*13:01	SSO SBT	
5214	Eckels/CPMC ,			3*03:01	4*01:03N							*04:01:01G	*13:01:01G	SSO	
3135	Enczmann , J	*07:01	*12:02	3*03:01	4*01:03N			*03:01	*03:03			*04:01	*13:01		
747	Ferrari-Lacraz , S	*07:01:01	*12:02:01	3*03:01:03	4*01:03:01:02N	*02:01	*04:01	*03:01:01	*03:03:02:01	*02:01	*02:02	*04:01:01	*13:01:01	SSP SSO NGS	DPB1*133:01 DPB1*107:01 DPB1*350:01 DPA1*02:06
762	Fischer , Gottfried	*07:01:01:02	*12:02:01	3*03:01:03	4*01:03:01:02N	*02:01	*06:01:01	*03:01:01	*03:03:02	*02:01:01	*02:07	*04:01:01	*13:01:01	NGS	DPB1*133:01 DPB1*350:01
4079	Fort , Marylise											*04:01	*13:01	SSP	
792	Gandhi , Manish	*07:01	*12:02					*03:01	*03:03			*04:01	*13:01	SSO SBT	DPB1*133:01 DPB1*350:01
8043	Gideoni , Osnat	*07:01	*12:02			*02:01	*06:01	*03:01	*03:03					SSP SSO	
810	Hamdi , Nuha			3*03:01	4*01:03	*02:01	04:01							SSO	
2344	Hurley & Hartzma	*07:01:01:02	*12:02:01			*02:01	*06:01:01	*03:01:01	*03:03:02	*02:01:01	*02:07:01:01	*04:01:01:01	*13:01:01	NGS	DPB1*04:01:01:02
771	Israel , Shoshana	*07:01	*12:02					*03:01	*03:03					SSP SSO	

Table 6b: Individual laboratory results for B-cell #540-Class II															
High resolution															
Center	Investigator	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
794	Jaatinen , Taina	*07:01	*12:02	3*03:01	4*01:03N	*02:01	*06:01	*03:01	*03:03	*02:01	*02:02	*04:01	*13:01	SSP SSO SBT RT-PCR	DRB1*07:34 DPA1*02:06 DPB1*350:01 DPB1*415:01 DPB1*459:01 DPB1*464:01 DPB1*133:01 DPB1*107:01
5488	Khuu , Hanh	*07:01:01	*12:02:01	3*03:01	4*01:03:01:02N	*02:01	*06:01	*03:01:01	*03:03:02			*04:01:01	*13:01:01		DPB1*133:01 DPB1*350:01
4337	Kim , Tai-Gyu	*07:01	*12:02					*03:01	*03:03			*04:01	*13:01	SSP SBT	
2400	Liu , Chang	*07:01	*12:02			*02:01	*06:01	*03:01	*03:03			*04:01:01G	*13:01:01G	SSP SSO SBT	
731	Loewenthal , Ron	*07:01:01G	*12:02:01					*03:01:01	*03:03:02					SSP SSO SBT	DQB1*03:113
8042	Muncher , Liora	*07:01	*12:02	3*03:01	4*01:03	NT	NT	*03:01	*03:03	NT	NT	NT	NT	SSP SSO	
3966	Permpikul , Vejba	*07:01	*12:02	3*03:01	4*01:03N			*03:01	*03:03					SSP	
8001	Rao , Prakash	*07:01	*12:02	3*03:01	4*01:03N			*03:01	*03:03			*04:01	*13:01:01G	SSP SSO	
3753	Reed , Elaine F.	*07:01:01	*12:02:01	3*03:01	4*01:03:01N	*02:01	*06:01	*03:01:01	*03:03:02	*02:01	*02:07	*04:01:01G	*13:01:01G	NGS	
3519	Renac , Virginie	*07:01	*12:02	3*03:01	4*01:03N	*02:01	*06:01	*03:01	*03:03			*04:01	*13:01	SSP NGS	DPB1*350:01 DPB1*133:01 DPB1*107:01
793	Rubocki , Ronald					*02:01	*06:01					*04:01	*13:01	SSP	
4251	Schiller , Jennifer	*07:01	*12:02	3*03:01	4*01:03N	*02:01	*06:01	*03:01	*03:03	*02:01	*02:07	*04:01	*13:01:01G	SSO NGS	
230	Thoni , Deborah	*07:01	*12:02					*03:01	*03:03			*04:01	*13:01	SBT	
5451	Tilanus , Marcel G	*07:01:01	*12:02:01											SSP SSO SBT	
5642	Varnavidou-Nicola	*07:01	*12:02					*03:01	*03:03					SSP	
3511	Zeevi , Adriana	*07:01	*12:02	3*03:01	4*01:03N	*02:01	*06:01	*03:01	*03:03			*04:01	*13:01	SSP SSO	

**Table 7: Individual laboratory results for B-cell #540-Class II**

Serology									
CTR	DIRNAME	DRB1		DRB3/4/5		DQB1			
910	Hahn,Amy B.	DR7	DR12	DR52	DR53			DQ7	DQ3

**Table 8: Individual laboratory results for B-cell #540-Class I**

Center	Investigator	Low resolution						High/Intermediate resolution						METHOD	Other Alleles
		HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
5462	Arnold , Paula	*24	*33	*07	*15	*07	*08	NT	NT	NT	NT	NT	NT	SSP SSO	
5133	Askar , Medhat							*24:17	*33:03:01	*07:02:01	*15:02:01	*07:02:01:03	*08:01:01	NGS	
4492	Caillat-Zucman , Sc							*24:17	*33:03:01	*07:02:01	*15:02:01	*07:02:01:03	*08:01:01	SSP SSO NGS	
774	Cecka , J. Michael	*24	*33	*07	*15	*07	*08				*15:02			SSP SSO	B*15:214 B*15:302N
8070	Chang , Uckjin													SBT	
9916	Charlton , Ronald K							*24:17	*33:03:01	*07:02	*15:02:01	*07:02:01	*08:01:01	SSP SBT	
3224	Chen , Dong-Feng	*24	*33	*07	*15	*07	*08	*24:17	*33:03	*07:02:01G	*15:02	*07:02:01G	*08:01:01G	SSO SBT	
8021	Clark , Brendan							*24:17	*33:03	*07:02	*15:02	*07:02	*08:01	SSO NGS	
3632	Colombe , Beth W.													SSP SSO	
5130	Costeas , Paul A.	*24	*33	*07	*15	*07	*08	*24:17	*33:03	*07:02	*15:02	*07:02	*08:01	SSP SSO NGS	
779	Daniel , Claude	*24	*33	*07	*15	*07	*08				*15:02			SSP SSO	
5219	Daniel , Dolly	*24	*33	*07	*15	*07	*08							SSO	
87	Di Paola , Nicholas	*24	*33	*07	*15	*07	*08							RT-PCR	
8086	Du , Keming							*24:17	*33:03	*07:02	*15:02	*07:02	*08:01	SSO SBT	
5214	Eckels/CPMC ,	*24	*33	*07	*15(B75)	*07	*08							SSO	
3135	Enczmann , J							*24:17	*33:03	*07:02	*15:02	*07:02	*08:01		
747	Ferrari-Lacraz , Sylv	*24	*33	*07	*15	*07	*08	*24:17	*33:03:01	*07:02:01	*15:02:01	*07:02:01:03	*08:01:01	SSP SSO NGS	
762	Fischer , Gottfried													NGS	
4079	Fort , Marylise													SSP	
792	Gandhi , Manish	*24	*33	*07	*15	*07	*08	*24:17	*33:03	*07:02	*15:02	*07:02	*08:01	SSO SBT	
8043	Gideoni , Osnat													SSP SSO	
910	Hahn , Amy B.														
810	Hamdi , Nuha	*24	*33	*07	*15	*07	*08							SSO	
8087	Hernandez Rosales	*24	*33	*07	*15	*07	*08							SSO	
2344	Hurley & Hartzman							*24:17	*33:03:01	*07:02:01	*15:02:01	*07:02:01:03	*08:01:01	NGS	
771	Israel , Shoshana													SSP SSO	
794	Jaatinen , Taina	*24	*33	*07	*15	*07	*08	*24:17	*33:03	*07:02	*15:02	*07:02	*08:01	SSP SSO SBT RT-PCR	B*07:61 B*07:161N C*07:50 C*07:349 C*08:22 C*08:99 C*08:102
5488	Khuu , Hanh							*24:17	*33:03:01	*07:02:01	*15:02:01	*07:02:01	*08:01:01		B*15:02:03 B*07:161N B*07:02:14 C*08:01:06 C*08:21 C*08:16:01 C*08:72:01 C*07:161 C*07:02:35 C*07:39 C*07:260
4337	Kim , Tai-Gyu							*24:17	*33:03	*07:02	*15:02	*07:02	*08:01	SSP SBT	
725	Lardy , N.M.													SSO	

**Table 8: Individual laboratory results for B-cell #540-Class I**

Center	Investigator	Low resolution						High/Intermediate resolution						METHOD	Other Alleles
		HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
6649	Lim , Young Ae													SSP	
2400	Liu , Chang	*24	*33	*07	*15	*07	*08	*24:17	*33:03	*07:02	*15:02	*07:02	*08:01	SSP SSO SBT	
731	Loewenthal , Ron													SSP SSO SBT	
206	McAlack , Robert	*24	*33	*07	*15	*07	*08							SSO	
735	Moussa , Omar	*24	*33	*07	*15	*07	*08							SSO	
8042	Muncher , Liora	*24	*33	*07	*15	*07	*08	*24:17	*33:03	*07:02	*15:02	*07:02	*08:01	SSP SSO	
3966	Permpikul , Vejbaes	*24	*33	*07	*15	*07	*08		*33:03		*15:02			SSP	
8001	Rao , Prakash													SSP SSO	
3753	Reed , Elaine F.							*24:17	*33:03:01	*07:02:01	*15:02:01	*07:02:01	*08:01:01	NGS	
3519	Renac , Virginie	*24	*33	*07	*15	*07	*08	*24:17	*33:03	*07:02	*15:02	*07:02	*08:01	SSP NGS	
793	Rubocki , Ronald	*24	*33	*07	*15	*07	*08							SSP	
4251	Schiller , Jennifer	*24	*33	*07	*15	*07	*08	*24:17	*33:03	*07:02	*15:02	*07:02	*08:01	SSO NGS	
8068	Shanmugam , Hem	*24	*33	*07	*15	*07	*08							SSO	
8029	Tarigopula , Anil	*24	*33	*07	*15	*07	*08							SSO	
230	Thoni , Deborah							*24:17	*33:03	*07:02	*15:02	*07:02	*08:01	SBT	
5451	Tilanus , Marcel G.J.													SSP SSO SBT	
5642	Varnavidou-Nicolaïd													SSP	
2847	Wakita , Atsushi	*24	*33	*07	*15	*07	*08							SSO	
3511	Zeevi , Adriana							*24:17	*33:03	*07:02	*15:02	*07:02	*08:01	SSP SSO	

## CELL EXCHANGE #399

The results for Cell Exchange #399 are summarized in Table 9 and Table 10. Molecular typing results for individual laboratories are listed in Tables 11

-14 for each sample and individual serology results for each sample are listed in Table 15.

