

REPORT OF THE 423rd CELL EXCHANGE

AUGUST 4, 2021

B-cell Line	587 - 588
Cells	1689 - 1692
Serum	1317 - 1320

B-CELL LINE EXCHANGE #294

The results for B-cell Line Exchange #294 are summarized in Tables 1 - 2 and individual laboratory results reported for each sample are listed in Tables 3 - 6. We would like to express our appreciation to Leiden University Medical Center, the Netherlands, for generously sharing the interesting cells

examined in this study. We would like to also acknowledge and thank the labs performing NGS for sharing their findings and encourage other NGS labs to do so as well. Haplotype frequencies used in this report are from the NMDP Bioinformatics website, <https://bioinformatics.bethematchclinical.org/>.

Ter-587. The reported HLA type for this cell from a Caucasian donor was A*02:01-A*24:02-B*07:02-B*13:02-C*06:02-C*07:02-DRB1*07:01-DRB1*11:19-DRB3*02:02-DRB4*01:03-DQA1*02:01-DQA1*05:05-DQB1*02:02-DQB1*03:01-DPA1*01:03-DPB1*02:01-DPB1*04:01. This cell was previously examined as Ter 544 (2017), Ter 502 (2014), Ter 408 (2008), and Ter 297 (2002). In this present retyping, good agreement (> 90%) was achieved for all allele assignments.

One possible haplotype present in this cell was A*02:01-B*13:02-C*06:02-DRB1*07:01-DRB4*01:03-DQA1*02:01-DQB1*02:02-DPA1*01:03. The association of A*02:01-B*13:02-C*06:02 was observed in Caucasians, with HF = 0.00818. The other association likely present was A*24:02-B*07:02-C*07:02-DRB1*11:19-DRB3*02:02-DQA1*05:05-DQB1*03:01-DPA1*01:03. A*24:02-B*07:02-C*07:02 was observed commonly in Caucasians, with HF = 0.01472.

References

1. Verduyn W, Anholts JD, Versluis LF, Parlevliet J, Drabbels J, De Meester J, Tilanus MG, Doxiadis II, Giphart MJ, Schreuder GM. Six newly identified HLA-DRB alleles: DRB1*1121, *1419, *1420, *1421, DRB3*0203 and DRB5*0103. *Tissue Antigens*. 1996 Aug;48(2):80-6.
2. Schell A, Leisenbach R, Coman C, Parissiadis A, Tourne S. A new HLA-B*15 allele, B*15:220, found in three individuals sharing the HLA-A*66:01, HLA-C*12:03 and HLADRB1*07:01 alleles. *Tissue Antigens*. 2011 Oct;78(4):287-8.

Ter-588 The reported HLA type for this cell from a Caucasian donor was A*02:01-A*03:01-B*15-B*35:03-C*04:01-C*12:03-DRB1*04:03-DRB1*11:21-DRB3*02:02-DRB4*01:03-DQA1*03:01-DQA1*05:05-DQB1*03:01-DQB1*03:02-DPA1*01:03-DPB1*02:01-DPB1*04:02. This cell was examined previously as Ter 435 (2010), Ter 350 (2004), Ter 251 (1999), and extract 110 (1999). It was one of the reference cells for DRB1*11:21. Its primary name was MUL (1).

In this most recent study, good agreement was achieved for all allele assignments, except B*15. Sixteen labs assigned B*15:220, 4 labs assigned B*15:03, and 1 lab assigned B*15:03P. When examined as extract 110 in 1999, 68% (30/44) of labs reporting at high resolution assigned B*15:03. B*15:220 differs from B*15:03 in exon 1 by a single nucleotide substitution at position 47 (GCC → GTC), resulting in amino acid change from alanine to valine. B*15:220 is expressed serologically as B70 (2).

One likely association present was A*02:01-B*15:220-C*04:01-DRB1*04:03-DRB4*01:03-DQB1*03:02. This same association was observed in KW10593, a reference cell for B*15:220. The other likely association present was A*03:01-B*35:03-DRB1*11:21-DQB1*03:01. The A*03:01-B*35:03 association present in this cell was observed in Caucasians, with HF = 0.00398.

Table 1: Summary of the 294th B-cell Line Exchange

Ter-587																			
DNA Typing - class II	<u>24 labs High; 22 labs low-DRB1</u>		%(n)	<u>18 labs High; 16 labs Low-DRB3/4/5</u>		%(n)	<u>19 labs High; 19 labs Low-DQA1</u>		%(n)	<u>23 labs High; 21 labs Low-DQB1</u>		%(n)	<u>15 labs High; 10 labs Low-DPA1</u>		%(n)	<u>22 labs High; 12 labs Low-DPB1</u>		%(n)	
	DRB1*07:01:01	29(7)		DRB3*02:02:01	17(3)		DQA1*02:01:01	21(4)		DQB1*02:02:01	22(5)		DPA1*01:03:01	27(4)		DPB1*02:01:02	27(6)		
	DRB1*07:01	67(16)		DRB3*02:02	83(15)		DQA1*02:01	79(15)		DQB1*02:02	78(18)		DPA1*01:03:01G	7 (1)		DPB1*02:01:02G	9 (2)		
	DRB1*07:01P	4 (1)		DRB3*02	81(13)		DQA1*02	100(19)		DQB1*02	100(21)		DPA1*01:03	66(10)		DPB1*02:01	64(14)		
	DRB1*07	100(22)		DRB3*PRESENT	19(3)								DPA1*01	100(10)		DPB1*02(DP201)	42(5)		
																DPB1*02	58(7)		
DNA Typing - class I	<u>19 labs High; 17 labs low- A</u>		%(n)	<u>19 labs High; 17 labs low- B</u>		%(n)	<u>19 labs High; 17 labs low- C</u>		%(n)										
	A*02:01:01:01	5 (1)		B*07:02:01:01	5 (1)		C*06:02:01:01	5 (1)											
	A*02:01:01	26(5)		B*07:02:01	26(5)		C*06:02:01	26(5)											
	A*02:01P	5 (1)		B*07:02P	5 (1)		C*06:02P	5 (1)											
	A*02:01	63(12)		B*07:02	63(12)		C*06:02	63(12)											
	A*02	100(17)		B*07	100(17)		C*06	100(17)											

Table 2: Summary of the 294th B-cell Line Exchange

Ter-588

DNA Typing - class II		<u>24 labs High; 23 labs low-DRB1</u>		<u>18 labs High; 17 labs Low-DRB3/4/5</u>		<u>20 labs High; 20 labs Low-DQA1</u>		<u>24 labs High; 22 labs Low-DQB1</u>		<u>15 labs High; 10 labs Low-DPA1</u>		<u>23 labs High; 13 labs Low-DPB1</u>	
		%(n)		%(n)		%(n)		%(n)		%(n)		%(n)	
DNA Typing - class II	DRB1*04:03:01	29(7)	DRB3*02:02:01	17 (3)	DQA1*03:01:01	20(4)	DQB1*03:01:01	17(4)	DPA1*01:03:01	27(4)	DPB1*02:01:02	17(4)	
	DRB1*04:03	71(17)	DRB3*02:02	83(15)	DQA1*03:01	80(16)	DQB1*03:01:01G	4 (1)	DPA1*01:03:01G	7 (1)	DPB1*02:01:02G	17(4)	
	DRB1*04	100(23)	DRB3*02	88(15)	DQA1*03	100(20)	DQB1*03:01	79(19)	DPA1*01:03	66(10)	DPB1*02:01P	4 (1)	
				DRB3*PRESENT	12(2)			DQB1*03(DQ7)	5 (1)	DPA1*01	100(10)	DPB1*02:01	61(14)
								DQB1*03	95(21)			DPB1*02(DP201)	46(6)
												DPB1*02	54(7)
DNA Typing - class I		<u>19 labs High; 18 labs low- A</u>		<u>21 labs High; 18 labs low- B</u>		<u>19 labs High; 18 labs low- C</u>		<u>24 labs High; 22 labs Low-DQB1</u>		<u>15 labs High; 10 labs Low-DPA1</u>		<u>23 labs High; 13 labs Low-DPB1</u>	
		%(n)		%(n)		%(n)		%(n)		%(n)		%(n)	
DNA Typing - class I	A*02:01:01:01	5 (1)	B*15:220:01:01	5 (1)	C*04:01:01:14	5 (1)	DQB1*03:02:01	21(5)	DPA1*01:03:01	27(4)	DPB1*04:02:01	17(4)	
	A*02:01:01	26(5)	B*15:220	71(15)	C*04:01:01	26(5)	DQB1*03:02	79(19)	DPA1*01:03:01G	7 (1)	DPB1*04:02:01G	17(4)	
	A*02:01P	5 (1)	B*15:03P	5 (1)	C*04:01P	5 (1)	DQB1*03:01	79(19)	DPA1*01:03	66(10)	DPB1*04:02P	4 (1)	
	A*02:01	63(12)	B*15:03	19(4)	C*04:01	63(12)	DQB1*03(DQ8)	5 (1)	DPA1*01	100(10)	DPB1*04:02	57(13)	
	A*02	100(18)	B*15	83(15)	C*04	100(18)	DQB1*03	95(21)			<i>DPB1*04:01</i>	4 (1)	
				B*15(B70)	11(2)						DPB1*04(DP402)	54(7)	
				B*15(B72)	6 (1)						DPB1*04	46(6)	
DNA Typing - class I		<u>19 labs High; 18 labs low- A</u>		<u>21 labs High; 18 labs low- B</u>		<u>19 labs High; 18 labs low- C</u>		<u>24 labs High; 22 labs Low-DQB1</u>		<u>15 labs High; 10 labs Low-DPA1</u>		<u>23 labs High; 13 labs Low-DPB1</u>	
		%(n)		%(n)		%(n)		%(n)		%(n)		%(n)	
DNA Typing - class I	A*03:01:01:01	5 (1)	B*35:03:01:03	5 (1)	C*12:03:01:32	5 (1)	DQB1*03:02:01	21(5)	DPA1*01:03:01	27(4)	DPB1*04:02:01	17(4)	
	A*03:01:01	26(5)	B*35:03:01	26(5)	C*12:03:01	26(5)	DQB1*03:02	79(19)	DPA1*01:03:01G	7 (1)	DPB1*04:02:01G	17(4)	
	A*03:01P	5 (1)	B*35:03P	5 (1)	C*12:03P	5 (1)	DQB1*03:01	79(19)	DPA1*01:03	66(10)	DPB1*04:02P	4 (1)	
	A*03:01	63(12)	B*35:03	63(12)	C*12:03	63(12)	DQB1*03(DQ8)	5 (1)	DPA1*01	100(10)	DPB1*04:02	57(13)	
	A*03	100(18)	B*35	100(18)	C*12	100(18)	DQB1*03	95(21)			<i>DPB1*04:01</i>	4 (1)	
											DPB1*04(DP402)	54(7)	
											DPB1*04	46(6)	

Table 3a: Individual laboratory results for B-cell #587 - Class II

Low resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
278	*07	*11	3*02	4*01	*02	*05	*02	*03	*01	*01	*02	*04	SSP SSO	
725	*07	*11	3*PRESENT	4*PRESENT	*02	*05	*02	*03					SSP SSO	
747	*07	*11	3*02	4*01	*02	*05	*02	*03	*01	*01	*02	*04	SSP SSO NGS	
774	*07	*11	3*02	4*01	*02	*05	*02	*03			*02(DP201)	*04(DP401)	SSP SSO	
792	*07	*11	3*02	4*01	*02	*05	*02	*03	*01	*01	*02	*04	SSO NGS	
793	NT												SSP	
794	*07	*11	3*02	4*01	*02	*05	*02	*03	*01		*02	*04	SSP SSO NGS	
2400	*07	*11	3*02	4*01	*02	*05	*02	*03			*02	*04	RT-PCR	
2847	*07	*11											SSO NGS	
2847	*07	*11											SSO	
3519	*07	*11	3*02	4*01	*02	*05	*02	*03	*01		*02(DP201)	*04(DP401)	RT-PCR	
3753	*07	*11	3*PRESENT	4*PRESENT	*02	*05	*02	*03	*01	*01	*02	*04(DP401)	SSO	
4079	*07	*11	3*02	4*01	*02	*05	*02	*03	*01		*02(DP201)	*04(DP401)	SSO	
5130	*07	*11	3*02	4*01	*02	*05	*02	*03			*02	*04	SSO NGS	
5214	*07	*11	3*02	4*01	*02	*05	*02	*03(DQ7)	*01		*02(DP201)	*04(DP401)	RT-PCR	
5219	*07	*11			*02	*05	*02	*03					SSO NGS	
5451	*07	*11	3*02	4*01	*02	*05	*02	*03					SSO SBT	
5462	*07	*11	3*02	4*01	*02	*05	*02	*03	*01		NT	NT	RT-PCR	
5642	*07	*11	3*PRESENT	4*PRESENT			*02	*03					SSP	
6649	*07	*11					*02	*03					SSO	
8029	*07	*11			*02	*05	*02	*03					SSO	
8043	*07	*11			*02	*05	*02	*03					SSP SSO	
8068	*07	*11			*02	*05	*02	*03					SSO	
8123	*07	*11	3*02	4*01	*02	*05	*02	*03	*01	*01	*02(DP201)	*04(DP401)	RT-PCR	