**Cell 1593.** The reported type for this sample from a donor of Caucasian/Hispanic descent is A\*26:01(A26)-A\*30:01(A30)-B\*38:01(B38)-B\*49:01(B49)-C\*07:01(Cw7)-C\*12:03. Likely associations in this cell are A\*26:01-B\*38:01-C\*12:03 and A\*30:01-B\*49:01-C\*07:01, with respective HF=0.00854 and 0.00051, in Hispanics.

The sample was previously typed as cell 1529 (2014). In this present retyping, A\*26:01, A\*30:01, B\*38:01, B\*49:01, C\*07:01, and C\*12:03, were each reported by 100% of labs reporting at high resolution. A\*26:01:01, B\*49:01:01, C\*07:01:01 and C\*12:03:01 were assigned by 5 labs, while A\*30:01:01 and B\*38:01:01 were each assigned by 6 labs. C\*07:01 (100%) and C\*12:03 (100%) were the reported C-locus types, with 5 labs assigning C\*07:01:01 and C\*12:03:01. Good agreement was also achieved among serology labs as A26 (100%), A30 (94%), B38 (100%), and B49 (94%) were well assigned.

**Cell 1594.** The reported type for this sample from an Asian Indian donor is A\*31:12(A31)-A\*68:01(A68)-B\*15:01(B62)-B\*15:18(B70)-C\*03:03(Cw3)-C\*07:04(Cw7). Likely associations in this cell are B\*15:01-C\*03:03 and B\*15:18-C\*07:04, with respective frequencies of 0.01098 and 0.00455, in Asians.

A\*31:12 was reported for the first time in the exchange, as labs assigned A\*31:12 by 93%. A\*68:01 (100%) was reported as the second A-locus type, with NGS assigning A\*68:01:02:01. A31 (77%) and A68 (60%) were reported by serology. Two subtypes of B\*15 were present in this cell, B\*15:01 (100%) and B\*15:18 (100%). B\*15:01:01 and B\*15:18:01 were each assigned by 6 labs. By serology, B62 (87%) and B70 (73%) were assigned. C\*03:03 (100%) and C\*07:04 (100%) were the assigned C-locus types, with 5 labs assigning C\*03:03:01 and C\*07:04:01.

**Cell 1595.** The reported type for this sample from an African American donor is A\*24:02(A24)-A\*68:02(A68)-B\*51:01(B51)-B\*81:01(B81)-C\*15:02-C\*18:01. The B\*51:01-C\*15:02 and B\*51:01-C\*18:01 associations likely present in this cell are observed in African American populations, with respective HF=0.00353 and 0.01101.

This cell was typed previously in the Exchange as cells 1461 (2012), 1354 (2009), and 1295 (2007). In this present retyping, B\*81:01 was assigned by 100% of labs reporting at high resolution, an improvement from 61% back in 2007. B\*68:02 (100%) was reported as the second B-locus type, with 3 NGS labs assigning B\*51:01:01:01. A\*24:02 (100%) and A\*68:02 (100%) were the reported A-locus types, with several NGS labs assigning A\*24:02:01:01 and A\*68:02:01:01. The reported C-locus types were C\*15:02 and C\*18:01. A24 (100%), A68 (71%), B51 (93%), and B81 (93%) were detected by serology.

**Cell 1596.** The reported type for this sample from a Caucasian donor is A\*02:01(A2)-A\*25:01(A25)-B\*18:01(B18)-B\*44:02(B44)-C\*05:01(Cw5)-C\*12:03. The likely class I associations of A\*02:01-B\*44:02-C\*05:01 and A\*25:01-B\*18:01-C\*12:03 present in this cell are commonly observed in Caucasian populations, with respective frequencies of HF=0.05370 and 0.01039.

A\*02:01 (100%) and A\*25:01 (100%) were the reported A-locus types in this cell, with 5 labs assigning A\*02:01:01 and A\*25:01:01. B\*18:01 and B\*44:02 were also reported in complete consensus, with several NGS labs assigning B\*18:01:01:02 and B\*44:02:01:01. The C-locus types were reported as C\*05:01 (C\*05:01:01) (100%) and C\*12:03 (C\*12:03:01) (100%). By serology, A2 (100%), A25 (100%), B18 (100%), B44 (100%), and Cw5 (36%) were assigned.

**Table 9. Summary of the 399<sup>th</sup> Cell Exchange (Cell #1593-1596)**

**DNA typing**

<b>Cell 1593</b>	
24 low/16 high labs - A	%(n)
A*26:01:01:01	25(4)
A*26:01:01	6 (1)
A*26:01:01G	13(2)
A*26:01	56(9)
A*26	100(24)
24 low/16 high labs - A	%(n)
A*30:01:01	38(6)
A*30:01	62(10)
A*30	100(24)
24 low/16 high labs - B	%(n)
B*38:01:01	38(6)
B*38:01	62(10)
B*38	100(24)
24 low/16 high labs - B	%(n)
B*49:01:01	31(5)
B*49:01	69(11)
B*49	100(24)
23 low/16 high Labs - C	%(n)
C*07:01:01:01	19(3)
C*07:01:01	13(2)
C*07:01:01G	13(2)
C*07:01	56(9)
C*07	100(23)
23 low/16 high Labs - C	%(n)
C*12:03:01:01	25(4)
C*12:03:01	6 (1)
C*12:03:01G	13(2)
C*12:03	56(9)
C*12	100(23)

<b>Cell 1594</b>	
23 low/14 high labs - A	%(n)
A*31:12	93(13)
A*31:01	7 (1)
A*31	100(23)
23 low/15 high labs - A	%(n)
A*68:01:02:01	27(4)
A*68:01:02	7 (1)
A*68:01:02G	13(2)
A*68:01	53(8)
A*68	100(23)
25 low/17 high labs - B	%(n)
B*15:01:01:01	23(4)
B*15:01:01	12(2)
B*15:01:01G	6 (1)
B*15:01	59(10)
B*15(B62)	9 (2)
B*15	91(23)
25 low/17 high labs - B	%(n)
B*15:18:01	35(6)
B*15:18:01G	12(2)
B*15:18	53(9)
B*15(B71)	9 (2)
B*15	91(23)
22 low/15 high Labs - C	%(n)
C*03:03:01	33(5)
C*03:03:01G	13(2)
C*03:03	53(8)
C*03(Cw10)	9 (2)
C*03	91(20)
22 low/14 high Labs - C	%(n)
C*07:04:01	36(5)
C*07:04:01G	14(2)
C*07:04	50(7)
C*07	100(22)

<b>Cell 1595</b>	
23 low/15 high labs - A	%(n)
A*24:02:01:01	20(3)
A*24:02:01	7 (1)
A*24:02:01G	7 (1)
A*24:02	66(10)
A*24	100(23)
23 low/15 high labs - A	%(n)
A*68:02:01:01	20(3)
A*68:02:01	13(2)
A*68:02	67(10)
A*68	100(23)
23 low/15 high labs - B	%(n)
B*51:01:01:01	20(3)
B*51:01:01	7 (1)
B*51:01:01G	7 (1)
B*51:01P	7 (1)
B*51:01	60(9)
B*51	100(23)
23 low/15 high labs - B	%(n)
B*81:01:01G	13(2)
B*81:01	87(13)
B*81	100(23)
22 low/15 high Labs - C	%(n)
C*15:02:01	27(4)
C*15:02:01G	13(2)
C*15:02	60(9)
C*15	100(23)
C*12	5 (1)
22 low/15 high Labs - C	%(n)
C*18:01:01G	7 (1)
C*18:01	93(14)
C*18	95(21)
C*12	5 (1)

<b>Cell 1596</b>	
22 low/14 high labs - A	%(n)
A*02:01:01:01	21(3)
A*02:01:01	14(2)
A*02:01:01G	7 (1)
A*02:01	57(8)
A*02	22(100)
22 low/14 high labs - A	%(n)
A*25:01:01	36(5)
A*25:01	64(9)
A*25	100(22)
22 low/14 high labs - B	%(n)
B*18:01:01:02	21(3)
B*18:01:01	7 (1)
B*18:01:01G	14(2)
B*18:01	57(8)
B*18	100(22)
22 low/14 high labs - B	%(n)
B*44:02:01:01	21(3)
B*44:02:01	7 (1)
B*44:02:01G	14(2)
B*44:02	57(8)
B*44	100(22)
21 low/14 high labs - C	%(n)
C*05:01:01:02	14(2)
C*05:01:01	21(3)
C*05:01	64(9)
C*05	95(20)
C*08	5 (1)
21 low/14 high labs - C	%(n)
C*12:03:01:01	14(2)
C*12:03:01	14(2)
C*12:03:01G	14(2)
C*12:03	57(8)
C*12	100(21)

**Table 10. Summary of the 399<sup>th</sup> Cell Exchange (Cell #1593 - 1596)**

**Serological typing**

(Mixed) <b>Cell 1593</b> (16 Samples Typed)	
A26	100.0%
	[100.0%]
A30	93.8%
A19	6.2%
	[100.0%]
B38	100.0%
	[100.0%]
B49	93.8%
B21	6.2%
	[100.0%]
Cw7	43.8%
Bw4	68.8%
Others Found	
B16	6.2%
A31	6.2%
Cw3	6.2%
B44	6.2%
Cw12	6.2%
B52	6.2%

(Asian Indian) <b>Cell 1594</b> (15 Samples Typed)	
A31	86.7%
A19	13.3%
	[100.0%]
A68	60.0%
A28	40.0%
	[100.0%]
B62	86.7%
B15	13.3%
	[100.0%]
B70	33.30%
B71	33.30%
B72	6.70%
	[73.3%]
Cw3	40.0%
Cw9	6.7%
	[46.7%]
Cw7	46.7%
Bw6	73.3%
Others Found	
B35	6.7%
B73	6.7%
B75	6.7%

(Black) <b>Cell 1595</b> (14 Samples Typed)	
A24	100.0%
	[100.0%]
A68	71.4%
A28	28.6%
	[100.0%]
B51	92.9%
B5	7.1%
	[100.0%]
B81	92.9%
	[92.9%]
Bw4	64.3%
Bw6	64.3%
Others Found	
B7	14.3%
Cw4	14.3%

(Caucasian) <b>Cell 1596</b> (14 Samples Typed)	
A2	100.0%
	[100.0%]
A25	100.0%
	[100.0%]
B18	100.0%
B44	100.0%
	[100.0%]
Cw5	35.7%
	[35.7%]
Bw4	71.4%
Bw6	71.4%
Others Found	
B12	7.1%