Table 3b: Individual laboratory results for B-cell #587 - Class II

High resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
230	*07:01	*11:19	3*02:02	4*01:03	*02:01	*05:05	*02:02	*03:01	*01:03	*01:03	*02:01	*04:01	SSO NGS	
278	*07:01	*11:19	3*02:02	4*01:03	*02:01	*05:05	*02:02	*03:01	*01:03	*01:03	*02:01	*04:01	SSP SSO	
747	*07:01:01	*11:19:01	3*02:02:01	4*01:03:01	*02:01:01	*05:05:01	*02:02	*03:01	*01:03:01	*01:03:01	*02:01:02	*04:01:01	SSP SSO NGS	DQB1*03:297 DQB1*03:419 DQB1*02:156
762	*07:01	*11:19	3*02:02	4*01:03	*02:01	*05:05	*02:02	*03:01	*01:03		*02:01	*04:01	NGS	
774	*07:01	*11:19	3*02:02	4*01:03	*02:01	*05:05	*02:02	*03:01			*02:01	*04:01	SSP SSO	DRB1*07:31 DRB1*07:33 DRB1*07:35
792	*07:01	*11:19	3*02:02	4*01:03	*02:01	*05:05	*02:02	*03:01	*01:03	*01:03	*02:01	*04:01	SSO NGS	
793													SSP	
794	*07:01:01	*11:19:01	3*02:02	4*01:03:01	*02:01:01	*05:05:01	*02:02:01	*03:01:01	*01:03:01		*02:01:02	*04:01:01	SSP SSO NGS RT-PCR	
2344	*07:01:01	*11:19:01	NT	NT	NT	NT	*02:02:01	*03:01:01	NT	NT	*02:01:02	*04:01:01	NGS	
2400	*07:01	*11:19	3*02:02	4*01:03	*02:01	*05:05	*02:02	*03:01			*02:01:02G	*04:01:01G	SSO NGS	DQB1*03:419 DQB1*02:156 DQB1*02:163N DQB1*03:297
3135	*07:01P	*11:19	3*02:02	4*01:03	*02:01	*05:05	*02:02	*03:01	*01:03		*02:01	*04:01		DQA1*05:09
3224	*07:01	*11:19	3*02:02	4*01:03	*02:01	*05:05	*02:02	*03:01	*01:03		*02:01	*04:01	NGS	
3511	*07:01	*11:19	3*02:02	4*01:03	*02:01	*05:05	*02:02	*03:01	*01:03	*01:03	*02:01	*04:01	SSP SSO	
3519	*07:01	*11:19	3*02:02	4*01:03	*02:01	*05:05	*02:02	*03:01	*01:03		*02:01	*04:01	SSP NGS RT-PCR	
4337	*07:01	*11:19					*02:02	*03:01			*02:01	*04:01	SSP SBT NGS	
5130	*07:01	*11:19	3*02:02	4*01:03	*02:01	*05:05	*02:02	*03:01			*02:01	*04:01	SSO NGS	
5133	*07:01:01	*11:19:01	3*02:02:01	4*01:03:01	*02:01:01	*05:05:01	*02:02:01	*03:01:01	*01:03:01		*02:01:02	*04:01:01	NGS	
5214											*02:01:02G	*04:01:01G	RT-PCR	
5219	*07:01:01	*11:19:01					*02:02:01	*03:01:01			*02:01:02	*04:01:01	SSO NGS	
5451	*07:01:01	*11:19:01											SSO SBT	
5488	*07:01:01	*11:19:01	3*02:02:01	4*01:03:01	*02:01:01	*05:05:01	*02:02:01	*03:01:01G	*01:03:01		*02:01:02	*04:01:01	SSO SBT NGS	
5642	*07:01	*11:19					*02:02	*03:01					SSP	
8021	*07:01	*11:19	3*02:02	4*01:03	*02:01	*05:05	*02:02	*03:01	*01:03		*02:01	*04:01	SSO NGS	
8043	*07:01	*11:19			*02:01	*05:05	*02:02	*03:01					SSP SSO	
8086	*07:01	*11:19	3*02:02	4*01:03	*02:01	*05:05	*02:02	*03:01	*01:03:01G	*01:03:01G	*02:01	*04:01		
8122	*07:01	*11:19	3*02:02	4*01:03	*02:01	*05:05	*02:02	*03:01	*01:03	*01:03	*02:01	*04:01	NGS	DPB1*939:01
8123								*03:01					RT-PCR	

Table 4: Individual laboratory results for B-cell #587- Class I

Table 4: Individual laboratory results for B-cell #587- Class I														
Center	Low resolution						High resolution						METHOD	Other Alleles
	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
230							*02:01	*24:02	*07:02	*13:02	*06:02	*07:02	SSO NGS	
278	*02	*24	*07	*13	*06	*07	*02:01	*24:02	*07:02	*13:02	*06:02	*07:02	SSP SSO	
725	*02	*24	*07	*13	*06	*07							SSP SSO	
747							*02:01:01	*24:02:01	*07:02:01	*13:02:01	*06:02:01	*07:02:01	SSP SSO NGS	
774	*02	*24	*07	*13	*06	*07							SSP SSO	
792	*02	*24	*07	*13	*06	*07	*02:01	*24:02	*07:02	*13:02	*06:02	*07:02	SSO NGS	A*02:01:01:02L
793	NT												SSP	
794	*02	*24	*07	*13	*06	*07	*02:01:01	*24:02:01	*07:02:01	*13:02:01	*06:02:01	*07:02:01	SSP SSO NGS RT-PCR	
2344							*02:01:01	*24:02:01	*07:02:01	*13:02:01	*06:02:01	*07:02:01	NGS	
2400	*02	*24	*07	*13	*06	*07	*02:01	*24:02	*07:02	*13:02	*06:02	*07:02	SSO NGS	
2847	*02	*24	*07	*13	*06	*07							SSO	
3135							*02:01P	*24:02P	*07:02P	*13:02P	*06:02P	*07:02P		
3224							*02:01	*24:02	*07:02	*13:02	*06:02	*07:02	NGS	
3511							*02:01	*24:02	*07:02	*13:02	*06:02	*07:02	SSP SSO SSP NGS RT-PCR	
3519	*02	*24	*07	*13	*06	*07	*02:01	*24:02	*07:02	*13:02	*06:02	*07:02	SSO	
3753	*02	*24	*07	*13	*06	*07							SSO	
4079	*02	*24	*07	*13	*06	*07							SSO	
4337							*02:01	*24:02	*07:02	*13:02	*06:02	*07:02	SSP SBT NGS	
5130	*02	*24	*07	*13	*06	*07	*02:01	*24:02	*07:02	*13:02	*06:02	*07:02	SSO NGS	
5133							*02:01:01:01	*24:02:01:01	*07:02:01:01	*13:02:01:01	*06:02:01:01	*07:02:01:03	NGS	
5214	*02	*24	*07	*13	*06	*07							RT-PCR	
5219	*02	*24	*07	*13	*06	*07	*02:01:01	*24:02:01	*07:02:01	*13:02:01	*06:02:01	*07:02:01	SSO NGS	
5462	*02	*24	*07	*13	*06	*07							RT-PCR	
5488							*02:01:01	*24:02:01	*07:02:01	*13:02:01	*06:02:01	*07:02:01	SSO SBT NGS	
8021							*02:01	*24:02	*07:02	*13:02	*06:02	*07:02	SSO NGS	
8029	*02	*24	*07	*13	*06	*07							SSO	
8068	*02	*24	*07	*13	*06	*07							SSO	
8086							*02:01	*24:02	*07:02	*13:02	*06:02	*07:02		
8122							*02:01	*24:02	*07:02	*13:02	*06:02	*07:02	NGS	
8123	*02	*24	*07	*13	*06	*07							RT-PCR	

Table 5a: Individual laboratory results for B-cell #588 - Class II

Low resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
278	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*01	*02	*04	SSP SSO	
725	*04	*11	3*PRESENT	4*PRESENT	*03	*05	*03	*03					SSP SSO	
747	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*01	*02	*04	SSP SSO NGS	
774	*04	*11	3*02	4*01	*03	*05	*03	*03			*02(DP201)	*04(DP402)	SSP SSO	
792	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*01	*02	*04	SSO NGS	
793	*04	*11	3*02	4*01	*03	*05	*03	*03			*02(DP201)	*04(DP402)	SSP	
794	*04	*11	3*02	4*01	*03	*05	*03		*01		*02	*04	SSP SSO NGS RT-PCR	
2400	*04	*11	3*02	4*01	*03	*05	*03	*03			*02	*04	SSO NGS	
2847	*04	*11											SSO	
3519	*04	*11	3*02	4*01	*03	*05	*03		*01		*02(DP201)	*04(DP402)	SSP NGS RT-PCR	
3753	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*01	*02	*04(DP402)	SSO	
4079	*04	*11	3*02	4*01	*03	*05	*03	*03	*01		*02(DP201)	*04(DP402)	SSO	
5130	*04	*11	3*02	4*01	*03	*05	*03	*03			*02	*04	SSO NGS	
5214	*04	*11	3*02	4*01	*03	*05	*03(DQ7)	*03(DQ8)	*01		*02(DP201)	*04(DP402)	RT-PCR	
5219	*04	*11			*03	*05	*03	*03					SSO NGS	
5451	*04	*11	3*02	4*01	*03	*05	*03	*03					SSO SBT	
5462	*04	*11	3*02	4*01	*03	*05	*03	*03	*01		NT	NT	RT-PCR	
5642	*04	*11	3*PRESENT	4*PRESENT			*03	*03					SSP	
6649	*04	*11					*03	*03					SSO	
8029	*04	*11			*03	*05	*03	*03					SSO	
8043	*04	*11			*03	*05	*03	*03					SSP SSO	
8068	*04	*11			*03	*05	*03	*03					SSO	
8123	*04	*11	3*02	4*01	*03	*05	*03	*03	*01	*01	*02(DP201)	*04(DP402)	RT-PCR	

Table 5b: Individual laboratory results for B-cell #588 - Class II

High resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
230	*04:03	*11:21	3*02:02	4*01:03	*03:01	*05:05	*03:01	*03:02	*01:03	*01:03	*02:01	*04:02	SSO NGS	
278	*04:03	*11:21	3*02:02	4*01:03	*03:01	*05:05	*03:01	*03:02	*01:03	*01:03	*02:01	*04:01	SSP SSO	
747	*04:03:01	*11:21	3*02:02:01	4*01:03:01	*03:01:01	*05:05:01	*03:01	*03:02	*01:03:01	*01:03:01	*02:01	*04:02	SSP SSO NGS	DQB1*03:419 DQB1*03:289 DQB1*03:416 DQB1*03:297 DPB1*105:01 DPB1*416:01
762	*04:03	*11:21	3*02:02	4*01:03	*03:01	*05:05	*03:01	*03:02	*01:03		*02:01	*04:02	NGS	DPB1*105:01 DPB1*416:01
774	*04:03	*11:21	3*02:02	4*01:03	*03:01	*05:05	*03:01	*03:02			*02:01	*04:02	SSP SSO	DRB1*04:93 DRB1*04:163 DRB1*04:165 DRB1*04:181 B*15:282 DRB1*04:96 DRB1*04:109 DRB1*04:142N DRB1*04:148 DQB1*03:45
792	*04:03	*11:21	3*02:02	4*01:03	*03:01	*05:05	*03:01	*03:02	*01:03	*01:03	*02:01:02G	*04:02:01G	SSO NGS	
793					*03:01	*05:05					*02:01	*04:02	SSP	
794	*04:03:01	*11:21	3*02:02	4*01:03:01	*03:01:01	*05:05:01	*03:01:01	*03:02:01	*01:03:01		*02:01:02	*04:02:01	SSP SSO NGS RT-PCR	
2344	*04:03:01	*11:21	NT	NT	NT	NT	*03:01:01	*03:02:01	NT	NT	*02:01:02	*04:02:01	NGS	DPB1*416:01 DPB1*105:01 DPB1*665:01
2400	*04:03	*11:21	3*02:02	4*01:03	*03:01	*05:05	*03:01	*03:02			*02:01:02G	*04:02:01G	SSO NGS	DQB1*03:289 DQB1*03:416 DQB1*03:297 DQB1*03:419
3135	*04:03	*11:21	3*02:02	4*01:03	*03:01	*05:05	*03:01	*03:02	*01:03		*02:01	*04:02		DQA1*05:09
3224	*04:03	*11:21	3*02:02	4*01:03	*03:01	*05:05	*03:01	*03:02	*01:03		*02:01	*04:02	NGS	
3511	*04:03	*11:21	3*02:02	4*01:03	*03:01	*05:05	*03:01	*03:02	*01:03	*01:03	*02:01	*04:02	SSP SSO	
3519	*04:03	*11:21	3*02:02	4*01:03	*03:01	*05:05	*03:01	*03:02	*01:03		*02:01P	*04:02P	SSP NGS RT-PCR	DPB1*416:01 DPB1*665:01
4337	*04:03	*11:21					*03:01	*03:02			*02:01	*04:02	SSP SBT NGS	
5130	*04:03	*11:21	3*02:02	4*01:03	*03:01	*05:05	*03:01	*03:02			*02:01	*04:02	SSO NGS	DQB1*03:02
5133	*04:03:01	*11:21	3*02:02:01	4*01:03:01	*03:01:01	*05:05:01	*03:01:01	*03:02:01	*01:03:01		*02:01:02	*04:02:01	NGS	DPB1*105:01:01 DPB1*416:01:01
5214											*02:01:02G	*04:02:01G	RT-PCR	
5219	*04:03:01	*11:21					*03:01:01	*03:02:01			*02:01:02	*04:02:01	SSO NGS	
5451	*04:03:01	*11:21											SSO SBT	
5488	*04:03:01	*11:21	3*02:02:01	4*01:03:01	*03:01:01	*05:05:01	*03:01:01G	*03:02:01	*01:03:01		*02:01:02G	*04:02:01G	SSO SBT NGS	
5642	*04:03	*11:21					*03:01	*03:02					SSP	
8021	*04:03	*11:21	3*02:02	4*01:03	*03:01	*05:05	*03:01	*03:02	*01:03		*02:01	*04:02	SSO NGS	
8043	*04:03	*11:21			*03:01	*05:05	*03:01	*03:02					SSP SSO	
8086	*04:03	*11:21	3*02:02	4*01:03	*03:01	*05:05	*03:01	*03:02	*01:03:01G	*01:03:01G	*02:01	*04:02		
8122	*04:03	*11:21	3*02:02	4*01:03	*03:01	*05:05	*03:01	*03:02	*01:03	*01:03	*02:01	*04:02	NGS	DPB1*105:01 DPB1*665:01 DPB1*416:01
8123							*03:01	*03:02					RT-PCR	