**Table 11. Individual laboratory results for Cell #1593**

Center	Investigator	Low Resolution						High Resolution						Method	Other Alleles
		HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
5462	Arnold , Paula	*26	*30	*38	*49	*07	*12	*26:01	*30:01	*38:01	*49:01	*07:01	*12:03	SSO NGS	
5133	Askar , Medhat							*26:01:01:01	*30:01:01	*38:01:01	*49:01:01	*07:01:01:01	*12:03:01:01	NGS	
4492	Caillat-Zucman , S	*26	*30	*38	*49	*07	*12							SSP	
774	Cecka , J. Michael	*26	*30	*38	*49	*07	*12							SSP	
8070	Chang , Uckjin							*26:01	*30:01	*38:01	*49:01	*07:01	*12:03	SBT	
3632	Colombe , Beth W.	*26	*30	*38	*49	*07	*12	*26:01	*30:01	*38:01	*49:01	*07:01	*12:03	SSP SSO	
779	Daniel , Claude	*26	*30	*38	*49	*07	*12							SSP SSO	
3766	Dunckley , Heather	*26	*30	*38	*49	*07	*12							SSO	
5214	Eckels/CPMC ,	*26	*30	*38	*49	*07	*12							SSO	C*12
747	Ferrari-Lacraz , Syl	*26	*30	*38	*49	*07	*12	*26:01:01:01	*30:01:01	*38:01:01	*49:01:01	*07:01:01	*12:03:01:01	SSP SSO NGS	
762	Fischer , Gottfried							*26:01:01:01	*30:01:01	*38:01:01	*49:01:01	*07:01:01:01	*12:03:01:01	SSO NGS	
4079	Fort , Marylise	*26	*30	*38	*49	*07	*12	*26:01	*30:01	*38:01	*49:01	*07:01	*12:03	SSP SSO	B*38:59; B*38:60 C*07:462; C*07:469; C*07:471, C*07:479
8043	Gideoni , Osnat	*26	*30	*38	*49	*07	*12	*26:01	*30:01	*38:01	*49:01	*07:01	*12:03	SSP SSO	
3545	Goldstein , Steven	*26	*30	*38	*49	*07	*12	*26:01	*30:01	*38:01	*49:01	*07:01	*12:03	SSP SSO SBT	A*26:117 C*07:06 C*07:18 C*07:343 C*07:419 C*07:458 C*12:143 C*12:167
810	Hamdi , Nuha	*26	*30	*38	*49	*07	*12							SSO	
3808	Hogan , Patrick	*26	*30	*38	*49	*07	*12							SSP	
771	Israel , Shoshana	*26	*30	*38	*49	*07	*12	*26:01	*30:01	*38:01	*49:01	*07:01	*12:03	SSO SBT	
725	Lardy , N.M.	*26	*30	*38	*49	*07	*12							SSO	
745	Latham , Katy							*26:01:01:01	*30:01:01	*38:01:01	*49:01:01	*07:01:01:01	*12:03:01:01	SSP SBT NGS	
278	Lee , Jar-How	*26	*30	*38	*49	*07	*12	*26:01	*30:01	*38:01	*49:01	*07:01	*12:03		
6649	Lim , Young Ae	*26	*30	*38	*49									SSP	
731	Loewenthal , Ron	*26	*30	*38	*49	*07	*12	*26:01:01G	*30:01:01	*38:01:01	*49:01	*07:01:01G	*12:03:01G	SSP SSO SBT	
8001	Rao , Prakash	*26	*30	*38	*49	*07	*12								
3625	Rees , Tracey	*26	*30	*38	*49	*07	*12	*26:01	*30:01	*38:01	*49:01	*07:01	*12:03		C*12:167 A*26:117
4251	Schiller , Jennifer	*26	*30	*38	*49	*07	*12	*26:01:01G	*30:01	*38:01	*49:01	*07:01:01G	*12:03:01G	SSO SBT	
5642	Varnavidou-Nicolai	*26	*30	*38	*49	*07	*12							SSP	
3186	Watson , Narelle	*26	*30	*38	*49	*07	*12							SSO	
16	Zhang , Aiwen	*26	*30	*38	*49	*07	*12	*26:01:01	*30:01:01	*38:01:01	*49:01:01	*07:01:01	*12:03:01	SBT NGS	

**Table 12. Individual laboratory results for Cell #1594**

Center	Investigator	Low Resolution						High Resolution						Method	Other Alleles
		HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
5462	Arnold , Paula	*31	*68	*15	*15	*03	*07	*31:12	*68:01	*15:01	*15:18	*03:03	*07:04	SSO NGS	
5133	Askar , Medhat							*31:12	*68:01:02:01	*15:01:01:01	*15:18:01	*03:03:01	*07:04:01	NGS	
4492	Caillat-Zucman , S	*31	*68	*15	*15	*03	*07							SSP	
774	Cecka , J. Michael	*31	*68	*15	*15	*03	*07							SSP	
8070	Chang , Uckjin							*31:12	*68:01	*15:01	*15:18	*03:03	*07:04	SBT	
3632	Colombe , Beth W.	*31	*68	*15	*15	*03	*07	*31:12	*68:01	*15:01	*15:18	*03:03	*07:04	SSP SSO	
779	Daniel , Claude	*31	*68	*15	*15	*03	*07			*15:01	*15:18	*03:03		SSP SSO	
3766	Dunckley , Heather	*31	*68	*15	*15	*03	*07							SSO	
5214	Eckels/CPMC ,	*31	*68	*15 (B62)	*15 (B71)	*03 (Cw9)	*07							SSO	
747	Ferrari-Lacraz , Syl	*31	*68	*15	*15	*03	*07	*31:12	*68:01:02:01	15:01:01:01	*15:18:01	*03:03:01	*07:04:01	SSP SSO NGS	
762	Fischer , Gottfried							*31:12	*68:01:02:01	15:01:01:01	*15:18:01	*03:03:01	*07:04:01	SSO NGS	
4079	Fort , Marylise	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	SSP SSO	
8043	Gideoni , Osnat	*31	*68	*15	*15	*03	*07		*68:01	*15:01	*15:18			SSP SSO	
3545	Goldstein , Steven	*31	*68	*15	*15	*03	*07	*31:12	*68:01	*15:01	*15:18	*03:03	*07:04	SSP SSO SBT	C*07:11 A*68:33 C*03:20N C*03:227
810	Hamdi , Nuha	*31	*68	*15	*15	*03	*07							SSO	
3808	Hogan , Patrick	*31	*68	*15	*15	*03	*07			*15:01:01G	*15:18:01G			SSP	
771	Israel , Shoshana	*31	*68	*15		*03	*07	*31:12	*68:01	*15:01	*15:18	*03:03	*07:04	SSO SBT	
725	Lardy , N.M.	*31	*68	*15		*03	*07							SSO	
745	Latham , Katy							*31:12	*68:01:02:01	*15:01:01:01	*15:18:01	*03:03:01	*07:04:01	SSP SBT NGS	
278	Lee , Jar-How	*31	*68	*15	*15	*03	*07	*31:01	*68:01	*15:01	*15:18	*03:03	*07:04		
6649	Lim , Young Ae	*31	*68	*15										SSP	
731	Loewenthal , Ron	*31	*68	*15	*15	*03	*07	*31:12	*68:01:02G	*15:01:01	*15:18:01	*03:03:01G	*07:04:01G	SSP SSO SBT	
8001	Rao , Prakash	*31	*68	*15 (B62)	*15 (B71)	*03 (Cw9)	*07								
3625	Rees , Tracey	*31	*68	*15	*15	*03	*07	*31:12	*68:01	*15:01	*15:18	*03:03	*07:04		A*68:11N B*15:64 B*15:66 C*03:20N C*03:227
4251	Schiller , Jennifer	*31	*68	*15	*15	*03	*07	*31:12	*68:01:02G	*15:01	*15:18:01G	*03:03:01G	*07:04:01G	SSO SBT	
5642	Varnavidou-Nicolai	*31	*68	*15	*15	*03	*07							SSP	
3186	Watson , Narelle	*31	*68	*15	*15	*03	*07							SSO	
16	Zhang , Aiwen	*31	*68	*15	*15	*03	*07	*31:12	*68:01:02	*15:01:01	*15:18:01	*03:03:01	*07:04:01	SBT NGS	

**Table 13. Individual laboratory results for Cell #1595**

Center	Investigator	Low Resolution						High Resolution						Method	Other Alleles
		HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
5462	Arnold , Paula	*24	*68	*51	*81	*15	*18	*24:02	*68:02	*51:01	*81:01	*15:02	*18:01	SSO NGS	
5133	Askar , Medhat							*24:02:01:01	*68:02:01:01	*51:01:01:01	*81:01	*15:02:01	*18:01	NGS	
4492	Caillat-Zucman , Sc	*24	*68	*51	*81	*15	*18							SSP	
774	Cecka , J. Michael	*24	*68	*51	*81	*15	*18							SSP	
8070	Chang , Uckjin							*24:02	*68:02	*51:01	*81:01	*15:02	*18:01	SBT	
3632	Colombe , Beth W.	*24	*68	*51	*81	*15	*18	*24:02	*68:02	*51:01	*81:01	*15:02	*18:01	SSP SSO	
779	Daniel , Claude	*24	*68	*51	*81	*15	*18							SSP SSO	
3766	Dunckley , Heather	*24	*68	*51	*81	*15	*18							SSO	
5214	Eckels/CPMC ,	*24	*68	*51	*81	*15	*18							SSO	
747	Ferrari-Lacraz , Syl													SSP SSO NGS	
762	Fischer , Gottfried							*24:02:01:01	*68:02:01:01	*51:01:01:01	*81:01	*15:02:01	*18:01	SSO NGS	
4079	Fort , Marylise	*24	*68	*51	*81	*15	*18	*24:02	*68:02	*51:01	*81:01	*15:02	*18:01	SSP SSO	A*24:328; A*24:331 B*51:196; B*51:200 C*15:119 C*18:02 C*18:10 B*51:174 B*81:02
8043	Gideoni , Osnat	*24	*68	*51	*81	*15	*18	*24:02	*68:02	*51:01	*81:01	*15:02	*18:01	SSP SSO	
3545	Goldstein , Steven	*24	*68	*51	*81	*15	*18	*24:02	*68:02	*51:01	*81:01	*15:02	*18:01	SSP SSO SBT	B*51:193 B*81:02 C*15:87 C*18:02
810	Hamdi , Nuha	*24	*68	*51	*81	*15	*18							SSO	
3808	Hogan , Patrick	*24	*68	*51	*81	*15	*18							SSP	
771	Israel , Shoshana	*24	*68	*51	*81	*15	*18	*24:02	*68:02	*51:01	*81:01	*15:02	*18:01	SSO SBT	
725	Lardy , N.M.	*24	*68	*51	*81	*15	*18							SSO	
745	Latham , Katy							*24:02:01:01	*68:02:01:01	*51:01:01:01	*81:01	*15:02:01	*18:01	SSP SBT NGS	
278	Lee , Jar-How	*24	*68	*51	*81	*15	*18	*24:02	*68:02	*51:01	*81:01	*15:02	*18:01		
6649	Lim , Young Ae	*24	*68	*51	*81									SSP	
731	Loewenthal , Ron	*24	*68	*51	*81	*15	*18	*24:02:01G	*68:02:01	*51:01:01G	*81:01:01G	*15:02:01G	*18:01	SSP SSO SBT	
8001	Rao , Prakash	*24	*68	*51	*81	*15	*18								
3625	Rees , Tracey	*24	*68	*51	*81	*15	*18	*24:02	*68:02	*51:01	*81:01	*15:02	*18:01		B*51:193
4251	Schiller , Jennifer	*24	*68	*51	*81	*15	*18	*24:02	*68:02	*51:01P	*81:01:01G	*15:02:01G	*18:01:01G	SSO SBT	
5642	Varnavidou-Nicolai	*24	*68	*51	*81	*15	*12							SSP	
3186	Watson , Narelle	*24	*68	*51	*81	*15	*18							SSO	
16	Zhang , Aiwen	*24	*68	*51	*81	*15	*18	*24:02:01	*68:02:01	*51:01:01	*81:01	*15:02:01	*18:01	SBT NGS	

**Table 14. Individual laboratory results for Cell #1596**

Center	Investigator	Low Resolution						High Resolution						Method	Other Alleles
		HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
5462	Arnold , Paula	*02	*25	*18	*44	*05	*12	*02:01	*25:01	*18:01	*44:02	*05:01	*12:03	SSO NGS	
5133	Askar , Medhat							*02:01:01:01	*25:01:01	*18:01:01:02	*44:02:01:01	*05:01:01	*12:03:01	NGS	
4492	Caillat-Zucman , S	*02	*25	*18	*44	*05	*12							SSP	
774	Cecka , J. Michael	*02	*25	*18	*44	*05	*12							SSP	
8070	Chang , Uckjin							*02:01	*25:01	*18:01	*44:02	*05:01	*12:03	SBT	
3632	Colombe , Beth W.	*02	*25	*18	*44	*05	*12	*02:01	*25:01	*18:01	*44:02	*05:01	*12:03	SSP SSO	
779	Daniel , Claude	*02	*25	*18	*44	*05	*12							SSP SSO	
3766	Dunckley , Heather	*02	*25	*18	*44	*05	*12							SSO	
5214	Eckels/CPMC ,	*02	*25	*18	*44	*05	*12							SSO	
747	Ferrari-Lacruz , Syl													SSP SSO NGS	
762	Fischer , Gottfried							*02:01:01:01	*25:01:01	*18:01:01:02	*44:02:01:01	*05:01:01:02	*12:03:01:01	SSO NGS	
4079	Fort , Marylise	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	SSP SSO	
8043	Gideoni , Osnat	*02	*25	*18	*44	*05	*12	*02:01	*25:01	*18:01	*44:02	*05:01	*12:03	SSP SSO	
3545	Goldstein , Steven	*02	*25	*18	*44	*05	*12	*02:01	*25:01	*18:01	*44:02	*05:01	*12:03	SSP SSO SBT	A*02:629 C*12:143 C*12:167 B*18:17N B*44:19N
810	Hamdi , Nuha	*02	*25	*18	*44	*08	*12							SSO	
3808	Hogan , Patrick	*02	*25	*18	*44	*05	*12							SSP	
771	Israel , Shoshana	*02	*25	*18	*44	*05	*12	*02:01	*25:01	*18:01	*44:02	*05:01	*12:03	SSO SBT	
725	Lardy , N.M.	*02	*25	*18	*44	*05	*12							SSO	
745	Latham , Katy							*02:01:01:01	*25:01:01	*18:01:01:02	*44:02:01:01	*05:01:01:02	*12:03:01:01	SSP SBT NGS	
278	Lee , Jar-How	*02	*25	*18	*44	*05	*12	*02:01	*25:01	*18:01	*44:02	*05:01	*12:03		
6649	Lim , Young Ae	*02	*25	*18	*44									SSP	
731	Loewenthal , Ron	*02	*25	*18	*44	*05	*12	*02:01:01	*25:01:01	*18:01:01G	*44:02:01G	*05:01:01	*12:03:01G	SSP SSO SBT	
8001	Rao , Prakash	*02	*25	*18	*44	*05	*12								
3625	Rees , Tracey	*02	*25	*18	*44	*05	*12	*02:01	*25:01	*18:01	*44:02	*05:01	*12:03		A*02:629 B*18:17N B*44:19N C*12:167
4251	Schiller , Jennifer	*02	*25	*18	*44	*05	*12	*02:01:01G	*25:01	*18:01:01G	*44:02:01G	*05:01	*12:03:01G	SSO SBT	
5642	Varnavidou-Nicolai	*02	*25	*18	*44	*05	*12							SSP	
3186	Watson , Narelle	*02	*25	*18	*44	*05	*12							SSO	
16	Zhang , Aiwen	*02	*25	*18	*44	*05	*12	*02:01:01	*25:01:01	*18:01:01	*44:02:01	*05:01:01	*12:03:01	SBT NGS	

**Table 15. Individual laboratory results for Cell #1593-1596 by serology**

Investigator	Days Old	Cell No 1593 (Mixed)								Cell No 1594 (Asian Indian)								Cell No 1595 (Black)								Cell No 1596 (Caucasian)									
		Viab %	A26	A30	B38	B49	Cw7	Bw4	OTHERS	Viab %	A31	A68	B62	B70	Cw3	Cw7	Bw4	Bw6	OTHERS	A24	A68	B51	B81	Bw4	Bw6	OTHERS	Viab %	A2	A25	B18	B44	Cw5	Bw4	Bw6	OTHERS
Cecka, J. Mic	2	>95	+	+	+	+				>95	+	+	+	B71						+	+	+	+	+	+		>95	+	+	+	+		+	+	
Dunckley, Hea		85	+	+	+	+				90	+	+	+	B71							+	+	+	+			85	+	+	+	+				
Enczmann, J		95	+	+	+	+				95	+	+	+	B71							+	+	+	+			95	+	+	+	+				
Ferrari-Lacra		90	+	+	+	+	+	+	Cw12	90	+	A28	+	+	Cw9	+	+										NT								
Fort, Marylis	3	98	+	+	+	+				NT											+	+	+	+			NT								
Hahn, Amy B.		99	+	+	+	+				98	+	+	+	B72							+	+	+	+	+	+	99	+	+	+	+		+	+	
Hogan, Patric		90	+	+	+	+	+	+		90	+	+	+	+	+	+	+				+	+	+	+	+		90	+	+	+	+	+	+	+	
Latham, Katy		95	+	+	+	+				100	+	+	+	B71							+	+	+	+	+		99	+	+	+	+		+	+	
Loewenthal ,		70	+	+	+	+	+	+		75	+	+	+	+	+	+	+				+	+	+	+	+		80	+	+	+	+	+	+	+	
Permpikul, Ve	6	50								50																	50								
Pule, Ziningi		80	+	+	+	+	+		B44,B52>	80	+	+	+	+	+	+			B73	+	+	+	+		Cw4,B7	80	+	+	+	+	+				B12
Rees, Tracey	7	80	+	+	+	+	+	+		60	+	A28	+	+	+	+	+			+	A28	+	+	+	+		80	+	+	+	+	+	+	+	
Renac, Virgin	3	100	+	+	+	B21		+		100	+	A28	B15							+	A28	+	+	+	+		100	+	+	+	+		+	+	
Shai, Isaac	8	90	+	+	+	+	+	+	A31,Cw3	86	+	A28	+	B35	+	+	+	B75	+	A28	B5	+	+	+	Cw4,B7	86	+	+	+	+	+	+	+	+	
Varnavidou-Ni	7	98	+	+	+	+	+	+		98	+	+	+	B71						+	+	+	+	+	+		98	+	+	+	+	+	+	+	
Vidan-Jeras,	6	NT								NT																	NT								
Watson, Narel	6	95	+	A19	+	+		+		95	A19	A28	B15													95	+	+	+	+		+	+		
Zhang, Aiwen	2	95	+	+	+	+	+			95	A19	A28	+		+	+					+	A28	+	+			95	+	+	+	+				

## SERUM EXCHANGE #557

The results for **Serum Exchange 557 (sera 1221 - 1224)**, are summarized in Tables 16 -21 and individual laboratory results by method are listed in Tables 22-33. Sera strongly positive to A29, A9 (23, A24), and B13 were examined in this study.

1221	method	#labs	A29	B75	B55	B56	A1	A36	B53	B49	A30	A26	A66	A6601	A80	A43	B35	B50	B63	B62	B72	B71	B39	A33	A74	B42	B54	B67			
class I	NIH-Std	3	75											25																	
	NIH-Ext	2	100	50	50														50					50	50						
	AHG	2	100	33	33	33	67	33	67	33										33	33	33	33								
	Luminex	29	100	97	100	100	100	100	100	100	97	100	48	24	97	90	100	100	97	97	97	93	48	86	86	100	100	100			
	ELISA	1	no consensus																												
	Flow	1	no specificities assigned																												
	C1q	2	100	100		50	100	100			50				50																
	Other	2	100		50	50	50	50	50	50	50				50		50	50													
1221	method	#labs	B77	B46	B78	B58	B57	A69	A68	A2	B7	B82	B81	B41	B51	Cw9	Cw10	Cw4	A34	A31	A23	A24	B37	B52	B59	B38	B76	B13	B27	B2708	B60
class I	AHG	2																													33
	Luminex	29	97	97	86	83	72	90	72	83	79	76	69	69	79	79	72	59	76	76	66	55	66	66	66	55	55	55	41	24	

1221	method	#labs	DR10	DR11	DR12	DR13	DR14	DR17	DR18	DR7	DR8	DR9	DR53	DR52	DQ2	DQA1*05	DR1404	DQ5	DQ6	DR1403	DR3	DQ7
class II	NIH-Ext	1	no specificities assigned																			
	Luminex	28	100	100	96	100	100	96	96	64	100	100	89	89	46	14	14	11	11	7	7	7
	Flow	1	no specificities assigned																			
	C1q	1	no specificities assigned																			
	Other	2	50	50	50	50	50	50	50	50	50											

**Serum 1221** was reported as strongly positivity to A29. Additional reactivity to B55, B56, as well as to 1C, 5C, and 10C specificities was reported by various methods. Luminex labs also reported anti-A2, -Cw9, and -Cw10 reactivity, along with reactivity to a number of 7C specificities. Allele specific reactivity to A\*24:02 was reported by 2 labs. For class II, reactivity to

a number of DR specificities (DR7, DR8, DR9, DR10, DR11, DR12, DR13, DR14, DR17, and DR18,) was reported by Luminex single antigen and Luminex PRA. Anti-DR52 and -DR53 reactivity, along with weaker DQ2 reactivity, was also reported by single antigen.