Table 6: Individual laboratory results for B-cell #588- Class I

Table 6: Individual laboratory results for B-cell #588- Class I														
Center	Low resolution						High resolution						METHOD	Other Alleles
	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
230							*02:01	*03:01	*15:220	*35:03	*04:01	*12:03	SSO NGS	
278	*02	*03	*15	*35	*04	*12	*02:01	*03:01	*15:03	*35:03	*04:01	*12:03	SSP SSO	
725	*02	*03	*15	*35	*04	*12							SSP SSO	
747							*02:01:01	*03:01:01	*15:220	*35:03:01	*04:01:01	*12:03:01	SSP SSO NGS	
774	*02	*03	*15	*35	*04	*12			*15:03				SSP SSO	B*15:220
792	*02	*03	*15	*35	*04	*12	*02:01	*03:01	*15:220	*35:03	*04:01	*12:03	SSO NGS	A*02:01:01:02L
793	*02	*03	*15(B70)	*35	*04	*12							SSP	
794	*02	*03	*15	*35	*04	*12	*02:01:01	*03:01:01	*15:220	*35:03:01	*04:01:01	*12:03:01	SSP SSO NGS	
2344							*02:01:01	*03:01:01	*15:220	*35:03:01	*04:01:01	*12:03:01	RT-PCR	
2400	*02	*03	*15	*35	*04	*12	*02:01	*03:01	*15:220	*35:03	*04:01	*12:03	NGS	
2847	*02	*03	*15	*35	*04	*12							SSO NGS	
3135													SSO	
3224							*02:01P	*03:01P	*15:03P	*35:03P	*04:01P	*12:03P		
3511							*02:01	*03:01	*15:220	*35:03	*04:01	*12:03	NGS	
							*02:01	*03:01	*15:220	*35:03	*04:01	*12:03	SSP SSO	
3519	*02	*03	*15(B70)	*35	*04	*12	*02:01	*03:01	*15:220	*35:03	*04:01	*12:03	SSP NGS	
3753	*02	*03	*15	*35	*04	*12							RT-PCR	
4079	*02	*03	*15	*35	*04	*12							SSO	
4337							*02:01	*03:01	*15:03	*35:03	*04:01	*12:03	SSO	
5130	*02	*03	*15	*35	*04	*12	*02:01	*03:01	*15:220	*35:03	*04:01	*12:03	SSP SBT NGS	
5133							*02:01	*03:01	*15:220	*35:03	*04:01	*12:03	SSO NGS	
5214	*02	*03	*15(B72)	*35	*04	*12	*02:01:01:01	*03:01:01:01	*15:220:01:01	*35:03:01:03	*04:01:01:14	*12:03:01:32	NGS	
5219	*02	*03	*15	*35	*04	*12							RT-PCR	
5462	*02	*03	*15	*35	*04	*12	*02:01:01	*03:01:01	*15:220	*35:03:01	*04:01:01	*12:03:01	SSO NGS	
5488													RT-PCR	
8021							*02:01:01	*03:01:01	*15:220	*35:03:01	*04:01:01	*12:03:01	SSO SBT NGS	
8029	*02	*03	*15	*35	*04	*12	*02:01	*03:01	*15:220	*35:03	*04:01	*12:03	SSO NGS	
8068	*02	*03	*15	*35	*04	*12							SSO	
8086							*02:01	*03:01	*15:220	*35:03	*04:01	*12:03	SSO	
8122							*02:01	*03:01	*15:220	*35:03	*04:01	*12:03	NGS	
8123	*02	*03	*15	*35	*04	*12			*15:03				RT-PCR	

CELL EXCHANGE #423

The results for Cell Exchange #423 are summarized in Table 7 - 10. Molecular typing results for individual laboratories are listed in Tables 11 – 18 for each sample. Thirteen labs submitted high and/or low resolution class II results for this study. We would like to thank each of them for sharing their re-

sults and encourage other labs to do so as well so that the class II assignments can be graded. Haplotype frequencies used in this report are from the NMDP Bioinformatics website, <https://bioinformatics.bethematchclinical.org/>.

Cell 1689. The reported HLA type for this cell from Hispanic donor was A*02:01-A*68:02-B*15:16-B*49:01-C*07:01-C*14:02-DRB1*04:05-DRB1*07:01-DRB4*01:03-DQA1*02:01-DQA1*03:03-DQB1*02:02-DQB1*03:02-DPA1*01:03-DPA1*02:01-DPB1*04:01-DPB1*13:01. This cell was previously examined in the Exchange as cell 1557 (2015). In this present study, > 80% agreement was achieved for all loci.

One likely association present in this cell was A*68:02-B*49:01-C*07:01, observed in Hispanics, with HF = 0.00076. The other likely association present was A*02:01-B*15:16-C*14:02. It is observed in African American populations, with HF = 0.00043.

Cell 1690. The reported HLA type for this cell from a Hispanic donor was A*02:01-A*03:01-B*35:03-B*57:03-C*04:01-C*07:01-DRB1*13:02-DRB3*03:01-DQA1*01:02-DQB1*06:04-DPA1*01-DPB1*04:01. This cell was previously examined in the Exchange as cell 1577 (2016). Good agreement (> 90%) was achieved for all loci, except DPA1. For the subtype of DPA1*01, no agreement achieved among labs, as 5 labs assigned DPA1*01:05 and 2 labs assigned DPA1*01:03.

Cell 1691. The reported HLA type for this cell from a Filipino donor was A*02:06-A*11:01-B*15:35-B*40:01-C*04-C*07:02-DRB1*04:03-DRB1*15:02-DRB4*01:03-DRB5*01:02-DQA1*01:01-DQA1*03:01-DQB1*03:02-DQB1*05:01-DPA1*02:02-DPB1*05:01-DPB1*05/*135. The subtypes for B*15, C*04, and DPB1*05 could not be graded for this cell, as < 90% agree-

ment was achieved for each. For B*15, 10 lab assigned B*15:35, 1 lab assigned B*15:01:01G, and 1 lab assigned B*15:01. For the subtype of C*04, 7 labs assigned C*04:82, 3 labs assigned C*04:01:01G, and 2 labs assigned C*04:01. This is the first C*04:82 cell examined in the Exchange. Finally, for the second DPB1 allele, 7 labs assigned DPB1*135:01 and 2 labs assigned DPB1*05:01.

One likely association present in this cell was B*15:35-C*07:02-DRB1*15:02, with HF = 0.00044, in Asians. The other likely association present was then B*40:01-C*04:82-DRB1*04:03. The B*40:01-C*04:82 association in this cell was also observed in the Reference cell AN00978.

Cell 1692. The reported HLA type for this cell from an Asian donor was A*02:07-A*24:02-B*15:01-B*40:06-C*01:02-C*08:01-DRB1*04:06-DRB1*09:01-DRB4*01:03-DQA1*03:01-DQA1*03:02-DQB1*03:02-DQB1*03:03-DPA1*02:02-DPA1*04:01-DPB1*05:01-DPB1*13/*107. Good agreement (> 90%) was achieved for all allele assignments, except for the second DPB1 allele. Labs were split in its assignment, with 5 labs assigning DPB1*13:01, 3 labs assigning DPB1*107:01, and 1 lab assigning, DPB1*13:01:01G.

One likely association present in this cell was A*24:02-B*40:06-DRB1*09:01. It is observed exclusively in Asian populations, with HF = 0.00183. The other likely association present was A*02:07-B*15:01-DRB1*04:06. The association of A*02:07 with B*15:01 is also observed exclusively in Asians, with HF = 0.00042.

Table 7: Summary of the 423rd Cell Exchange - DNA Typing

Cell 1689

DNA Typing - class I	13 labs High; 15 labs low- A	%(n)	15 labs High; 15 labs low- B	%(n)	13 labs High; 13 labs low- C	%(n)
	A*02:01:01:01	8 (1)		B*15:16:01:01	7 (1)	C*07:01:01:16
A*02:01:01G	8 (1)		B*15:16:01	13(2)	C*07:01:01	15(2)
A*02:01:01	15(2)		B*15:16	80(12)	C*07:01:01G	8 (1)
A*02:01	69(9)		B*15	93(14)	C*07:01	69(9)
A*02	100(15)		B*40	7 (1)	C*07	92(12)
					C*02	8 (1)
14 labs High; 15 labs low- A	%(n)		14 labs High; 15 labs low- B	%(n)	14 labs High; 12 labs low- C	%(n)
A*68:02:01:01	7 (1)		B*49:01:01:01	7 (1)	C*14:02:01:02	7 (1)
A*68:02:01	14(2)		B*49:01:01	14(2)	C*14:02:01	14(2)
A*68:02:01G	7 (1)		B*49:01:01G	7 (1)	C*14:02:01G	7 (1)
A*68:02	71(10)		B*49:01	71(10)	C*14:02	71(10)
A*68	93(7)		B*49	100(15)	C*14	100(12)
A*69	7 (1)					

DNA Typing - class II	12 labs High; 10 labs low-DRB1	%(n)	7 labs High; 4 labs low-DRB3/4/5	%(n)	10 labs High; 7 labs Low-DQA1	%(n)	11 labs High; 9 labs Low-DQB1	%(n)	7 labs High; 4 labs Low-DPA1	%(n)	11 labs High; 5 labs Low-DPB1	%(n)
	DRB1*04:05:01	25(3)		DRB4*01:03:01	28(2)	DQA1*02:01:01	30(3)	DQB1*02:02:01	9 (1)	DPA1*01:03:01	29(2)	DPB1*04:01:01
DRB1*04:05	75(9)		DRB4*01:01:01G	14(1)	DQA1*02:01	70(7)	DQB1*02:01:01G	9 (1)	DPA1*01:03:01G	14(1)	DPB1*04:01P	9 (1)
DRB1*04	100(10)		DRB4*01:03	57(4)	DQA1*02	100(7)	DQB1*02:02	82(9)	DPA1*01:03	57(4)	DPB1*04:01	64(7)
			DRB4*01	75(3)			DQB1*02	100(9)	DPA1*01	100(4)	DPB1*133:01	9 (1)
			DRB4*PRESENT	25(1)							DPB1*04(DP401)	40(2)
											DPB1*04	60(3)
11 labs High; 10 labs low-DRB1	%(n)				9 labs High; 7 labs Low-DQA1	%(n)	11 labs High; 9 labs Low-DQB1	%(n)	7 labs High; 4 labs Low-DPA1	%(n)	11 labs High; 5 labs Low-DPB1	%(n)
DRB1*07:01:01	27(3)				DQA1*03:03:01	33(3)	DQB1*03:02:01	9 (1)	DPA1*02:01:01	29(2)	DPB1*13:01:01	18(2)
DRB1*07:01:01G	18(2)				DQA1*03:03	56(5)	DQB1*03:02:01G	9 (1)	DPA1*02:01	71(5)	DPB1*13:01:01G	9 (1)
DRB1*07:01	55(6)				DQA1*03:02	11(1)	DQB1*03:02	82(9)	DPA1*02	100(4)	DPB1*13:01P	9 (1)
DRB1*07	100(10)				DQA1*03	100(7)	DQB1*03	100(9)			DPB1*13:01	55(6)
											DPB1*350:01	9 (1)
											DPB1*13	100(5)

Table 8: Summary of the 423rd Cell Exchange - DNA Typing

Cell 1690

Cell 1690												
DNA Typing - class I	13 labs High;15 labs low- A	%(n)	14 labs High; 15 labs low- B	%(n)	14 labs High; 14 labs low- C	%(n)						
	A*02:01:01:01	8 (1)	B*35:03:01:03	7 (1)	C*04:01:01:14	7 (1)						
	A*02:01:01	8 (1)	B*35:03:01	14(2)	C*04:01:01	7 (1)						
	A*02:01:01G	8 (1)	B*35:03:01G	7 (1)	C*04:01:01G	21(3)						
	A*02:01	76(10)	B*35:03	71(10)	C*04:01	64(9)						
	A*02	100(15)	B*35	100(15)	C*04	83(13)						
					C*02	7 (1)						
	13 labs High;15 labs low- A	%(n)	15 labs High; 15 labs low- B	%(n)	14 labs High; 13 labs low- C	%(n)						
	A*03:01:01:26	8 (1)	B*57:03:01:02	7 (1)	C*07:01:02:01	7 (1)						
	A*03:01:01	8 (1)	B*57:03:01	13(2)	C*07:01:02	7 (1)						
	A*03:01:01G	8 (1)	B*57:03	80(12)	C*07:01:01G	14(2)						
	A*03:01	76(10)	B*57	93(14)	C*07:01	71(10)						
	A*03	93(14)	B*58	7 (1)	C*07	100(13)						
	A*74	7 (1)										
DNA Typing - class II	12 labs High; 10 labs low-DRB1	%(n)	7 labs High; 4 labs low-DRB3/4/5	%(n)	10 labs High; 7 labs Low-DQA1	%(n)	11 labs High; 9 labs Low-DQB1	%(n)	7 labs High; 5 labs Low-DPA1	%(n)	11 labs High; 6 labs Low-DPB1	%(n)
	DRB1*13:02:01	17(2)	DRB3*03:01:01	14(1)	DQA1*01:02:01	20(2)	DQB1*06:04:01	18(2)	DPA1*01:05	71(5)	DPB1*04:01:01	18(2)
	DRB1*13:02	73(10)	DRB3*03:01:01G	29(2)	DQA1*01:02	80(8)	DQB1*06:04:01G	9 (1)	DPA1*01:03	29(2)	DPB1*04:01	82(9)
	DRB1*13	90(9)	DRB3*03:01	57(4)	DQA1*01	100(7)	DQB1*06:04	73(8)	DPA1*01	100(5)	DPB1*04(DP401)	33(2)
	DRB1*03	10(1)	DRB3*03	75(3)			DQB1*06	100(9)			DPB1*04	67(4)
			DRB3*PRESENT	25(1)								