1222	method	#labs	A23	A24	A2403	B57	B58	A25	A32	A2	A203	B38	B53	B51	B49	A68	A69	Bw4	B52	B59	B63	B77	B44	B13	B27
class I	NIH-Std	3	75	75		75		50				50	50		50									50	50
	NIH-Ext	2	100	100		50		50				50	50		50									50	50
	AHG	2	100	100		67	33	67	100	33		33	33	33				67					33		
	Luminex	29	100	100	31	100	97	100	97	100	31	100	100	100	97	100	97	31	100	100	97	97	100	97	97
	ELISA	1	no consensus																						
	Flow	1	no specificities assigned																						
	C1q	2	100	100		100	100	100	100	50		100	100	100	100	50	50	50	50	100	100	50			
	Other	2	50	50		50	50	50	50	50						50	50								

1222	method	#labs	DR4	DR9	DR10	DQ7	DQ9	DQ8	DR7	DR1	DR15	DR16	DR53	DR103	DR51	DQ2	DR52	DQ6	DQ5	DQ4	DP15	DQA1*02	DQA1*03	DQA1*05	DQA1*06
class II	NIH-Ext	1	no specificities assigned																						
	Luminex	28	100	82	75	75	75	68	57	46	43	43	86	50	46	46	25	39	32	18	14	11	11	11	11
	Flow	1	no specificities assigned																						
	C1q	1	no specificities assigned																						
	Other	2	50	50	50	50	50	50	50	50	50	50													

For **Serum 1222**, strong reactivity to A9 (A23 A24) and B57 was reported. In addition, reactivity to a number of Bw4 antigens, along with anti-A2, -A68, -A69 reactivity was reported by various methods. Allele level A\*34:01 and A\*29:02 was reported by several labs. Strong class II reactivity was reported, with Luminex single antigen and Luminex PRA reporting reactivity to DR4 and DR9, along with reactivity to DR10, DQ7, DQ9, DQ8, DR7, DR1, DR15, and DR16. Additional reactivity to DR53, DR103, DR51, and DQ2 was also reported by single antigen. Allele specific DQB1\*06:02 was reported by 2 labs.

1223	method	#labs	B13	B7	B81	B8101	B60	B61	B40	B27	B2708	B47	B41	B73	B67	B48	B8	B42	B38	B39	B3901	B62	B75	B76	B72	B50	B71	B77	B49	B55	B56	A6602	A66	B52	B37	B54	Cw2	Cw17	B18	B35				
class I	NIH-Std	3	75																																									
	NIH-Ext	2	50																																									
	AHG	2	100	100	67		67	67	33	67		67	33																															
	Luminex	28	100	96	86	25	96	96		100	39	96	86	96	93	89	86	86	82	71	25	86	82	79	71	64	64	61	57	79	64	50	43	46	43	39	71	36	32	32				
	ELISA	1	no consensus																																									
	Flow	1	no specificities assigned																																									
	C1q	2	100	50	100																																							
	Other	2	50	50	50		50	50																																				

1223	method	#labs	DR11	DR7	DR9	DR53	DPw3	DP18	DPw1	DPw2	DPw5	DP13	DP28	DP14	DP19	DPw6	DP17	DP9	DP11	DP10	DP20	DPw4	DP402	DPA1*02	DP15	DPA1*01	DPA1*03	DPA1*04
class II	NIH-Ext	1	no specificities assigned																									
	Luminex	28	96	93	85	85	89	89	85	85	85	85	85	79	79	79	79	78	78	70	70	56	44	30	22	15	15	15
	Flow	1	no specificities assigned																									
	C1q	1	no specificities assigned																									
	Other	2	50	50	50																							

**Serum 1223** was reported as positive to B13. Various methods also reported reactivity to B7, B81, B60, B61, B27, B47, and B41. Additional anti-A66, -B37, -Cw2, and -Cw17 reactivity, along with reactivity to a number of 5C, 7C, and 8C specificities, was reported by Luminex. Allele specific

A\*66:02 and B\*27:08 reactivity was reported by a number of labs. For class II, reactivity to DR11, DR7, and DR9 was reported by Luminex single antigen and Luminex PRA. In addition, single antigen labs reported anti-DR53 reactivity, along with reactivity to a number of DP antigens.



1224	method	#labs	B13	A32	B41	A25	B45	B44	B18	B37	B50	B35	B47	B48	B49	B62	B72	B77	B75	B76	B61	B60	B8	B38	B53	B71	B78		
class I	NIH-Std	3	67																										
	NIH-Ext	2	100																										
	AHG	2	100	33	33	33																							
	Luminex	28	100	93	93	96	96	93	93	93	93	89	89	86	86	96	93	93	93	89	93	93	89	89	86	86	86		
	ELISA	1	no consensus																										
	Flow	1	no specificities assigned																										
	C1q	2	100																										
	Other	2	50	50	50		50	50	50	50	50	50	50	50	50														
1224	method	#labs	B51	B59	B64	B52	A74	A29	A34	A33	A26	A31	A43	B39	B3901	A66	A6601	A6602	A3	A30	A68	A69	B65	A11	A1101	B42	B54	B55	B56
class I	Luminex	28	81	79	75	71	79	79	75	71	68	68	68	68	29	68	29	29	61	61	61	54	50	39	21				
	Other	2																								50	50	50	50

For **Serum 1224**, strong reactivity to B13 was reported. In addition, reactivity to A32, B41, and A25 was detected. Luminex single antigen and Luminex PRA also reported reactivity to 5C, 7C, and 12C specificities. Additional reactivity to a number of 8C specificities was reported by Luminex. Class II reactivity to DR7, DR9, DR11, and DQ2 was reported by Luminex single antigen and Luminex PRA. Additional reactivity to a number of DP specificities was also reported by single antigen.

1224	method	#labs	DR7	DR9	DR11	DQ2	DP28	DPw2	DPw3	DP18	DPw6	DP14	DP9	DP10	DP17	DP20	DPw4	DP402	DR52	DR12	DQA1*02	DQA1*05	DPA1*01	DPA1*04	DPA1*02	DQ4		
class II	NIH-Ext	1	no specificities assigned																									
	Luminex	28	100	100	89	85	85	81	81	78	70	67	67	63	63	63	52	41	30	19	15	15	11	11	7	7		
	Flow	1	no specificities assigned																									
	C1q	1	no specificities assigned																									
	Other	2	50	50	50	50																						

**NEXT MAILING DATE: August 9, 2017**  
*Arlene Locke, David Gjertson, Qiheng Zhang, and Elaine F. Reed*

**Table 16. Summary of the 557<sup>th</sup> Serum Exchange (Serum #1221-1224) by NIH-Standard and NIH-Extended - class I**

Method: NIH-Standard											
<b>*** Serum 1221 ***</b>			<b>*** Serum 1222 ***</b>			<b>*** Serum 1223 ***</b>			<b>*** Serum 1224 ***</b>		
4 typing Labs			4 typing Labs			3 typing Labs			3 typing Labs		
Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion
A29	75%	75%	A23	75%	100%	B13	67%	80%	B13	67%	40%
A6601	25%	100%	A24	75%	100%						
			B57	25%	100%						

Method: NIH-Extended											
<b>*** Serum 1221 ***</b>			<b>*** Serum 1222 ***</b>			<b>*** Serum 1223 ***</b>			<b>*** Serum 1224 ***</b>		
2 typing Labs			2 typing Labs			2 typing Labs			2 typing Labs		
Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion
A29	100%	100%	A23	100%	100%	B13	50%	100%	B13	100%	100%
A33	50%	100%	A24	100%	92%						
A74	50%	100%	A25	50%	100%						
B75	50%	100%	B13	50%	100%						
B55	50%	50%	B38	50%	100%						
B63	50%	50%	B49	50%	100%						
			B53	50%	100%						
			B57	50%	100%						
			B27	50%	67%						

**Table 17. Summary of the 557<sup>th</sup> Serum Exchange (Serum #1221-1224) by Antiglobulin and Other - class I**

Method: Antiglobulin											
*** Serum 1221 ***			*** Serum 1222 ***			*** Serum 1223 ***			*** Serum 1224 ***		
3 typing Labs			3 typing Labs			3 typing Labs			3 typing Labs		
Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion
A29	100%	100%	A23	100%	100%	B13	100%	100%	B13	100%	100%
A1	67%	100%	A24	100%	100%	B7	100%	91%	B41	33%	67%
B53	67%	62%	A32	100%	82%	B47	67%	100%	A32	33%	60%
A36	33%	100%	A25	67%	100%	B60	67%	100%	A25	33%	33%
B39	33%	100%	B57	67%	100%	B61	67%	100%			
B49	33%	100%	Bw4	67%	94%	B81	67%	100%			
B55	33%	100%	A2	33%	100%	B27	67%	86%			
B56	33%	100%	A80	33%	100%	B40	33%	100%			
B60	33%	100%	B38	33%	100%	B41	33%	67%			
B62	33%	100%	B44	33%	100%						
B71	33%	100%	B51	33%	100%						
B72	33%	100%	B53	33%	100%						
B75	33%	100%	B58	33%	100%						

Method: Other											
*** Serum 1221 ***			*** Serum 1222 ***			*** Serum 1223 ***			*** Serum 1224 ***		
2 typing Labs			2 typing Labs			2 typing Labs			2 typing Labs		
Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion
A1	50%	100%	A2	50%	100%	B13	50%	100%	B13	50%	100%
A26	50%	100%	A23	50%	100%	B60	50%	100%	B18	50%	100%
A29	50%	100%	A24	50%	100%	B61	50%	100%	B35	50%	100%
A30	50%	100%	A25	50%	100%	B7	50%	100%	B37	50%	100%
A36	50%	100%	A32	50%	100%	B81	50%	100%	B41	50%	100%
A80	50%	100%	A68	50%	100%				B42	50%	100%
B35	50%	100%	A69	50%	100%				B44	50%	100%
B49	50%	100%	B57	50%	100%				B45	50%	100%
B50	50%	100%	B58	50%	100%				B47	50%	100%
B53	50%	100%							B48	50%	100%
B55	50%	100%							B49	50%	100%
B56	50%	100%							B50	50%	100%
									B54	50%	100%
									B55	50%	100%
									B56	50%	100%