Table 9: Summary of the 423rd Cell Exchange - DNA Typing

Cell 1691

DNA Typing - class I	<u>12 labs High; 13 labs low- A</u>	%(n)	<u>12 labs High; 13 labs low- B</u>	%(n)	<u>12 labs High; 12 labs low- C</u>	%(n)
	A*02:06:01:01	8 (1)		B*15:01:01G	8 (1)	C*04:82
A*02:06:01G	8 (1)		B*15:35	83(10)	C*04:01:01G	25(3)
A*02:06	83(10)		B*15:01	8 (1)	C*04:01	17(2)
A*02	100(13)		B*15	92(12)	C*04	92(11)
			B*15(B70)	8 (1)	C*02	8 (1)
<u>11 labs High; 13 labs low- A</u>	%(n)	<u>12 labs High; 13 labs low- B</u>	%(n)	<u>12 labs High; 11 labs low- C</u>	%(n)	
A*11:01:01:01	9 (1)	B*40:01:02:04	8 (1)	C*07:02:01:01	8 (1)	
A*11:01:01G	9 (1)	B*40:01:01G	17(2)	C*07:02:01G	17(2)	
A*11:01	82(9)	B*40:01	75(9)	C*07:02	75(9)	
A*11	100(13)	B*40	100(13)	C*07	100(11)	

DNA Typing - class II	<u>10 labs High; 8 labs low-DRB1</u>	%(n)	<u>5 labs High; 4 lab low-DRB3/4/5</u>	%(n)	<u>7 labs High; 6 labs Low-DQA1</u>	%(n)	<u>9 labs High; 7 labs Low-DQB1</u>	%(n)	<u>5 labs High; 4 labs Low-DPA1</u>	%(n)	<u>9 labs High; 5 labs Low-DPB1</u>	%(n)
	DRB1*04:03:01	10(1)		DRB4*01:03:01	20(1)	DQA1*01:01:01	14(1)	DQB1*03:02:01	11(1)	DPA1*02:02:02	20(1)	DPB1*05:01:01
DRB1*04:03:01G	20(2)		DRB4*01:01:01G	20(1)	DQA1*01:01	86(6)	DQB1*03:02:01G	11(1)	DPA1*02:02	80(4)	DPB1*05:01	89(8)
DRB1*04:03	60(6)		DRB4*01:03	60(3)	DQA1*01	100(6)	DQB1*03:02	78(7)	DPA1*02	100(4)	DPB1*05	100(5)
DRB1*04:06	10(1)		DRB4*01	75(3)			DQB1*03	100(7)				
DRB1*04	88(7)		DRB4*PRESENT	25(1)								
DRB1*15	12(1)											
<u>10 labs High; 8 labs low-DRB1</u>	%(n)	<u>5 labs High; 4 lab low-DRB3/4/5</u>	%(n)	<u>8 labs High; 6 labs Low-DQA1</u>	%(n)	<u>9 labs High; 7 labs Low-DQB1</u>	%(n)	<u>5 labs High; 4 labs Low-DPA1</u>	%(n)	<u>9 labs High; 5 labs Low-DPB1</u>	%(n)	
DRB1*15:02:01	10(1)	DRB5*01:02	100(5)	DQA1*03:01:01	12(1)	DQB1*05:01:24	11(1)			DPB1*135:01	78(7)	
DRB1*15:02:01G	20(2)	DRB5*01	75(3)	DQA1*03:01	88(7)	DQB1*05:01	89(8)			DPB1*05:01	22(2)	
DRB1*15:02	70(7)	DRB5*PRESENT	25(1)	DQA1*03	100(6)	DQB1*05	100(7)			DPB1*05	100(5)	
DRB1*15	100(8)											

Table 10: Summary of the 423rd Cell Exchange - DNA Typing

Cell 1692

DNA Typing - class I		<u>11 labs High; 13 labs low- A</u>		<u>12 labs High; 13 labs low- B</u>		<u>12 labs High; 11 labs low- C</u>												
			%(n)		%(n)		%(n)											
	A*02:07:01:01	9	(1)	B*15:01:01:01	8	(1)	C*01:02:01:08	8	(1)									
	A*02:07:01G	9	(1)	B*15:01:01G	17	(2)	C*01:02:01G	8	(1)									
	A*02:07	73	(8)	B*15:01	75	(9)	C*01:02	83	(10)									
	A*02:01	9	(1)	B*15	92	(12)	C*01	100	(11)									
	A*02	100	(13)	B*15(B70)	8	(1)												
DNA Typing - class II		<u>10 labs High; 8 labs low-DRB1</u>		<u>5 labs High; 3 labs low-DRB3/4/5</u>		<u>7 labs High; 6 labs Low-DQA1</u>		<u>9 labs High; 7 labs Low-DQB1</u>		<u>5 labs High; 3 labs Low-DPA1</u>		<u>9 labs High; 4 labs Low-DPB1</u>						
			%(n)		%(n)		%(n)		%(n)		%(n)		%(n)					
	DRB1*04:06:01	10	(1)	DRB4*01:03:01	20	(1)	DQA1*03:01:01	14	(1)	DQB1*03:02:01	11	(1)	DPA1*02:02:02	20	(1)	DPB1*05:01:01	11	(1)
	DRB1*04:06	90	(9)	DRB4*01:03:01G	20	(1)	DQA1*03:01	86	(6)	DQB1*03:02:01G	11	(1)	DPA1*02:02	80	(4)	DPB1*05:01:01G	11	(1)
	DRB1*04	100	(8)	DRB4*01:03	60	(3)	DQA1*03	100	(6)	DQB1*03:02	78	(7)	DPA1*02	100	(3)	DPB1*05:01	78	(7)
				DRB4*01	67	(2)				DQB1*03	100	(7)				DPB1*05	100	(4)
				DRB4*PRESENT	33	(1)												
DNA Typing - class II		<u>10 labs High; 8 labs low-DRB1</u>				<u>7 labs High-DQA1</u>		<u>9 labs High-DQB1</u>		<u>4 labs High; 4 labs Low-DPA1</u>		<u>9 labs High; 4 labs Low-DPB1</u>						
			%(n)		%(n)		%(n)		%(n)		%(n)		%(n)					
	DRB1*09:01:02	10	(1)			DQA1*03:02:01	14	(1)	DQB1*03:03:02	22	(2)	DPA1*04:01:01	25	(1)	DPB1*13:01:01G	11	(1)	
	DRB1*09:01:02G	20	(2)			DQA1*03:02	86	(6)	DQB1*03:03	78	(7)	DPA1*04:01	75	(3)	DPB1*13:01	56	(5)	
	DRB1*09:01	70	(7)								DPA1*04	100	(4)	DPB1*107:01	33	(3)		
	DRB1*09	100	(8)										DPB1*13	75	(3)			
													DPB1*107	12	(1)			

Table 11. Individual laboratory results for Cell #1689 - Class I

Center	Low Resolution						High Resolution						Method	Other Alleles
	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
278	*02	*68	*15	*49	*07	*14	*02:01	*68:02	*15:16	*49:01	*07:01	*14:02	SSP SSO	
725	*02	*68	*15	*49	*07	*14							SSO	
731	*02	*68	*15	*49			*02:01:01	*68:02:01	*15:16:01	*49:01:01	*07:01:01	*14:02:01	SSP NGS RT-PCR	
747	*02	*68	*15	*49	*07	*14	*02:01:01	*68:02:01	*15:16:01	*49:01:01	*07:01:01	*14:02:01	SSP SSO NGS	
762							*02:01	*68:02	*15:16	*49:01	*07:01	*14:02	NGS	
771	*02	*68	*15	*49	*07	*14	*02:01	*68:02	*15:16	*49:01	*07:01	*14:02	SSO NGS	
774	*02	*68	*15	*49	*07	*14			*15:16					B*15:67 B*15:95 B*15:254
3545	*02	*68	*15	*49	*07	*14	*02:01:01G	*68:02:01G	*15:16	*49:01:01G	*07:01:01G	*14:02:01G	SSO SBT	
3808	*02	*68	*15	*49	*07	*14		*68:02	*15:16	*49:01		*14:02	SSO	
4079	*02	*68	*15	*49	*07	*14	*02:01	*68:02	*15:16	*49:01	*07:01	*14:02	SSP NGS	
4251							*02:01	*68:02	*15:16	*49:01	*07:01	*14:02	NGS	
5133							*02:01:01:01	*68:02:01:01	*15:16:01:01	*49:01:01:01	*07:01:01:16	*14:02:01:02	NGS	
5462	*02	*68	*15	*49	*07	*14	*02:01	*68:02	*15:16	*49:01	*07:01	*14:02	SSO NGS	
5642	*02	*68	*15	*49	*07	*14							SSP	
6649	*02	*68	*15	*49									SSO	
8001							*02:01	*68:02	*15:16	*49:01	*07:01	*14:02	NGS	
8043	*02	*68	*15	*49	*07	*14	*02:01	*68:02	*15:16	*49:01	*07:01	*14:02	SSP SSO	
8058	*02	*69	*40	*49	*02								SSP OTHER	
8103	*02	*68	*15	*49	*07	*14	*02:01	*68:02	*15:16	*49:01	*07:01	*14:02	SSO	

Table 12a: Individual laboratory results for Cell #1689 - Class II

Low resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
731	*04	*07					*02	*03					SSP NGS RT-PCR	
747	*04	*07	4*01	4*01	*02	*03	*02	*03	*01	*02	*04	*13	SSP SSO NGS	
771	*04	*07			*02	*03	*02	*03			*04	*13	SSO NGS	
774	*04	*07	4*01		*02	*03	*02	*03			*04(DP401)	*13		
3545	*04	*07											SSO SBT	
3808	*04	*07	NT	NT	*02	*03	*02	*03	*01	*02	*04(DP401)	*13	SSO	
4079	*04	*07			*02	*03	*02	*03					SSP NGS	
5462	*04	*07	4*01		*02	*03	*02	*03	*01	*02	NT	NT	SSO NGS	
8058	*04	*07	4*PRESENT	4*PRESENT			*02	*03					SSP OTHER	
8103	*04	*07			*02	*03	*02	*03	*01	*02	*04	*13	SSO	

Table 12b: Individual laboratory results for Cell #1689 - Class II

High resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
731	04:05:01	*07:01:01			*02:01:01	*03:03:01	*02:02	*03:02			*133:01	*350:01	SSP NGS RT-PCR	DQB1*02:156 DQB1*03:289 DQB1*03:416 DRB1*07:79 DRB1*07:93
747	04:05:01	*07:01:01	4*01:03:01	4*01:03:01	*02:01:01	*03:03:01	*02:02	*03:02	*01:03:01	*02:01:01	*04:01:01	*13:01:01	SSP SSO NGS	DQB1*03:416 DQB1*02:156 DQB1*03:289
771	04:05	*07:01					*02:02	*03:02			*04:01	*13:01	SSO NGS	
774	04:05	*07:01	4*01:03		*02:01	*03:03	*02:02	*03:02			*04:01	*13:01		DRB4*01:09 DRB1*04:90 DRB4*01:10 DRB1*04:104 DRB1*04:116 DRB1*04:178N DRB1*07:31 DRB1*07:33 DRB1*07:35
3545	04:05	*07:01:01G											SSO SBT	
3808	04:05				*02:01		*02:02	*03:02	*01:03	*02:01	*04:01	*13:01	SSO	
4079	04:05	*07:01	4*01:03		*02:01	*03:03	*02:02	*03:02	*01:03	*02:01	*04:01	*13:01	SSP NGS	
4251	04:05	*07:01:01G	4*01:01:01G	4*01:03	*02:01	*03:03	*02:01:01G	*03:02:01G	*01:03:01G	*02:01	*04:01	*13:01:01G	NGS	
5133	04:05:01	*07:01:01	4*01:03:01		*02:01:01	*03:03:01	*02:02:01	*03:02:01	*01:03:01	*02:01:01	*04:01:01	*13:01:01	NGS	DPB1*350:01 DPB1*133:01
5462	04:05	*07:01	4*01:03		*02:01	*03:03	*02:02	*03:02	*01:03	*02:01	*04:01P	*13:01P	SSO NGS	DPB1*350:01 DPB1*133:01

Table 12b: Individual laboratory results for Cell #1689 - Class II

High resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
8001	04:05	*07:01	4*01:03		*02:01	*03:03	*02:02	*03:02			*04:01	*13:01	NGS	DPB1*939:01 DPB1*133:01 DPB1*350:01
8103	04:05	*07:01			*02:01	*03:02	*02:02	*03:02	*01:03	*02:01	*04:01	*13:01	SSO	DQA1*03:03 DRB1*07:05 DRB1*07:07 DRB1*07:11 DRB1*07:13

Table 13. Individual laboratory results for Cell #1690 - Class I

Center	Low Resolution						High Resolution						Method	Other Alleles
	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
278	*02	*03	*35	*57	*04	*07	*02:01	*03:01	*35:03	*57:03	*04:01	*07:01	SSP SSO	
725	*02	*03	*35	*57	*04	*07							SSO	
731	*02	*03	*35	*57	*04	*07	*02:01	*03:01	*35:03:01	*57:03:01	*04:01	*07:01	SSP NGS RT-PCR	DQB1*06:280
747	*02	*03	*35	*57	*04	*07	*02:01:01	*03:01:01	*35:03:01	*57:03:01	*04:01:01	*07:01:02	SSP SSO NGS	
762							*02:01	*03:01	*35:03	*57:03	*04:01	*07:01	NGS	
771	*02	*03	*35	*57	*04	*07	*02:01	*03:01	*35:03	*57:03	*04:01	*07:01	SSO NGS	
774	*02	*03	*35	*57	*04	*07				*57:03				B*57:70 B*57:66 B*57:17 B*57:46
3545	*02	*03	*35	*57	*04	*07	*02:01:01G	*03:01:01G	*35:03:01G	*57:03	*04:01:01G	*07:01:01G	SSO SBT	
3808	*02	*03	*35	*57	*04	*07			*35:03	*57:03	*04:01:01G	*07:01:01G	SSO	
4079	*02	*03	*35	*57	*04	*07	*02:01	*03:01	*35:03	*57:03	*04:01	*07:01	SSP NGS	
4251							*02:01	*03:01	*35:03	*57:03	*04:01	*07:01	NGS	
5133							*02:01:01:01	*03:01:01:26	*35:03:01:03	*57:03:01:02	*04:01:01:14	*07:01:02:01	NGS	
5462	*02	*03	*35	*57	*04	*07	*02:01	*03:01	*35:03	*57:03	*04:01	*07:01	SSO NGS	
5642	*02	*03	*35	*57	*04	*07							SSP	
6649	*02	*03	*35	*57									SSO	
8001							*02:01	*03:01	*35:03	*57:03	*04:01	*07:01	NGS	
8043	*02	*03	*35	*57	*04	*07	*02:01	*03:01	*35:03	*57:03	*04:01:01G	*07:01	SSP SSO	
8058	*02	*74	*35	*58	*02								SSP OTHER	
8103	*02	*03	*35	*57	*04	*07	*02:01	*03:01	*35:03	*57:03	*04:01	*07:01	SSO	B*35:55 C*07:06 C*07:18 C*04:09N C*04:82

Table 14a: Individual laboratory results for Cell #1690 - Class II

Low resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
731	*13	*13	3*03	NP	*01	*01	*06	*06	*01	*01	*04	*04	SSP NGS	
747	*13	*13	3*03	3*03	*01	*01	*06	*06	*01	*01	*04	*04	RT-PCR	
771	*13				*01		*06				*04		SSP SSO NGS	
774	*13		3*03		*01		*06				*04(DP401)		SSO NGS	
3545	*13												SSO SBT	
3808	*13	*13	NT	NT	*01	*01	*06	*06	*01	*01	*04(DP401)	*04(DP401)	SSO	
4079	*13						*06						SSP NGS	
5462	*13		3*03		*01		*06		*01		NT		SSO NGS	
8058	*03	*11	3*PRESENT	3*PRESENT			*06	*06					SSP OTHER	
8103	*13	*13			*01	*01	*06	*06	*01	*01	*04	*04	SSO	

Table 14b: Individual laboratory results for Cell #1690 - Class II

High resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
731	*13:02	*13:02			*01:02	*01:02	*06:04	*06:04			*04:01	*04:01	SSP NGS	
747	*13:02:01	*13:02:01	3*03:01:01	3*03:01:01	*01:02:01	*01:02:01	*06:04:01	*06:04:01	*01:05	*01:05	*04:01:01	*04:01:01	RT-PCR	DQB1*06:280
771	*13:02						*06:04				*04:01		SSP SSO NGS	
														DRB1*13:147 DRB1*13:155 DRB1*13:165 DRB1*13:168 DRB1*13:171 DQB1*06:186 DRB1*13:140 DRB1*13:142N DRB1*13:74 DRB1*13:114 DRB1*13:143 DRB1*13:145
774	*13:02		3*03:01		*01:02		*06:04				*04:01			
3545	*13:02												SSO SBT	
3808	*13:02	*13:02			*01:02	*01:02	*06:04	*06:04	*01:03	*01:03	*04:01	*04:01	SSO	
4079	*13:02		3*03:01		*01:02		*06:04		*01:05		*04:01		SSP NGS	
4251	*13:02	*13:02	3*03:01:01G	3*03:01	*01:02	*01:02	*06:04:01G	*06:04:01G	*01:05	*01:05	*04:01	*04:01	NGS	
5133	*13:02:01		3*03:01:01		*01:02:01		*06:04:01		*01:05		*04:01:01		NGS	
5462	*13:02		3*03:01		*01:02		*06:04		*01:05		*04:01		SSO NGS	
8001	*13:02		3*03:01		*01:02		*06:04				*04:01		NGS	DPB1*939:01
8103	*13:02	*13:39			*01:02	*01:02	*06:04	*06:04	*01:03	*01:03	*04:01	*04:01	SSO	

Table 15. Individual laboratory results for Cell #1691 - Class I

Center	Low Resolution						High Resolution						Method	Other Alleles
	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
278	*02	*11	*15	*40	*04	*07	*02:06	*11:01	*15:35	*40:01	*04:01	*07:02	SSP SSO	
725	*02	*11	*15	*40	*04	*07							SSO	
731	*02	*11	*15	*40	*04	*07	*02:06	*11:01	*15:35	*40:01	*04:82	*07:02	SSP NGS RT-PCR	
747	NT												SSP SSO NGS	
762							*02:06	*11:01	*15:35	*40:01	*04:82	*07:02	NGS	
771	*02	*11	*15	*40	*04	*07	*02:06	*11:01	*15:35	*40:01	*04:82	*07:02	SSO NGS	
774	*02	*11	*15	*40	*04	*07								
3545	*02	*11	*15	*40	*04	*07	*02:06:01G	*11:01:01G	*15:35	*40:01:01G	*04:01:01G	*07:02:01G	SSO SBT	
3808	*02	*11	*15	*40	*04	*07	*02:06		*15:01:01G	*40:01:01G	*04:01:01G	*07:02:01G	SSO	
4079	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	SSP NGS	
4251							*02:06	*11:01	*15:35	*40:01	*04:82	*07:02	NGS	
5133							*02:06:01:01	*11:01:01:01	*15:35	*40:01:02:04	*04:82	*07:02:01:01	NGS	
5462	*02	*11	*15	*40	*04	*07	*02:06	*11:01	*15:35	*40:01	*04:82	*07:02	SSO NGS	
5642	*02	*11	*15	*40	*04	*07							SSP	
6649	*02	*11	*15	*40									SSO	
8001							*02:06	*11:01	*15:35	*40:01	*04:82	*07:02	NGS	
8043	*02	*11	*15	*40	*04	*07	*02:06	*11:01	*15:35	*40:01	*04:01:01G	*07:02	SSP SSO	
8058	*02	*11	*15(B70)	*40	*02								SSP OTHER	A*24
8103	*02	*11	*15	*40	*04	*07	*02:06	*11:01	*15:01	*40:01	*04:01	*07:02	SSO	A*02:10 A*02:21 C*04:09N C*04:82

Table 16a: Individual laboratory results for Cell #1691 - Class II

Low resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
731	*04	*15	4*01	5*01	*01	*03	*03	*05	*02	*02	*05	*05	SSP NGS RT-PCR	
747	NT												SSP SSO NGS	
771	*04	*15			*01	*03	*03	*05			*05	*05	SSO NGS	
774	*04	*15	4*01	5*01	*01	*03	*03	*05			*05			
3545	*04	*15											SSO SBT	
3808	*04	*15	NT	NT	*01	*03	*03	*05	*02	*02	*05	*05	SSO	
4079	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	SSP NGS	
5462	*04	*15	4*01	5*01	*01	*03	*03	*05	*02		NT	NT	SSO NGS	
8058	*15	*15	4*PRESENT	5*PRESENT			*03	*05					SSP OTHER	
8103	*04	*15			*01	*03	*03	*05	*02	*02	*05	*05	SSO	

Table 16b: Individual laboratory results for Cell #1691- Class II

High resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
731	*04:06	*15:02			*01:01	*03:01	*03:02	*05:01			*05:01	*135:01	SSP NGS RT-PCR	DRB1*15:140 DRB1*15:149 DQB1*03:289 DQB1*03:416
747	NT												SSP SSO NGS	
771	*04:03	*15:02					*03:02	*05:01			*05:01	*135:01	SSO NGS	
774	*04:03	*15:02	4*01:03	5*01:02	*01:01	*03:01	*03:02	*05:01			*05:01	*135:01		DRB1*04:93 DRB1*04:96 DRB1*04:109 DRB1*04:142N DRB1*04:148 DRB1*04:163 DRB1*04:165>
3545	*04:03:01G	*15:02:01G											SSO SBT	
3808	*04:03	*15:02				*03:01	*03:02	*05:01	*02:02	*02:02	*05:01	*05:01	SSO	
4079	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	SSP NGS	
4251	*04:03:01G	*15:02:01G	4*01:01:01G	5*01:02	*01:01	*03:01	*03:02:01G	*05:01	*02:02	*02:02	*05:01	*135:01	NGS	
5133	*04:03:01	*15:02:01	4*01:03:01	5*01:02	*01:01:01	*03:01:01	*03:02:01	*05:01:24	*02:02:02		*05:01:01	*135:01	NGS	
5462	*04:03	*15:02	4*01:03	5*01:02	*01:01	*03:01	*03:02	*05:01	*02:02		*05:01	*135:01	SSO NGS	
8001	*04:03	*15:02	4*01:03	5*01:02	*01:01	*03:01	*03:02	*05:01			*05:01	*135:01	NGS	
8103	*04:03	*15:02			*01:01	*03:01	*03:02	*05:01	*02:02	*02:02	*05:01	*05:01	SSO	DRB1*04:50 DRB1*04:51 DRB1*15:14 DQA1*01:04 DQA1*01:05

Table 17. Individual laboratory results for Cell #1692 - Class I

Center	Low Resolution						High Resolution						Method	Other Alleles
	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
278	*02	*24	*15	*40	*01	*08	*02:07	*24:02	*15:01	*40:06	*01:02	*08:01	SSP SSO	
725	*02	*24	*15	*40	*01	*08							SSO	
731	*02	*24	*15	*40			*02:07	*24:02:01	*15:01	*40:06	*01:02	*08:01	SSP NGS RT-PCR	
747	NT												SSP SSO NGS	
762							*02:07	*24:02	*15:01	*40:06	*01:02	*08:01	NGS	
771	*02	*24	*15	*40	*01	*08	*02:07	*24:02	*15:01	*40:06	*01:02	*08:01	SSO NGS	
774	*02	*24	*15	*40	*01	*08								
3545	*02	*24	*15	*40	*01	*08	*02:07:01G	*24:02:01G	*15:01:01G	*40:06:01G	*01:02:01G	*08:01:01G	SSO SBT	
3808	*02	*24	*15	*40	*01	*08			*15:01:01G	*40:06	*01:02	*08:01	SSO	
4079	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	SSP NGS	
4251							*02:07	*24:02	*15:01	*40:06	*01:02	*08:01	NGS	
5133							*02:07:01:01	*24:02:01:01	*15:01:01:01	*40:06:01	*01:02:01:08	*08:01:01:01	NGS	
5462	*02	*24	*15	*40	*01	*08	*02:07	*24:02	*15:01	*40:06	*01:02	*08:01	SSO NGS	
5642	*02	*24	*15	*40	*01	*08							SSP	
6649	*02	*24	*15	*40									SSO	
8001							*02:07	*24:02	*15:01	*40:06	*01:02	*08:01	NGS	
8043	*02	*24	*15	*40	*01	*08	*02:07	*24:02	*15:01	*40:06	*01:02	*08:01	SSP SSO	
8058	*02	*24	*15(B70)	*40	*01								SSP OTHER	
8103	*02	*24	*15	*40	*01	*08	*02:01	*24:02	*15:01	*40:06	*01:02	*08:01	SSO	A*02:07 A*02:09 A*02:17 A*02:58 C*08:22

Table 18a: Individual laboratory results for Cell #1692 - Class II

Low resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
731	*04	*09				*03	*03						SSP NGS	
747	NT												RT-PCR	
771	*04	*09			*03		*03	*03			*05	*13	SSP SSO NGS	
774	*04	*09	4*01		*03	*03	*03	*03			*05	*107	SSO NGS	
3545	*04	*09											SSO SBT	
3808	*04	*09	NT	NT	*03	*03	*03	*03	*02	*04	*05	*13	SSO	
4079	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	SSP NGS	
5462	*04	*09	4*01	4*01	*03	*03	*03	*03	*02	*04	NT	NT	SSO NGS	
8058	*04	*09	4*PRESENT	4*PRESENT			*03			*04			SSP OTHER	
8103	*04	*09			*03	*03	*03	*03	*02	*04	*05	*13	SSO	

Table 18b: Individual laboratory results for Cell #1692- Class II

High resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
731	*04:06	*09:01			*03:01	*03:02	*03:02	*03:03:02			*05:01	*13:01	SSP NGS	DPB1*135:01
747	NT												RT-PCR	DPB1*519:01
771	*04:06	*09:01					*03:02	*03:03			*05:01	*13:01	SSP SSO NGS	DQB1*03:289
774	*04:06	*09:01	4*01:03		*03:01	*03:02	*03:02	*03:03			*05:01	*107:01	SSO NGS	DQB1*03:416
3545	*04:06	*09:01:02G											SSO SBT	DRB1*09:31
3808	*04:06	*09:01					*03:02	*03:03	*02:02		*05:01	*13:01	SSO	
4079	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	SSP NGS	
4251	*04:06	*09:01:02G	4*01:01:01G	4*01:03	*03:01	*03:02	*03:02:01G	*03:03	*02:02	*04:01	*05:01:01G	*13:01:01G	NGS	
5133	04:06:01	*09:01:02	4*01:03:01	4*01:03:02	*03:01:01	*03:02:01	*03:02:01	*03:03:02	*02:02:02	*04:01:01	*05:01:01	*107:01	NGS	
5462	*04:06	*09:01	4*01:03	4*01:03	*03:01	*03:02	*03:02	*03:03	*02:02	*04:01	*05:01	*107:01	SSO NGS	
8001	*04:06	*09:01	4*01:03		*03:01	*03:02	*03:02	*03:03			*05:01	*13:01	NGS	DPB1*135:01
8103	*04:06	*09:01			*03:01	*03:02	*03:02	*03:03	*02:02	*04:01	*05:01	*13:01	SSO	DPB1*519:01
														DQA1*03:03
														DRB1*04:41
														DRB1*09:04
														DQA1*03:02

SERUM EXCHANGE #581

The results for Serum Exchange #581 are summarized in Tables 19 - 26 and individual listing of results are shown in tables 27 - 40. Sera strongly

positive to A29, A66, B7, B27, and B18 antibodies, as well as sera with strong reactivity to DR and DQ antibodies were examined in this study.