**Table 18. Summary of the 557<sup>th</sup> Serum Exchange (Serum #1221-1224) by Luminex - class I**

Method: Luminex											
*** Serum 1221 ***			*** Serum 1222 ***			*** Serum 1223 ***			*** Serum 1224 ***		
29 typing Labs			29 typing Labs			28 typing Labs			28 typing Labs		
Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion
A1	100%	100%	A2	100%	100%	B27	100%	88%	B13	100%	89%
A26	100%	100%	A23	100%	100%	B13	100%	78%	A25	96%	83%
A36	100%	100%	A24	100%	100%	B47	96%	100%	B45	96%	71%
B35	100%	100%	A25	100%	100%	B60	96%	100%	B62	96%	67%
B42	100%	100%	A68	100%	100%	B61	96%	100%	A32	93%	100%
B49	100%	100%	B37	100%	100%	B7	96%	100%	B41	93%	100%
B50	100%	100%	B38	100%	100%	B73	96%	100%	B72	93%	100%
B53	100%	100%	B44	100%	100%	B67	93%	60%	B77	93%	100%
B55	100%	100%	B51	100%	100%	B48	89%	100%	B61	93%	89%
B56	100%	100%	B52	100%	100%	B8	86%	100%	B18	93%	86%
B67	100%	100%	B53	100%	100%	B81	86%	100%	B60	93%	86%
A29	100%	85%	B57	100%	100%	B41	86%	60%	B37	93%	80%
B54	100%	80%	B59	100%	100%	B62	86%	60%	B44	93%	80%
A30	97%	100%	A32	97%	100%	B42	86%	50%	B50	93%	80%
B62	97%	100%	A69	97%	100%	B75	82%	67%	B75	93%	62%
B72	97%	100%	B49	97%	100%	B38	82%	40%	B76	89%	100%
B75	97%	100%	B58	97%	100%	B55	79%	100%	B47	89%	75%
B77	97%	100%	B63	97%	100%	B76	79%	100%	B38	89%	67%
B63	97%	83%	B77	97%	100%	B72	71%	100%	B35	89%	57%
B46	97%	80%	A1	97%	92%	Cw2	71%	100%	B8	89%	57%
A80	97%	75%	B13	97%	89%	B39	71%	75%	B53	86%	100%
B71	93%	100%	B27	97%	71%	B50	64%	100%	B71	86%	100%
A43	90%	100%	A80	93%	100%	B56	64%	100%	B78	86%	100%
A69	90%	100%	B47	93%	100%	B71	64%	100%	B48	86%	80%
A74	86%	100%	B76	93%	100%	B77	61%	100%	B49	86%	67%
B78	86%	100%	Cw2	83%	100%	B49	57%	100%	B51	81%	100%
A33	86%	90%	Cw4	79%	100%	A6602	50%	100%	A74	79%	75%
B58	83%	75%	Cw15	76%	100%	B52	46%	100%	B59	79%	75%
A2	83%	62%	Cw5	76%	100%	B37	43%	100%	A29	79%	56%
Cw9	79%	100%	A43	66%	100%	A66	43%	50%	A34	75%	50%
B7	79%	80%	Cw17	66%	100%	B2708	39%	100%	B64	75%	50%
B51	79%	56%	A29	62%	50%	B54	39%	100%	B52	71%	60%
A34	76%	100%	Cw18	59%	100%	Cw17	36%	100%	A33	71%	50%
B82	76%	100%	A34	59%	50%	B18	32%	100%	A26	68%	100%
A31	76%	67%	B45	45%	100%	B35	32%	100%	A31	68%	100%

**Table 18. Summary of the 557<sup>th</sup> Serum Exchange (Serum #1221-1224) by Luminex - cont.**

Method: Luminex											
*** Serum 1221 ***			*** Serum 1222 ***			*** Serum 1223 ***			*** Serum 1224 ***		
29 typing Labs			29 typing Labs			28 typing Labs			28 typing Labs		
Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion
Cw10	72%	100%	B54	45%	100%	B59	29%	100%	A43	68%	100%
A68	72%	88%	Cw14	41%	100%	B64	29%	100%	B39	68%	100%
B57	72%	88%	Cw6	41%	100%	B3901	25%	100%	A66	68%	50%
B81	69%	75%	Cw7	41%	100%	B45	25%	100%	A3	61%	100%
B41	69%	67%	A2403	31%	100%	B8101	25%	100%	A30	61%	100%
A23	66%	100%	A66	31%	75%	B65	21%	100%	A68	61%	100%
B37	66%	100%	A203	31%	100%	B78	21%	100%	A69	54%	100%
B52	66%	75%	Bw4	31%	100%				B65	50%	100%
B59	66%	33%	Cw10	31%	100%				A11	39%	100%
Cw4	59%	100%	B61	28%	100%				A6601	29%	100%
B13	55%	100%	B82	28%	100%				A6602	29%	100%
B38	55%	100%	Cw1	28%	100%				B3901	29%	100%
B76	55%	100%							A1101	21%	100%
A24	55%	50%									
A66	48%	100%									
B39	48%	100%									
B27	41%	67%									
A6601	24%	100%									
B2708	24%	100%									

**Table 19. Summary of the 557<sup>th</sup> Serum Exchange (Serum #1221-1224) by ELISA, Flow Cytometry and C1q - class I**

Method: ELISA											
<b>*** Serum 1221 ***</b>			<b>*** Serum 1222 ***</b>			<b>*** Serum 1223 ***</b>			<b>*** Serum 1224 ***</b>		
1 typing Lab			1 typing Lab			1 typing Lab			1 typing Lab		
Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion
No consensus			No consensus			No consensus			No consensus		

Method: Flow Cytometry											
<b>*** Serum 1221 ***</b>			<b>*** Serum 1222 ***</b>			<b>*** Serum 1223 ***</b>			<b>*** Serum 1224 ***</b>		
1 typing Lab			1 typing Lab			1 typing Lab			1 typing Lab		
Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion
No specificities assigned			No specificities assigned			No specificities assigned			No specificities assigned		

Method: C1q											
<b>*** Serum 1221 ***</b>			<b>*** Serum 1222 ***</b>			<b>*** Serum 1223 ***</b>			<b>*** Serum 1224 ***</b>		
2 typing Labs			2 typing Labs			2 typing Labs			2 typing Labs		
Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion
A1	100%	100%	A23	100%	100%	B13	100%	100%	B13	100%	100%
A29	100%	100%	A24	100%	100%	B81	100%	100%			
A36	100%	100%	A25	100%	100%	B7	50%	100%			
B75	100%	100%	A32	100%	100%						
A30	50%	100%	B38	100%	100%						
A43	50%	100%	B49	100%	100%						
B56	50%	100%	B51	100%	100%						
			B53	100%	100%						
			B57	100%	100%						
			B58	100%	100%						
			B59	100%	100%						
			B63	100%	100%						
			A2	50%	100%						
			A68	50%	100%						
			A69	50%	100%						
			B52	50%	100%						
			B77	50%	100%						
			Bw4	50%	100%						

**Table 20. Summary of the 557<sup>th</sup> Serum Exchange (Serum #1221-1224) by Luminex - class II**

Method: Luminex											
*** Serum 1221 ***			*** Serum 1222 ***			*** Serum 1223 ***			*** Serum 1224 ***		
28 typing Labs			28 typing Labs			27 typing Labs			27 typing Labs		
Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion
DR10	100%	100%	DR4	100%	100%	DR11	96%	100%	DR7	100%	100%
DR11	100%	100%	DR53	86%	100%	DR7	93%	100%	DR9	100%	64%
DR13	100%	100%	DR9	82%	50%	DPw3	89%	93%	DR11	89%	100%
DR14	100%	100%	DR10	75%	100%	DP18	89%	92%	DP28	85%	78%
DR8	100%	100%	DQ9	75%	67%	DP28	85%	100%	DQ2	85%	73%
DR9	100%	100%	DQ7	75%	60%	DPw1	85%	100%	DPw2	81%	100%
DR12	96%	100%	DQ8	68%	33%	DPw5	85%	100%	DPw3	81%	89%
DR17	96%	100%	DR7	57%	100%	DR9	85%	100%	DP18	78%	78%
DR18	96%	100%	DR103	50%	100%	DR53	85%	95%	DPw6	70%	100%
DR53	89%	95%	DR1	46%	100%	DP13	85%	78%	DP14	67%	100%
DR52	89%	91%	DR51	46%	100%	DPw2	85%	64%	DP9	67%	100%
DR7	64%	100%	DQ2	46%	40%	DP14	79%	100%	DP10	63%	100%
DQ2	46%	100%	DR15	43%	100%	DP19	79%	100%	DP17	63%	100%
DQA1*05	14%	100%	DR16	43%	100%	DPw6	79%	100%	DP20	63%	100%
DR1404	14%	100%	DQ6	39%	33%	DP17	79%	80%	DPw4	52%	50%
DQ5	11%	100%	DQ5	32%	50%	DP11	78%	100%	DP402	41%	100%
DQ6	11%	50%	DR52	25%	100%	DP9	78%	100%	DR52	30%	67%
DR1403	7%	100%	DQ4	18%	100%	DP10	70%	100%	DR12	19%	50%
DR3	7%	100%	DP15	14%	100%	DP20	70%	100%	DQA1*02	15%	100%
DQ7	7%	40%	DQA1*02	11%	100%	DPw4	56%	67%	DQA1*05	15%	100%
			DQA1*03	11%	100%	DP402	44%	100%	DPA1*01	11%	100%
			DQA1*05	11%	100%	DPA1*02	30%	100%	DPA1*04	11%	100%
			DQA1*06	11%	100%	DP15	22%	100%	DPA1*02	7%	100%
						DPA1*01	15%	100%	DQ4	7%	25%
						DPA1*03	15%	100%			
						DPA1*04	15%	100%			

**Table 21. Summary of the 557<sup>th</sup> Serum Exchange (Serum #1221-1224) by various methods - class II**

Method: NIH-Extended															
<b>*** Serum 1221 ***</b>				<b>*** Serum 1222 ***</b>				<b>*** Serum 1223 ***</b>				<b>*** Serum 1224 ***</b>			
1 typing Lab				1 typing Lab				1 typing Lab				1 typing Lab			
Antigen	Consensus	Inclusion		Antigen	Consensus	Inclusion		Antigen	Consensus	Inclusion		Antigen	Consensus	Inclusion	
No specificities assigned				No specificities assigned				No specificities assigned				No specificities assigned			

Method: Flow Cytometry															
<b>*** Serum 1221 ***</b>				<b>*** Serum 1222 ***</b>				<b>*** Serum 1223 ***</b>				<b>*** Serum 1224 ***</b>			
1 typing Lab				1 typing Lab				1 typing Lab				1 typing Lab			
Antigen	Consensus	Inclusion		Antigen	Consensus	Inclusion		Antigen	Consensus	Inclusion		Antigen	Consensus	Inclusion	
No specificities assigned				No specificities assigned				No specificities assigned				No specificities assigned			

Method: C1q															
<b>*** Serum 1221 ***</b>				<b>*** Serum 1222 ***</b>				<b>*** Serum 1223 ***</b>				<b>*** Serum 1224 ***</b>			
1 typing Lab				1 typing Lab				1 typing Lab				1 typing Lab			
Antigen	Consensus	Inclusion		Antigen	Consensus	Inclusion		Antigen	Consensus	Inclusion		Antigen	Consensus	Inclusion	
No specificities assigned				No specificities assigned				No specificities assigned				No specificities assigned			

Method: Other															
<b>*** Serum 1221 ***</b>				<b>*** Serum 1222 ***</b>				<b>*** Serum 1223 ***</b>				<b>*** Serum 1224 ***</b>			
2 typing Labs				2 typing Labs				2 typing Labs				2 typing Labs			
Antigen	Consensus	Inclusion		Antigen	Consensus	Inclusion		Antigen	Consensus	Inclusion		Antigen	Consensus	Inclusion	
DR10	50%	100%		DQ7	50%	100%		DR11	50%	100%		DQ2	50%	100%	
DR11	50%	100%		DQ8	50%	100%		DR7	50%	100%		DR11	50%	100%	
DR12	50%	100%		DQ9	50%	100%		DR9	50%	100%		DR7	50%	100%	
DR13	50%	100%		DR1	50%	100%						DR9	50%	100%	
DR14	50%	100%		DR10	50%	100%									
DR17	50%	100%		DR15	50%	100%									
DR18	50%	100%		DR16	50%	100%									
DR7	50%	100%		DR4	50%	100%									
DR8	50%	100%		DR7	50%	100%									
DR9	50%	100%		DR9	50%	100%									