1317	method	#labs	A29	A1	A36	B42	B56	B55	B53	B35	B49	B75	A30	A80	A43	B50	B62	B71	B72	B70	B77	B63	A26	B67	B54	B7	B82	A2	A68
class I	NIH-Std	1	no consensus																										
	AHG	2	100%	50%	50%	50%	50%	50%	50%	50%	50%									50%									
	C1q	3	100%	100%	67%							33%	33%																
	PRA	3	67%	67%	67%	67%	67%	33%	67%	67%	67%	33%	67%	67%	33%	33%	67%	67%	67%		33%	67%	67%	67%	33%	33%	33%	33%	33%
	SAB	23	100%	100%	100%	96%	100%	96%	100%	100%	100%	100%	83%	100%	100%	100%	100%	100%	100%		100%	96%	96%	96%	83%	78%	70%	78%	65%

1317	method	#labs	B58	B57	Cw10	B41	B39	B46	B51	B78	A69	A33	B81	A3	B44	Cw15	Cw2	Cw9	Cw4	A31	A74	A34	B59	A23	B76	B37	B52
	PRA	3	67%	33%	33%	33%	33%							33%	33%	33%	33%										
	SAB	23	65%	61%	61%	39%	22%	83%	78%	74%	70%	65%	65%				4%	65%	61%	57%	57%	48%	35%	26%	26%	17%	13%

1317	method	#labs	NEG	DR14	DR1403	DR1404	DR11	DR12	DR13	DR17	DR18	DR8	DR9	DR53	DR10	DR52	DR7	DQ5	DQ2	DQA1*05	DQA1*01	DR3
class II	C1q	2	100%																			
	PRA	3		67%	33%	33%	67%	67%	67%	67%	67%	67%	67%	33%	67%	67%						
	SAB	21		95%	14%	14%	90%	90%	90%	90%	90%	90%	90%	90%	86%	81%	38%	38%	24%	19%	10%	10%

Serum 1317. Strong anti-A29 (16891) reactivity was detected in this sample by all methods. Additional reactivity to A1 (10714) and A36 (10150), along with reactivity to a number of 5C and 7C specificities was reported by various methods. PRA and SAB also reported C-locus reactivity in this sample.

Class II reactivity was also detected, with PRA and SAB labs reporting reactivity to a number of DR specificities, including anti-DR14 (6406), -DR11 (5486), -DR9 (4258), -DR13 (4896), -DR17 (3595), and -DR18 (3477) reactivity. This sample was class II negative by C1q.

*(median MFI)

1318	method	#labs	A66	A6601	A6602	A25	A26	A34	A43	A11	A1101	A1102	A32	A33	A68	A3	A30	A31	A29	B7	B8
class I	NIH-Std	1	no consensus																		
	AHG	2	50%																		
	C1q	3	67%			33%	33%	33%	33%	33%											
	PRA	3	67%			67%	67%	67%	33%	67%			67%	67%	67%	67%	67%	67%	67%	67%	67%
	SAB	23	87%	26%	26%	100%	100%	100%	100%	91%	22%	22%	100%	100%	100%	100%	100%	100%	96%	100%	100%

1318	method	#labs	B81	B8101	B703	A69	A36	A74	A80	A1	B41	B42	B48	B73	B40	B60	Cw7	Cw6	Cw18	B15	B75
	PRA	3	67%		33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%		33%			33%	
	SAB	23	91%	22%	17%	100%	100%	100%	100%	96%	100%	100%	100%	96%		100%	83%	83%	83%		65%

1318	method	#labs	B27	B38	B61	B67	B39	Cw10	Cw3	Cw12	Cw2	Cw9	Cw15	B44	B57	B58	B82	B77	B18	B49	B50
	PRA	3	33%				33%		33%	33%	33%		33%	33%	33%	33%	33%				
	SAB	23		57%	57%	52%	48%	52%		13%	13%	39%		17%	4%			17%	13%	13%	13%

1318	method	#labs	DR8	DR11	DR13	DQ7	DQ8	DQ9	DR4	DR16	DQ6	DR53	DQA1*03	DQA1*05	DR52	DPw5	DQ4	DQA1*06
class II	C1q	2	100%	100%	100%	100%	50%	50%										
	PRA	3	67%	67%	33%	67%	67%	67%	67%	33%	33%		33%	33%				
	SAB	21	100%	100%	90%	100%	100%	100%	100%	76%	57%	52%	29%	24%	29%	24%	24%	24%

1318	method	#labs	DP14	DP17	DPA1*02	DR1404	DP9	DQA1*01	DR15	DP10	DP11	DP13	DP15	DPw1	DQ3	DR12	DR14	DR51
	SAB	21	19%	19%	19%	19%	14%	14%	14%	10%	10%	10%	10%	10%	10%	10%	10%	10%

Serum 1318. Strong anti-A66 (13756) reactivity was detected in this sample by all methods. Strong reactivity to other class I antibodies was also reported by various methods, including reactivity to A25 (14035), A26 (12971), A34 (11926), A43 (10310), A11 (9787), and A32 (9842). C-locus reactivity was reported as well by PRA and SAB.

Strong class II reactivity was also reported in this sample, with C1q, PRA, and SAB labs reporting anti-DR8 (15074), -DR11 (15231), -DR13 (16728), -DQ7 (17260), -DQ8 (14994), and -DQ9 (14429) reactivity. Strong DQA1*03 (14493), DQA1*05 (18749), and DQA1*06 (19013) reactivity was also reported by some PRA and SAB labs.

*(median MFI)

1319	method	#labs	B27	B2708	B2705	B7	B42	B55	B56	B60	B61	B48	B81	B8101	B54	B67	B73	B82	B8201	B57	
class I	NIH-Std	1	no consensus																		
	AHG	2	100%			100%	100%	50%	50%	50%	50%	50%	50%								
	C1q	3	67%	33%	33%	100%	100%	67%	100%	67%	67%	67%	67%	33%	100%	100%	100%	67%	33%		
	PRA	3	67%	33%		67%	67%	67%	67%	67%	67%	67%	67%		67%	67%	67%	67%	33%	67%	
	SAB	23	91%	39%	26%	100%	100%	100%	100%	100%	100%	91%	91%	26%	100%	100%	100%	96%		100%	
1319	method	#labs	B63	B46	B13	B47	A6602	B703	Cw15	Cw2	Cw9	Cw10	Cw3	Cw1	Cw14	Cw16	A3	A25	B64		
	C1q	3					33%														
	PRA	3	67%		67%	67%		33%	33%				33%				33%				
	SAB	23	100%	83%	100%	100%	52%	13%	83%	96%	91%	91%	4%	35%	35%	22%		22%	13%		

1319	method	#labs	NEG	DQ8	DQ7	DQ9	DQA1*03	DQA1*05	DQA1*06	DQ3
class II	C1q	2	100%							
	PRA	3	33%	33%	33%	33%	33%			
	SAB	19	11%	58%	52%	47%	42%	21%	16%	11%

Serum 1319. Strong anti-B27 (16456) and –B7 (16566) reactivity was detected in this sample by all methods. In addition, AHG, C1q, PRA, and SAB reported strong reactivity to B42 (16425), B55 (17842), B56 (16704), B60 (13307), B61(13223), B48 (11049), and B81 (17265). Allele specific B*27:08 and B*27:05 reactivity was reported by various methods. In addition, PRA and SAB reported reactivity to a number of C-locus specificities, including Cw15

and Cw3 (Cw9, Cw10).

The reporting of class II reactivity in this sample was mixed, with ≤ 58% of Luminex-SAB and PRA labs reporting reactivity to DQ8 (6662), DQ9 (4812), DQ7 (1212), and DQA1*03 (10576). Three SAB labs, 1 PRA lab, and 2 C1q labs reported this sample as negative for class II.

*(median MFI)

1320	method	#labs	B18	B51	B8	B35	B78	B7801	A23	A24	A2403	A3	B38	B37	B64	B65	B44	B53	B54	B41	B45	B59	B52	B62
class I	NIH-Std	1	no consensus																					
	AHG	2	100%	50%	50%	50%						50%	50%	50%			50%			50%				
	C1q	3	100%	100%	33%	33%	33%		33%	33%					100%	33%		33%	33%					
	PRA	3	67%	67%	67%	67%	67%		33%	33%	33%	33%	67%	67%	67%	67%	67%	67%	67%	33%	67%	67%	67%	67%
	SAB	22	100%	100%	100%	100%	96%	17%	100%	100%	30%	100%	100%	100%	100%	100%	100%	100%	100%	78%	100%	100%	100%	100%
1320	method	#labs	B71	B72	B77	B75	B76	A2	A33	A68	A69	B73	B39	B3901	B55	B82	B67	A34	A25	A26	A66	A6601	A6602	
	PRA	3	67%	67%	67%	33%	33%	33%	33%	33%	33%	33%		33%	33%	67%	33%	33%	33%	33%	33%			
	SAB	22	100%	96%	100%	100%	100%	100%	100%	100%	96%	96%	91%	26%	91%	91%	87%	91%	78%	61%	70%	22%	26%	
1320	method	#labs	A1	B42	B7	B61	A29	B48	B50	B60	B81	B8101	B8201	B27	B2708	A203	B703	B56	B13	B49	Bw6	A2C	B8C	Bw4
	PRA	3	33%	33%	33%	33%			33%	33%	33%					33%	33%							
	SAB	83%	83%	83%	78%	74%	70%	65%	65%	65%	13%	13%	39%	22%	22%	4%	39%	35%	22%	22%	13%	13%	13%	

1320	method	#labs	DQ4	DQ6	DQ5	DR1	DR10	DR103	DR11	DR12	DR13	DR14	DR1404	DR1403	DR8	DR9	DR15	DR16	DR51	DR52	DR53
class II	C1q	2	67%	67%	67%	67%	67%	33%	67%	67%	67%	33%			67%	67%	67%	67%	67%		
	PRA	3	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%	33%	33%	67%	67%	67%	67%	67%	67%	33%
	SAB	21	100%	100%	95%	100%	100%	100%	100%	100%	100%	100%	19%	14%	100%	100%	100%	100%	100%	100%	100%
1320	method	#labs	DR17	DR18	DR7	DPw5	DPw1	DPw4	DP401	DR4	DQ7	DP11	DP13	DP19	DP15	DP17	DP23	DPw2	DP28	DP9	DPA1*02
	PRA	3	67%	67%	67%	33%	33%	33%		33%	33%										
	SAB	21	100%	100%	100%	100%	95%	86%	29%	81%	48%	100%	100%	90%	81%	76%	76%	76%	71%	38%	38%
1320	method	#labs	DQ2	DQA1*05	DQA1*01	DQA1*04	DQA1*03	DQA1*06	DQA1*02	DQ8	DPw3	DPw6	DP14	DPA1*01	DPA1*04	DPA1*03	DQ9	DP18	DP20	DP10	DR3
	PRA	3	33%	33%	33%	33%	33%	33%	33%												
	SAB	21	29%	67%	43%	38%	24%	33%	5%	38%	38%	33%	33%	33%	33%	14%	33%	29%	29%	14%	10%

Serum 1320. Strong class I and class II reactivity was detected in this sample, including anti-B18 (19769) reactivity which was reported by all methods. Additional reactivity to B38 (7158), B64 (14057), B65 (11095), B44 (4848), and B45 (6471), along with reactivity to a number of 1C, 5C, and 7C specificities was reported by various methods.

Reactivity to a number of DR, DQ, and DP antibodies was reported as well by C1q, PRA, and SAB. This included strong reactivity to DR15 (21159), DR16 (20905), DR51 (22239), DP5 (10532), DP1 (8924), DP4 (DP401) (8836), DP13 (8400), DQ4 (15638), DQ5 (22118), and DQ6 (22414).

*(median MFI)

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Table 19. Summary of the 581st Serum Exchange (Serum #1317-1320) by NIH-Standard - class I

Method: NIH-Standard											
*** Serum 1317 ***			*** Serum 1318 ***			*** Serum 1319 ***			*** Serum 1320 ***		
1 typing Labs			1 typing Labs			1 typing Labs			1 typing Labs		
Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion
no consensus			no consensus			no consensus			no consensus		

Table 20. Summary of the 581st Serum Exchange (Serum #1317-1320) by Antiglobulin - class I

Method: Antiglobulin											
*** Serum 1317 ***			*** Serum 1318 ***			*** Serum 1319 ***			*** Serum 1320 ***		
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%	A66	50%	100%	B27	100%	100%	B18	100%	100%
A36	50%	100%				B42	100%	100%	A3	50%	100%
B42	50%	100%				B7	100%	100%	B35	50%	100%
B49	50%	100%				B48	50%	100%	B37	50%	100%
B53	50%	100%				B56	50%	100%	B38	50%	100%
B56	50%	100%				B60	50%	100%	B41	50%	100%
B70	50%	100%				B61	50%	100%	B44	50%	100%
B55	50%	88%				B81	50%	100%	B51	50%	100%
B35	50%	83%				B55	50%	88%	B8	50%	100%
A1	50%	80%									

Table 21. Summary of the 581st Serum Exchange (Serum #1317-1320) by C1q - class I

Method: C1q											
*** Serum 1317 ***			*** Serum 1318 ***			*** Serum 1319 ***			*** Serum 1320 ***		
3 typing Labs			3 typing Labs			3 typing Labs			3 typing Labs		
Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion
A1	100%	100%	A66	67%	100%	B42	100%	100%	B18	100%	100%
A29	100%	100%	A11	33%	100%	B54	100%	100%	B51	100%	100%
A36	67%	100%	A25	33%	100%	B56	100%	100%	B64	100%	100%
A30	33%	100%	A26	33%	100%	B67	100%	100%	A23	33%	100%
B75	33%	100%	A34	33%	100%	B7	100%	100%	A24	33%	100%
			A43	33%	100%	B73	100%	100%	B35	33%	100%
			A6601	33%	100%	B27	67%	100%	B53	33%	100%
						B48	67%	100%	B54	33%	100%
						B55	67%	100%	B65	33%	100%
						B60	67%	100%	B78	33%	100%
						B61	67%	100%	B8	33%	100%
						B81	67%	100%			
						B82	67%	100%			
						A66	33%	100%			
						A6602	33%	100%			
						B2705	33%	100%			
						B2708	33%	100%			
						B8101	33%	100%			
						B8201	33%	100%			

Table 22. Summary of the 581st Serum Exchange (Serum #1317-1320) by Luminex PRA - class I

Method: Luminex - PRA											
*** Serum 1317 ***			*** Serum 1318 ***			*** Serum 1319 ***			*** Serum 1320 ***		
3 typing Labs			3 typing Labs			3 typing Labs			3 typing Labs		
Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion
A1	67%	100%	A11	67%	100%	B13	67%	100%	B18	67%	100%
A26	67%	100%	A25	67%	100%	B27	67%	100%	B35	67%	100%
A29	67%	100%	A26	67%	100%	B42	67%	100%	B37	67%	100%
A30	67%	100%	A29	67%	100%	B47	67%	100%	B38	67%	100%
A36	67%	100%	A3	67%	100%	B48	67%	100%	B44	67%	100%
A80	67%	100%	A30	67%	100%	B54	67%	100%	B45	67%	100%
B35	67%	100%	A31	67%	100%	B55	67%	100%	B51	67%	100%
B42	67%	100%	A32	67%	100%	B56	67%	100%	B52	67%	100%
B49	67%	100%	A33	67%	100%	B57	67%	100%	B53	67%	100%
B53	67%	100%	A34	67%	100%	B60	67%	100%	B54	67%	100%
B56	67%	100%	A66	67%	100%	B61	67%	100%	B59	67%	100%
B58	67%	100%	A68	67%	100%	B63	67%	100%	B62	67%	100%
B62	67%	100%	B7	67%	100%	B67	67%	100%	B64	67%	100%
B63	67%	100%	B8	67%	100%	B7	67%	100%	B65	67%	100%
B67	67%	100%	B81	67%	100%	B73	67%	100%	B71	67%	100%
B71	67%	100%	A1	33%	100%	B81	67%	100%	B72	67%	100%
B72	67%	100%	A36	33%	100%	B82	67%	100%	B77	67%	100%
A2	33%	100%	A43	33%	100%	A3	33%	100%	B78	67%	100%
A3	33%	100%	A69	33%	100%	A66	33%	100%	B8	67%	100%
A43	33%	100%	A74	33%	100%	B2708	33%	100%	B82	67%	100%
A68	33%	100%	A80	33%	100%	B703	33%	100%	A1	33%	100%
B39	33%	100%	B15	33%	100%	B8201	33%	100%	A2	33%	100%
B41	33%	100%	B27	33%	100%	Cw15	33%	100%	A203	33%	100%
B44	33%	100%	B39	33%	100%	Cw3	33%	100%	A23	33%	100%
B50	33%	100%	B40	33%	100%				A24	33%	100%
B54	33%	100%	B41	33%	100%				A2403	33%	100%
B55	33%	100%	B42	33%	100%				A25	33%	100%
B57	33%	100%	B44	33%	100%				A26	33%	100%
B7	33%	100%	B48	33%	100%				A29	33%	100%
B75	33%	100%	B57	33%	100%				A3	33%	100%
B77	33%	100%	B58	33%	100%				A33	33%	100%
B82	33%	100%	B703	33%	100%				A34	33%	100%
Cw10	33%	100%	B73	33%	100%				A66	33%	100%
Cw15	33%	100%	B82	33%	100%				A68	33%	100%
Cw2	33%	100%	Cw12	33%	100%				A69	33%	100%

Table 23. Summary of the 581st Serum Exchange (Serum #1317-1320) by Single Antigen - class I

Method: Luminex - SAB											
*** Serum 1317 ***			*** Serum 1318 ***			*** Serum 1319 ***			*** Serum 1320 ***		
23 typing Labs			23 typing Labs			23 typing Labs			23 typing Labs		
Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion
A1	100%	100%	A25	100%	100%	B13	100%	100%	A2	100%	100%
A29	100%	100%	A26	100%	100%	B42	100%	100%	A23	100%	100%
A36	100%	100%	A3	100%	100%	B47	100%	100%	A24	100%	100%
A43	100%	100%	A30	100%	100%	B54	100%	100%	A3	100%	100%
A80	100%	100%	A31	100%	100%	B55	100%	100%	A33	100%	100%
B35	100%	100%	A32	100%	100%	B56	100%	100%	A68	100%	100%
B49	100%	100%	A33	100%	100%	B57	100%	100%	B18	100%	100%
B50	100%	100%	A34	100%	100%	B60	100%	100%	B35	100%	100%
B53	100%	100%	A36	100%	100%	B61	100%	100%	B37	100%	100%
B56	100%	100%	A43	100%	100%	B63	100%	100%	B38	100%	100%
B62	100%	100%	A68	100%	100%	B67	100%	100%	B44	100%	100%
B71	100%	100%	A69	100%	100%	B7	100%	100%	B45	100%	100%
B72	100%	100%	A74	100%	100%	B73	100%	100%	B51	100%	100%
B75	100%	100%	A80	100%	100%	B82	96%	100%	B52	100%	100%
B77	100%	100%	B41	100%	100%	Cw2	96%	38%	B53	100%	100%
A26	96%	100%	B42	100%	100%	B27	91%	100%	B54	100%	100%
B42	96%	100%	B48	100%	100%	B48	91%	100%	B59	100%	100%
B55	96%	100%	B60	100%	100%	B81	91%	100%	B62	100%	100%
B63	96%	100%	B7	100%	100%	Cw9	91%	75%	B64	100%	100%
B67	96%	100%	B8	100%	100%	Cw10	91%	73%	B65	100%	100%
A30	83%	100%	A1	96%	100%	Cw15	83%	100%	B71	100%	100%
B46	83%	100%	A29	96%	100%	B46	83%	33%	B75	100%	100%
B54	83%	67%	B73	96%	50%	A66	65%	57%	B76	100%	100%
B7	78%	80%	A11	91%	100%	A6602	52%	100%	B77	100%	100%
A2	78%	68%	B81	91%	100%	B2708	39%	100%	B8	100%	100%
B51	78%	40%	A66	87%	100%	Cw1	35%	100%	A69	96%	100%
B78	74%	100%	Cw18	83%	100%	Cw14	35%	100%	B72	96%	100%
A69	70%	100%	Cw6	83%	100%	B2705	26%	100%	B73	96%	100%
B82	70%	100%	Cw7	83%	100%	B8101	26%	100%	B78	96%	100%
A33	65%	100%	B75	65%	100%	A25	22%	100%	B39	91%	100%
A68	65%	100%	B38	57%	100%	Cw16	22%	100%	B55	91%	100%
B58	65%	100%	B61	57%	100%	B703	13%	100%	B82	91%	100%
B81	65%	100%	B67	52%	100%	B64	13%	50%	A34	91%	50%
Cw9	65%	100%	Cw10	52%	100%	A32	9%	100%	B67	87%	100%
B57	61%	100%	B39	48%	100%	B40	9%	100%	A1	83%	100%

Table 23. Summary of the 581st Serum Exchange (Serum #1317-1320) by Single Antigen - class I

Method: Luminex - SAB, cont.											
*** Serum 1317 ***			*** Serum 1318 ***			*** Serum 1319 ***			*** Serum 1320 ***		
23 typing Labs			23 typing Labs			23 typing Labs			23 typing Labs		
Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion
Cw4	61%	100%	Cw9	39%	100%	B52	9%	100%	B42	83%	100%
Cw10	61%	50%	A6601	26%	100%	B7C	9%	100%	B7	83%	100%
A31	57%	100%	A6602	26%	100%	B8201	9%	100%	A25	78%	100%
A74	57%	100%	A1101	22%	100%	Cw17	9%	100%	B41	78%	100%
A34	48%	100%	A1102	22%	100%	A10C	4%	100%	B61	78%	83%
B41	39%	100%	B8101	22%	100%	A2C	4%	100%	A29	74%	50%
B59	35%	100%	B44	17%	100%	B12C	4%	100%	B48	70%	100%
A23	26%	100%	B703	17%	100%	B15	4%	100%	A66	70%	50%
B76	26%	100%	B77	17%	100%	B22	4%	100%	B50	65%	100%
B39	22%	100%	B18	13%	100%	B39	4%	100%	B60	65%	100%
B37	17%	100%	B49	13%	100%	B58	4%	100%	B81	65%	100%
B52	13%	100%	B50	13%	100%	B5C	4%	100%	A26	61%	100%
A6601	9%	100%	Cw12	13%	100%	B75	4%	100%	B27	39%	100%
B27	9%	100%	Cw2	13%	100%	B76	4%	100%	B56	39%	100%
B2708	9%	100%	A10C	9%	100%	B8	4%	100%	B13	35%	100%
B5C	9%	100%	A1C	9%	100%	B8C	4%	100%	A2403	30%	100%
B7801	9%	100%	B3901	9%	100%	Bw4	4%	100%	A6602	26%	100%
B8101	9%	100%	B47	9%	100%	Bw6	4%	100%	B3901	26%	100%
A10C	4%	100%	B55	9%	100%	Cw3	4%	100%	A203	22%	100%
A1C	4%	100%	B62	9%	100%	Cw4	4%	100%	A6601	22%	100%
A203	4%	100%	B63	9%	100%	Cw7	4%	100%	B2708	22%	100%
A24	4%	100%	A10	4%	100%				B49	22%	100%
A2C	4%	100%	A19	4%	100%				Bw6	22%	100%
A66	4%	100%	A28	4%	100%				B7801	17%	100%
B12C	4%	100%	A2C	4%	100%				A2C	13%	100%
B13	4%	100%	B12C	4%	100%				B8101	13%	100%
B15	4%	100%	B13	4%	100%				B8201	13%	100%
B21	4%	100%	B27	4%	100%				B8C	13%	100%
B38	4%	100%	B37	4%	100%				Bw4	13%	100%
B3901	4%	100%	B40	4%	100%				B14	9%	100%
B4005	4%	100%	B4005	4%	100%				B5C	9%	100%
B48	4%	100%	B45	4%	100%				Cw18	9%	100%
B70	4%	100%	B46	4%	100%				A10C	4%	100%
B7C	4%	100%	B57	4%	100%				A11	4%	100%
B8201	4%	100%	B5C	4%	100%				A1C	4%	100%

Table 24. Summary of the 581st Serum Exchange (Serum #1317-1320) by C1q - class II

Method: C1q											
*** Serum 1317 ***			*** Serum 1318 ***			*** Serum 1319 ***			*** Serum 1320 ***		
2 typing Labs			2 typing Labs			3 typing Labs			3 typing Labs		
Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion
NEG	100%	-	DQ7	100%	100%	NEG	100%	-	DQ4	67%	100%
			DR11	100%	100%				DQ5	67%	100%
			DR13	100%	100%				DQ6	67%	100%
			DR8	100%	100%				DR1	67%	100%
			DQ8	50%	100%				DR10	67%	100%
			DQ9	50%	100%				DR103	67%	100%
									DR11	67%	100%
									DR12	67%	100%
									DR13	67%	100%
									DR15	67%	100%
									DR16	67%	100%
									DR51	67%	100%
									DR8	67%	100%
									DR9	67%	100%
									DR14	33%	100%

Table 25. Summary of the 581st Serum Exchange (Serum #1317-1320) by Luminex PRA - class II

Method: Luminex-PRA											
*** Serum 1317 ***			*** Serum 1318 ***			*** Serum 1319 ***			*** Serum 1320 ***		
3 typing Labs			3 typing Labs			3 typing Labs			3 typing Labs		
Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion
DR10	67%	100%	DQ7	67%	100%	NEG	33%	-	DQ4	67%	100%
DR11	67%	100%	DQ8	67%	100%	DQ7	33%	100%	DQ5	67%	100%
DR12	67%	100%	DQ9	67%	100%	DQ8	33%	100%	DQ6	67%	100%
DR13	67%	100%	DR11	67%	100%	DQ9	33%	100%	DR1	67%	100%
DR14	67%	100%	DR4	67%	100%	DQA1*03	33%	100%	DR10	67%	100%
DR17	67%	100%	DR8	67%	100%				DR103	67%	100%
DR18	67%	100%	DQ6	33%	100%				DR11	67%	100%
DR52	67%	100%	DQA1*03	33%	100%				DR12	67%	100%
DR8	67%	100%	DQA1*05	33%	100%				DR13	67%	100%
DR9	67%	100%	DR13	33%	100%				DR14	67%	100%
DR1403	33%	100%	DR16	33%	100%				DR15	67%	100%
DR1404	33%	100%							DR16	67%	100%
DR53	33%	100%							DR17	67%	100%
									DR18	67%	100%
									DR51	67%	100%
									DR52	67%	100%
									DR7	67%	100%
									DR8	67%	100%
									DR9	67%	100%
									DPw1	33%	100%
									DPw4	33%	100%
									DPw5	33%	100%
									DQ2	33%	100%
									DQ7	33%	100%
									DQA1*01	33%	100%
									DQA1*02	33%	100%
									DQA1*03	33%	100%
									DQA1*04	33%	100%
									DQA1*05	33%	100%
									DQA1*06	33%	100%
									DR1403	33%	100%
									DR1404	33%	100%
									DR4	33%	100%
									DR53	33%	100%

Table 26. Summary of the 581st Serum Exchange (Serum #1317-1320) by Single Antigen - class II