**Table 22. Individual laboratory results for Serum #1221-1224 by NIH-Standard and NIH-Extended - class I**

	**** Serum 1221 ****					**** Serum 1222 ****					**** Serum 1223 ****			**** Serum 1224 ****			
Investigator	% POS	A29	A6601		Other	% POS	A23	A24	B57	Other	% POS	B13	Other	% POS	B13	Other	Method
Fort, Marylise	15	+	+			8	+	+			NT			NT			STD
McCluskey, James	11					75					11			14			STD
Vasilescu, Rodica	18	+				30	+	+			10	+		10	+		STD
Watson, Narelle	5	+			Weak B13,B44	36	+	+	+	weak B44	6	+		3	+		STD

STD = Standard-NIH

	**** Serum 1221 ****					**** Serum 1222 ****					**** Serum 1223 ****			**** Serum 1224 ****			
Investigator	% POS	A29	A33	B75	Other	% POS	A23	A24	B13	Other	% POS	B13	Other	% POS	B13	Other	Method
Lardy, N.M.	25	+	+	+	B55,A74,B63	45	+	+	+	A25,B27	11	+		6	+		EXT
Reed, Elaine F. PhD	19	+				57	+	+		B49,B53,B38,B57	0			6	+		EXT

EXT = Extended-NIH

**Table 23. Individual laboratory results for Serum #1221-1224 by Antiglobulin and Other - class I**

Investigator	**** Serum 1221 ****								**** Serum 1222 ****								**** Serum 1223 ****								**** Serum 1224 ****					Method		
	% POS	A29	A1	B53	A36	B39	B49	Other	% POS	A23	A24	A32	A25	B57	Bw4	Other	% POS	B13	B7	B47	B60	B61	B81	B27	Other	% POS	B13	B41	A32		A25	Other
Cecka, J. Michael P	65	+	+	+	+		+	B75,B55,B56>	88	+	+	+	+	+	+	A2,B44,B51>	13	+	+	+	+	+	+	+	B41	42	+	+	+	+		AHG
Hahn, Amy B. PhD		+		+			+	B60,B22,B14>		+	+	+	+		+	A66		+	+	+	+	+	+	+			+				AHG	
Vasilescu, Rodica	20	+	+						33	+	+	+		+			23	+	+						B40	8	+				AHG	

AHG = Antiglobulin

Investigator	**** Serum 1221 ****								**** Serum 1222 ****								**** Serum 1223 ****								**** Serum 1224 ****					Method		
	% POS	A1	A26	A29	A30	A36	A80	Other	% POS	A2	A23	A24	A25	A32	A68	Other	% POS	B13	B60	B61	B7	B81			Other	% POS	B13	B18	B35		B37	Other
Liu, Chang MD, PhD	89								87								58									95						LMX Phenotype
Reed, Elaine F. PhD	78	+	+	+	+	+	+	B50,B55,B56>	80	+	+	+	+	+	+	A69,B57,B58	62	+	+	+	+	+				96	+	+	+	+	B41,B42,B44>	LMX PRA



**Table 25. Individual laboratory results for Serum #1222 by Luminex - class I**

**** Serum 1222 ****																																										
Investigator	% POS	A2	A23	A24	A25	A68	B37	B38	B44	B51	B52	B53	B57	B59	A32	A69	B49	B58	B63	B77	A1	B13	B27	A80	B47	B76	Cw2	Cw4	Cw15	Cw5	A43	Cw17	A29	Cw18	A34	B45	B54	Other	Method			
Al-Attas, Rabab A. M	Multi	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Cw6,Bw4	LMX
Arnold, Paula PhD		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A203,A2403	LMX
Bengochea, Carrette	34	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A203,A2403	LMX	
Cecka, J. Michael P	85	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Bw4	LMX	
Chen, Dong-Feng P		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Cw6,A203,B61,Cw14 >	LMX	
Colombe, Beth w. P	97	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Bw4	LMX	
Daniel, Dolly	31	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Cw6,A203,B60,B48 >	LMX	
Du, Keming	39	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A66,A31,A74,B46 >	LMX	
Dunckley, Heather	98	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Cw6,A203,A66,A2403 >	LMX	
Eckels/CPMC,		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Bw4,A2403,B2708,A6602	LMX	
Fort, Marylise		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Cw6,B61,A66,B82 >	LMX	
Gideoni, Osnat	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B60,B61,B48,B82 >	LMX	
Hahn, Amy B. PhD		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A66,B82,B41,B42 >	LMX	
Hamdi, Nuha	85	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Cw6,A66,A26,A33 >	LMX	
Hogan, Patrick	36	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A203,A2403	LMX	
Holdsworth, Rhonda		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Cw6,B60,B61,A66 >	LMX
Lardy, N.M.		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		LMX
Liu, Chang MD, PhD		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		LMX
Mayne, Elizabeth	34	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Cw403,A203,B15,Bw4 >	LMX	
McCluskey, James		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Cw6,B60,B61,A66 >	LMX
Pancoska, Carol Ph		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		LMX
Permpikul, Vejbaesy		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Cw7	LMX
Pule, Ziningi	28	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B15,Bw4,Bw6	LMX	
Reed, Elaine F. PhD		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A66	LMX
Sacchi, Nicoletta		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		LMX
V.Brouard, M.Tonye	76	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Cw6,A203,B40,Bw4 >	LMX
Vasilescu, Rodica		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Cw6,A203,B61,B82 >	LMX
Vather/JHB,		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Cw6,B61,A66,B82 >	LMX
Vather/Pinetown,		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Cw6,B61,A66,A26 >	LMX



**Table 27. Individual laboratory results for Serum #1224 by Luminex - class I**

		**** Serum 1224 ****																																													
Investigator	% POS	B13	A25	B45	B62	A32	B41	B72	B77	B61	B18	B60	B37	B44	B50	B75	B76	B47	B38	B35	B8	B53	B71	B78	B48	B49	B51	A74	B59	A29	A34	B64	B52	A33	A26	A31	A43	B39	A66	Other	Method						
Al-Attas, Rabab A. M	Multi	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A30,A68,A3,B65	LMX			
Arnold, Paula PhD		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B7801,B3901	LMX			
Bengochea, Carrette	51	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A11,B703,A30,A68 >	LMX			
Cecka, J. Michael P	36	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A11,B703,A30,A68 >	LMX			
Chen, Dong-Feng P		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A30,A68,A69,A3 >	LMX			
Colombe, Beth w. P	92	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A11,B703,A30,A68 >	LMX			
Daniel, Dolly	15	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A11,B703,A30,A68 >	LMX			
Du, Keming	31	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B7,B46	LMX			
Dunckley, Heather	98	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A11,A30,A68,A69 >	LMX		
Eckels/CPMC,		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A11,A30,A68,A69 >	LMX		
Fort, Marylise	NT																																											LMX			
Gideoni, Osnat	64	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B82,B54,B56,A80 >	LMX		
Hahn, Amy B. PhD		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A30,A68,A3	LMX	
Hamdi, Nuha	95	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A11,A30,A68,A69 >	LMX	
Hogan, Patrick	51	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A11,B7,B703,A30 >	LMX	
Holdsworth, Rhonda		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A11,A30,A68,A69 >	LMX	
Lardy, N.M.		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		LMX	
Liu, Chang MD, PhD		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		LMX	
Mayne, Elizabeth	41	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B40,B15,B7,B703 >	LMX		
McCluskey, James		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A11,A30,A68,A69 >	LMX	
Pancoska, Carol Ph		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A30,A68,A69,A3 >	LMX	
Permpikul, Vejbaesy		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A11,A30,A68,A69 >	LMX	
Pule, Ziningi	2	+				+																																						Bw4	LMX		
Reed, Elaine F. PhD		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A30,A68,A69,A3 >	LMX
Sacchi, Nicoletta		+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B27,B7,A69,B46	LMX	
V.Brouard, M.Tonye	11	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B7801,B3901	LMX	
Vasilescu, Rodica		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A30,A68,A69,A3 >	LMX	
Vather/JHB,		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A11,B82,B54,B67 >	LMX	
Vather/Pinetown,		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A11,B82,B54,B56 >	LMX	

**Table 28. Individual laboratory results for Serum #1221-#1224 by ELISA and C1q - class I**

Investigator	**** Serum 1221 ****										**** Serum 1222 ****										**** Serum 1223 ****					**** Serum 1224 ****					Method				
	% POS	A1	A2	A26	A29	A36	A68	A69	A80	Other	% POS	A23	A24	A25	A32	B38	B49	B51	B57	B53	B58	B59	B63	Others	% POS	B13	B61	B7	A11	Other		% POS	B13	B37	B48
Hahn, Amy B. PhD		+	+	+	+	+	+	+	+	B35,B41>		+	+	+	+	+	+	+	+	+	+	+	A2,A68,A69>		+	+	+	+	B27,B42>		+	+	+		Elisa

Investigator	**** Serum 1221 ****										**** Serum 1222 ****										**** Serum 1223 ****					**** Serum 1224 ****					Method					
	% POS										% POS													% POS												
Eckels/CPMC,	97										97													96												FC

FC = Flow Cytometry

Investigator	**** Serum 1221 ****										**** Serum 1222 ****										**** Serum 1223 ****					**** Serum 1224 ****					Method				
	% POS	A1	A29	A36	B75	A30	A43	B56		Other	% POS	A23	A24	A25	A32	B38	B49	B51	B53	B57	B58	B59	B63	Other	% POS	B13	B81	B7		Other		% POS	B13		
Colombe, Beth W. F	39	+	+	+	+	+	+	+			89	+	+	+	+	+	+	+	+	+	+	+	A2,A68,A69 >	5	+	+				4	+				C1q
Liu, Chang MD, PhD		+	+	+	+							+	+	+	+	+	+	+	+	+	+	+				+	+	+							C1q

**Table 29. Individual laboratory results for Serum #1221 by Luminex - class II**

**** Serum 1221 ****																		
Investigator	% POS	DR10	DR11	DR13	DR14	DR8	DR9	DR12	DR17	DR18	DR53	DR52	DR7	DQ2	DQA1*05	DR1404	Other	Method
Al-Attas, Rabab A. M	Multi	+	+	+	+	+	+	+	+	+	+	+	+	+				LMX
Arnold, Paula PhD		+	+	+	+	+	+	+	+	+	+	+	+	+				LMX
Bengochea, Carrette	22	+	+	+	+	+	+	+	+	+	+	+	+	+		+		LMX
Cecka, J. Michael P	86	+	+	+	+	+	+	+	+	+	+	+	+	+				LMX
Chen, Dong-Feng P		+	+	+	+	+	+	+	+	+	+	+	+	+				LMX
Colombe, Beth W. F	93	+	+	+	+	+	+	+	+	+	+	+	+	+				LMX
Daniel, Dolly	26	+	+	+	+	+	+	+	+	+	+	+	+	+		+	DR1403,DQ5,DQ7,DQ8 >	LMX
Du, Keming	19	+	+	+	+	+	+	+	+	+	+	+	+	+				LMX
Dunckley, Heather	93	+	+	+	+	+	+	+	+	+	+	+	+	+	+			LMX
Eckels/CPMC,		+	+	+	+	+	+	+	+	+	+	+	+	+				LMX
Fort, Marylise		+	+	+	+	+	+	+	+	+	+	+	+	+				LMX
Gideoni, Osnat	67	+	+	+	+	+	+		+	+								LMX
Hahn, Amy B. PhD		+	+	+	+	+	+	+	+	+	+	+	+	+				LMX
Hamdi, Nuha	91%	+	+	+	+	+	+	+	+	+	+	+	+	+			DQ5,DQ7,DQ9,DQ6	LMX
Hogan, Patrick	35	+	+	+	+	+	+	+	+	+	+	+				+	DR1403	LMX
Holdsworth, Rhonda		+	+	+	+	+	+	+	+	+	+	+	+	+				LMX
Liu, Chang MD, PhD		+	+	+	+	+	+	+	+	+	+	+						LMX
Loewenthal , Ron M	24	+	+	+	+	+	+	+	+				+					LMX
Mayne, Elizabeth	22	+	+	+	+	+	+	+	+	+	+	+	+	+		+	DR3	LMX
McCluskey, James		+	+	+	+	+	+	+	+	+	+	+	+	+				LMX
Pancoska, Carol Ph		+	+	+	+	+	+	+	+	+	+	+	+	+				LMX
Permpikul, Vejbaesy		+	+	+	+	+	+	+	+	+	+	+			+			LMX
Pule, Ziningi	24	+	+	+	+	+	+						+	+			DR1,DR2,DR3	LMX
Reed, Elaine F. PhD		+	+	+	+	+	+	+	+	+	+	+	+					LMX
Sacchi, Nicoletta		+	+	+	+	+	+	+	+	+	+	+						LMX
V.Brouard, M.Tonye	89	+	+	+	+	+	+	+	+	+	+	+	+					LMX
Vather/JHB,		+	+	+	+	+	+	+	+	+	+	+	+	+	+		DQA1*04	LMX
Vather/Pinetown,		+	+	+	+	+	+	+	+	+	+	+	+	+	+		DQ5,DQ6,DP11,DP15	LMX



**Table 30. Individual laboratory results for Serum #1222 by Luminex - class II**

**** Serum 1222 ****																						
Investigator	% POS	DR4	DR53	DR9	DR10	DQ9	DQ7	DQ8	DR7	DR103	DR1	DR51	DQ2	DR15	DR16	DQ6	DQ5	DR52	DQ4	Other	Method	
Al-Attas, Rabab A. M	Multi	+	+	+	+	+	+	+														LMX
Arnold, Paula PhD		+	+	+	+	+	+	+														LMX
Bengochea, Carrette	6	+	+	+	+	+		+					+				+			+		LMX
Cecka, J. Michael P	26	+																				LMX
Chen, Dong-Feng P		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+						LMX
Colombe, Beth W. F	64	+	+			+	+															LMX
Daniel, Dolly	9	+	+	+	+	+	+		+	+	+	+	+					+	+	DR8		LMX
Du, Keming	22	+	+	+	+	+	+	+					+				+	+				LMX
Dunckley, Heather	96	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+						LMX
Eckels/CPMC,		+	+	+	+	+	+	+	+	+	+	+										LMX
Fort, Marylise		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			LMX
Gideoni, Osnat	47	+					+															LMX
Hahn, Amy B. PhD		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+		DR8,DP9,DP10,DP15		LMX
Hamdi, Nuha	34%	+	+	+	+	+	+	+					+				+	+				LMX
Hogan, Patrick	16	+	+	+	+				+				+									LMX
Holdsworth, Rhonda		+	+	+	+	+	+	+	+	+	+	+		+	+	+	+				DQA1*02, DQB1*06:02	LMX
Liu, Chang MD, PhD		+	+	+		+	+	+														LMX
Loewenthal , Ron M	14	+		+	+				+					+	+						DR2	LMX
Mayne, Elizabeth	11	+	+	+									+									LMX
McCluskey, James		+	+	+	+	+	+	+	+	+	+	+		+	+						DP15,DQA1*02,DQB1*06:02,DQB1*05:02,DRB3*01:01,DRB3*02:02,DQB1*06:04	LMX
Pancoska, Carol Ph		+	+	+	+	+	+	+	+	+	+	+		+	+							LMX
Permpikul, Vejbaesy		+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+			DQA1*03,DQA1*05,DQA1*06	LMX
Pule, Ziningi	6	+																				LMX
Reed, Elaine F. PhD		+	+	+	+	+	+	+	+	+												LMX
Sacchi, Nicoletta		+	+																			LMX
V.Brouard, M.Tonye	34	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			DP15	LMX
Vather/JHB,		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		DPW1,DP15,DQA1*01,DQA1*02 >	LMX
Vather/Pinetown,		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		DQA1*01,DQA1*03,DQA1*04,DQA1*05 >	LMX

**Table 31. Individual laboratory results for Serum #1223 by Luminex - class II**

**** Serum 1223 ****																											
Investigator	% POS	DR11	DR7	DPw3	DP18	DP28	DPw1	DPw5	DR9	DR53	DP13	DPw2	DP14	DP19	DPw6	DP17	DP11	DP9	DP10	DP20	DPw4	DP402	DP1*02	DP15	Other	Method	
Al-Attas, Rabab A. M	Multi	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		LMX
Arnold, Paula PhD		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		LMX
Bengochea, Carrette	24	+	+	+	+		+	+	+	+	+	+	+	+								+	+				LMX
Cecka, J. Michael P	57	+	+	+	+	+				+		+	+		+	+		+	+	+	+						LMX
Chen, Dong-Feng P		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+		DPA1*01,DPA1*03,DPA1*04	LMX
Colombe, Beth W. F	63	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+				LMX
Daniel, Dolly	27	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+		+			LMX
Du, Keming	31	+	+	+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+					LMX
Dunckley, Heather	78	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+					LMX
Eckels/CPMC,		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+				LMX
Fort, Marylise	NT																										LMX
Gideoni, Osnat	33	+	+						+																		LMX
Hahn, Amy B. PhD		+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+					DR4	LMX
Hamdi, Nuha	91%	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+				DR14,DQ5	LMX
Hogan, Patrick	31	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			+	+	+	+		LMX
Holdsworth, Rhonda		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	DPB1*04:02	LMX
Liu, Chang MD, PhD		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+					LMX
Loewenthal , Ron M	31	+							+																	DR1	LMX
Mayne, Elizabeth	30	+	+	+	+	+	+	+	+	+	+	+	+	+		+						+	+	+			LMX
McCluskey, James		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		LMX
Pancoska, Carol Ph		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+					LMX
Permpikul, Vejbaesy		+	+	+	+	+	+	+	+	+	+				+	+							+			DPA1*01,DPA1*03,DPA1*04	LMX
Pule, Ziningi	10		+																								LMX
Reed, Elaine F. PhD		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+				LMX
Sacchi, Nicoletta		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+					LMX
V.Brouard, M.Tonye	94	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+					LMX
Vather/JHB,		+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	DPA1*01,DPA1*03,DPA1*04	LMX
Vather/Pinetown,		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	DPA1*01,DPA1*03,DPA1*04	LMX

**Table 32. Individual laboratory results for Serum #1224 by Luminex - class II**

**** Serum 1224 ****																						
Investigator	% POS	DR7	DR9	DR11	DP28	DQ2	DPw2	DPw3	DP18	DPw6	DP14	DP9	DP10	DP17	DP20	DPw4	DP402	DR52	DR12	Other	Method	
Al-Attas, Rabab A. M	Multi	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+					LMX
Arnold, Paula PhD		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+					LMX
Bengochea, Carrette	26	+	+	+	+	+	+	+	+		+			+		+		+	+			LMX
Cecka, J. Michael P	31	+	+																			LMX
Chen, Dong-Feng P		+	+	+	+	+	+	+	+	+	+	+	+	+	+		+					LMX
Colombe, Beth W. F	56	+	+	+	+	+	+	+	+	+		+	+		+		+					LMX
Daniel, Dolly	15	+	+	+	+	+	+	+	+	+		+				+		+				LMX
Du, Keming	9	+	+		+	+		+	+							+						LMX
Dunckley, Heather	66	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+						LMX
Eckels/CPMC,		+	+	+	+	+	+	+	+	+	+	+	+	+	+		+					LMX
Fort, Marylise	NT																					LMX
Gideoni, Osnat	40	+	+	+		+																LMX
Hahn, Amy B. PhD		+	+	+	+	+	+		+			+	+		+							LMX
Hamdi, Nuha	51%	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	DQ4,DQ7,DQ9		LMX
Hogan, Patrick	21	+	+	+	+	+	+	+	+	+	+	+		+		+	+					LMX
Holdsworth, Rhonda		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	DQA1*02,DPB1*04:02		LMX
Liu, Chang MD, PhD		+	+	+	+	+	+	+	+	+	+	+	+	+	+		+					LMX
Loewenthal , Ron M	8	+	+	+																		LMX
Mayne, Elizabeth	18	+	+	+	+	+	+	+	+		+			+		+		+				LMX
McCluskey, James		+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+		DQA1*02		LMX
Pancoska, Carol Ph		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+						LMX
Permpikul, Vejbaesy		+	+	+	+	+	+	+	+	+			+		+	+				DPA1*01,DPA1*02,DPA1*04,DQA1*05		LMX
Pule, Ziningi	12	+	+	+																		LMX
Reed, Elaine F. PhD		+	+	+	+	+	+	+	+	+	+	+	+	+	+		+					LMX
Sacchi, Nicoletta		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+						LMX
V.Brouard, M.Tonye	34	+	+		+	+														DQA1*05		LMX
Vather/JHB,		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	DQ4,DPA1*01,DPA1*02,DPA1*03 >		LMX
Vather/Pinetown,		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	DPA1*01,DPA1*04,DQA1*02,DQA1*05		LMX

**Table 33. Individual laboratory results for Serum #1224 by various methods - class II**

Investigator	**** Serum 1221 ****										**** Serum 1222 ****										**** Serum 1223 ****					**** Serum 1224 ****					Method
	% POS										% POS										% POS				% POS				Other		
Reed, Elaine F. PhD	19										57										5				11					EXT	
Eckels/CPMC,	97										97										96				99					FC	
Colombe, Beth W. F	0										0										1				0					C1q	

EXT = NIH-Extended

FC = Flow Cytometry

Investigator	**** Serum 1221 ****												**** Serum 1222 ****										**** Serum 1223 ****					**** Serum 1224 ****					Method			
	% POS	DR10	DR11	DR12	DR13	DR14	DR17	DR18	DR7	DR8	DR9	Other	% POS	DQ7	DQ8	DQ9	DR1	DR10	DR15	DR16	DR4	DR7	DR9	Other	% POS	DR11	DR7	DR9	Other	% POS	DQ2	DR11		DR7	DR9	Other
Liu, Chang MD, PhD	91											37													94					49						LMX Phenotype
Reed, Elaine F. PhD	80	+	+	+	+	+	+	+	+	+	+	83	+	+	+	+	+	+	+	+	+	+	+	33	+	+	+		40	+	+	+	+		LMX PRA	