Method: Luminex - SAB											
*** Serum 1317 ***			*** Serum 1318 ***			*** Serum 1319 ***			*** Serum 1320 ***		
21 typing Labs			21 typing Labs			19 typing Labs			21 typing Labs		
Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion	Antigen	Consensus	Inclusion
DR14	95%	100%	DQ7	100%	100%	DQ8	58%	100%	DP11	100%	100%
DR11	90%	100%	DQ8	100%	100%	DQ7	52%	100%	DP13	100%	100%
DR12	90%	100%	DQ9	100%	100%	DQ9	47%	100%	DPw5	100%	100%
DR13	90%	100%	DR11	100%	100%	DQA1*03	42%	0%	DQ4	100%	100%
DR17	90%	100%	DR4	100%	100%	DQA1*05	21%	100%	DQ6	100%	100%
DR18	90%	100%	DR8	100%	100%	DQA1*06	16%	100%	DR1	100%	100%
DR8	90%	100%	DR13	90%	38%	DQ3	11%	100%	DR10	100%	100%
DR9	90%	100%	DR16	76%	100%	NEG	11%	100%	DR103	100%	100%
DR53	90%	94%	DQ6	57%	33%				DR11	100%	100%
DR10	86%	100%	DR53	52%	100%				DR12	100%	100%
DR52	81%	93%	DQA1*03	29%	100%				DR13	100%	100%
DR7	38%	100%	DR52	29%	33%				DR14	100%	100%
DQ5	38%	50%	DPw5	24%	100%				DR15	100%	100%
DQ2	24%	100%	DQ4	24%	100%				DR16	100%	100%
DQA1*05	19%	100%	DQA1*05	24%	100%				DR17	100%	100%
DR1403	14%	100%	DQA1*06	24%	100%				DR18	100%	100%
DR1404	14%	100%	DP14	19%	100%				DR51	100%	100%
DQA1*01	10%	100%	DP17	19%	100%				DR52	100%	100%
DR3	10%	100%	DPA1*02	19%	100%				DR53	100%	100%
DQ6	5%	100%	DR1404	19%	100%				DR7	100%	100%
DQ7	5%	100%	DP9	14%	100%				DR8	100%	100%
DQ8	5%	100%	DQA1*01	14%	100%				DR9	100%	100%
DQ9	5%	100%	DR15	14%	100%				DPw1	95%	100%
DQA1*03	5%	100%	DP10	10%	100%				DQ5	95%	100%
DQA1*06	5%	100%	DP11	10%	100%				DP19	90%	100%
DR16	5%	100%	DP13	10%	100%				DPw4	86%	93%
DR4	5%	100%	DP15	10%	100%				DP15	81%	100%
DR5	5%	100%	DPw1	10%	100%				DR4	81%	64%
DR6	5%	100%	DQ3	10%	100%				DP17	76%	100%
NEG	5%	100%	DR12	10%	100%				DP23	76%	100%
			DR14	10%	100%				DPw2	76%	100%
			DR51	10%	100%				DP28	71%	67%
			DP19	5%	100%				DQA1*05	67%	100%
			DP28	5%	100%				DQ7	48%	100%
			DPw3	5%	100%				DQA1*01	43%	100%

Table 26. Summary of the 581st Serum Exchange (Serum #1317-1320) by Single Antigen - class II

Method: Luminex - SAB, cont.								
*** Serum 1318 ***						*** Serum 1320 ***		
23 typing Labs						23 typing Labs		
Antigen	Consensus	Inclusion				Antigen	Consensus	Inclusion
DPw6	5%	100%				DP9	38%	100%
DQA1*02	5%	100%				DPA1*02	38%	100%
DR103	5%	100%				DPw3	38%	100%
						DQ8	38%	100%
						DQA1*04	38%	100%
						DP14	33%	100%
						DPA1*01	33%	100%
						DPA1*04	33%	100%
						DPw6	33%	100%
						DQ9	33%	100%
						DQA1*06	33%	100%
						DP18	29%	100%
						DP20	29%	100%
						DP401	29%	100%
						DQ2	29%	80%
						DQA1*03	24%	100%
						DR1404	19%	100%
						DP10	14%	100%
						DPA1*03	14%	100%
						DR1403	14%	100%
						DR3	10%	100%
						DP26	5%	100%
						DPA1*05	5%	100%
						DQ1	5%	100%
						DQA1*02	5%	100%
						DR2	5%	100%
						DR5	5%	100%
						DR6	5%	100%

Table 27. Individual laboratory results for Serum #1317 - 1320 by NIH-Standard - class I

Ctr	**** Serum 1317 ****				**** Serum 1318 ****				**** Serum 1319 ****				**** Serum 1320 ****				Method
	% POS	A29		Other	% POS	A66		Other	% POS	B27	B7	Other	% POS	B18		Other	
786		+				+				+	+			+			STD

STD = NIH-standard

Table 28. Individual laboratory results for Serum #1317 - 1320 by Antiglobulin - class I

Ctr	**** Serum 1317 ****											**** Serum 1318 ****			**** Serum 1319 ****										**** Serum 1320 ****									Method				
	% POS	A29	A36	B42	B49	B53	B56	B70	B55	B35	A1	Other	% POS	A66	Other	% POS	B27	B42	B7	B48	B56	B60	B61	B81	B55	Other	% POS	B18	A3	B35	B37	B38	B41		B44	B51	B8	Other
774	47	+	+	+	+	+	+	+	+	+	+		100			55	+	+	+	+	+	+	+	+	+		90	+	+	+	+	+	+	+	+	+		Antiglobulin
786		+											+				+	+	+								+											Antiglobulin

Table 29. Individual laboratory results for Serum #1317 - 1320 by C1q - class I

**** Serum 1317 ****														**** Serum 1318 ****										
Ctr	% POS	A1	A29	A36	A30	B75								Other	% POS	A66	A11	A25	A26	A34	A43	A6601	Other	Method
786		+	+		+																	+		C1q
2400		+	+	+		+										+	+	+	+	+	+			C1q
3753		+	+	+												+								C1q

**** Serum 1319 ****														**** Serum 1320 ****															
Ctr	% POS	B42	B54	B56	B67	B7	B73	B27	B48	B55	B60	B61	B81	B82	A66	A6602	B2705	B2708	B8101	B8201	Other	% POS	B18	B51	B64	A23	A24	Other	Method
786		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			+	+	+				C1q
2400		+	+	+	+	+	+	+	+	+	+	+	+	+	+								+	+	+	+	+	B78,B53,B54,B65 >	C1q
3753		+	+	+	+	+	+	+		+			+	+									+	+	+				C1q

Table 30. Individual laboratory results for Serum #1317 - 1320 by Luminex PRA - class I

**** Serum 1317 ****																													
Ctr	% POS	A1	A26	A29	A30	A36	A80	B35	B42	B49	B53	B56	B58	B62	B63	B67	B71	B72	A2	A3	A43	A68	B39	B41	B44	B50	B54	Other	Method
2400	89																												LMX-PRA
3753	90	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			+					+	B7	LMX-PRA
8043	23	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+		+	+	+	+		B82,B75,B55,B77 >	LMX-PRA

**** Serum 1318 ****																													
Ctr	% POS	A11	A25	A26	A29	A3	A30	A31	A32	A33	A34	A66	A68	B7	B8	B81	A1	A36	A43	A69	A74	A80	B15	B27	B39	B40	B41	Other	Method
2400	89																												LMX-PRA
3753	96	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+													LMX-PRA
8043	33	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B48,B44,B82,B703 >	LMX-PRA

**** Serum 1319 ****																													
Ctr	% POS	B13	B27	B42	B47	B48	B54	B55	B56	B57	B60	B61	B63	B67	B7	B73	B81	B82	A3	A66	B2708	B703	B8201	Cw15	Cw3		Other	Method	
2400	62																												LMX-PRA
3753	62	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+											LMX-PRA
8043	27	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			LMX-PRA	

**** Serum 1320 ****																													
Ctr	% POS	B18	B35	B37	B38	B44	B45	B51	B52	B53	B54	B59	B62	B64	B65	B71	B72	B77	B78	B8	B82	A1	A2	A203	A23	A24	A2403	Other	Method
2400	100																												LMX-PRA
3753	96	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+							B7,B55,B81	LMX-PRA
8043	58	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B60,B61,A66,B50 >	LMX-PRA

Table 31. Individual laboratory results for Serum #1317 by Single Antigen - class I

		**** Serum 1317 ****																																																							
Ctr	% POS	A1	A29	A36	A43	A80	B35	B49	B50	B53	B56	B62	B71	B72	B75	B77	A26	B42	B55	B63	B67	A30	B46	B54	B7	A2	B51	B78	A69	B82	A33	A68	B58	B81	Cw9	B57	Cw4	Cw10	A31	A74	A34	B41	B59	A23	B76	B39	Other	Method									
615		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			LMX-SAB					
725		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			LMX-SAB				
774	79	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			LMX-SAB				
786		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B37,B8101, B7801>		LMX-SAB				
910		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			LMX-SAB			
2400		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			LMX-SAB				
3224	53	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			LMX-SAB			
3753		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			LMX-SAB		
3766	96	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A203,B8101, B7801, A*34:02, B*57:03		LMX-SAB				
3808	23	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			LMX-SAB			
3966		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			LMX-SAB		
4322		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			LMX-SAB		
5219	19	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B52,B37,Cw1> B70,B21,B5C		LMX-SAB		
5462		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			LMX-SAB		
6649	57	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			LMX-SAB		
8082		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B52,B37, B2708		LMX-SAB		
8086	35	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			LMX-SAB		
8090		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A24,A66,B13>		LMX-SAB		
8098		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Bw4,Bw6,B12C		LMX-SAB		
8100		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B27		LMX-SAB		
8103		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B15,Cw18		LMX-SAB		
8112		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			LMX-SAB		
8125		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B48,B4005		LMX-SAB

Table 32. Individual laboratory results for Serum #1318 by Single Antigen - class I

		**** Serum 1318 ****																																																		
Ctr	% POS	A25	A26	A3	A30	A31	A32	A33	A34	A36	A43	A68	A69	A74	A80	B41	B42	B48	B60	B7	B8	A1	A29	B73	A11	B81	A66	Cw18	Cw6	Cw7	B75	B38	B61	B67	Cw10	B39	Cw9	A6601	A6602	A1101	A1102	B8101	Other	Method								
615		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B*15:02	LMX-SAB		
725		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		LMX-SAB	
774	88	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		LMX-SAB	
786		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B44,B77,B3901	LMX-SAB	
910		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B*15:02	LMX-SAB	
2400		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		LMX-SAB	
3224	44	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		LMX-SAB	
3753		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		LMX-SAB	
3766	96	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B3901, B*15:02, B*40:02	LMX-SAB	
3808	33	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B703	LMX-SAB	
3966		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		LMX-SAB
4322		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B49,B50,B44,B77 >	LMX-SAB
5219	31	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A10,B703,A19,A28 >	LMX-SAB	
5462		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		LMX-SAB	
6649	47	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		LMX-SAB	
8082		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B62,B49,B50,B13 >	LMX-SAB
8086	37	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		LMX-SAB	
8090		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B49,B50,B47,B44 >	LMX-SAB
8098		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B703,Bw4,Bw6,Cw12 >	LMX-SAB
8100		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		LMX-SAB	
8103		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B40,B703,Cw16	LMX-SAB
8112		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		LMX-SAB	
8125		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B62,B55,B63,Cw12 >	LMX-SAB

Table 33. Individual laboratory results for Serum #1319 by Single Antigen - class I

		**** Serum 1319 ****																																			
Ctr	% POS	B13	B42	B47	B54	B55	B56	B57	B60	B61	B63	B67	B7	B73	B82	Cw2	B27	B48	B81	Cw9	Cw10	Cw15	B46	A66	A6602	B2708	Cw1	Cw14	B2705	B8101	A25	Cw16	Other	Method			
615		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+						A*66:02	LMX-SAB		
725		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+									LMX-SAB	
774	61	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+										B64	LMX-SAB		
786		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+			+	+				B8201	LMX-SAB		
910		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+											LMX-SAB	
2400		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+												LMX-SAB	
3224	29	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+		+	+						LMX-SAB	
3753		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+										LMX-SAB	
3766	76	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+		+	+						LMX-SAB	
3808	23	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+										LMX-SAB	
3966		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+				+								LMX-SAB	
4322		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+		+	+				+	+		Cw4,B52,B75,A32 >	LMX-SAB	
5219	21	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+		+	+					B40,B703,B22,B7C	LMX-SAB	
5462		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+		+	+					B8201	LMX-SAB	
6649	30	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+												LMX-SAB	
8082		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+		+	+							B52,A32,B64,Cw17	LMX-SAB	
8086	30	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+										+		LMX-SAB	
8090		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			+	+								LMX-SAB	
8098		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+									B703,Bw4,Bw6,B12C >	LMX-SAB	
8100		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			+	+								LMX-SAB	
8103		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+			+	+					B40,B15,B703,Cw3	LMX-SAB
8112		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+												LMX-SAB	
8125		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			+	+								B39	LMX-SAB

Table 34. Individual laboratory results for Serum #1320 by Single Antigen - class I

		**** Serum 1320 ****																																																															
Ctr	% POS	A2	A23	A24	A3	A33	A68	B18	B35	B37	B38	B44	B45	B51	B52	B53	B54	B59	B62	B64	B65	B71	B75	B76	B77	B8	A69	B72	B73	B78	B39	B55	B82	A34	B67	A1	B42	B7	A25	B41	B61	A29	B48	A66	B50	B60	B81	A26	B27																
615		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+															
725		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+													
774	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+												
786		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+											
910		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+											
2400		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+											
3224	61	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+											
3753		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+										
3766	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+										
3808		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+										
3966		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+								
4322		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+							
5219	32	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+								
5462		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+							
6649	62	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+							
8082		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+							
8086	54	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+						
8090		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+					
8098		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+				
8100		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+				
8103		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+				
8112		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
8125		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Table 34. Individual laboratory results for Serum #1320 by Single Antigen - class I, cont.

**** Serum 1320 ****														
Ctr	% POS	B56	B13	A2403	A6602	B3901	A203	A6601	B2708	B49	Bw6	Other	Method	
615		+	+									B*13:02	LMX-SAB	
725													LMX-SAB	
774	100												LMX-SAB	
786		+	+	+	+	+	+	+	+	+		B8101,B8201	LMX-SAB	
910													LMX-SAB	
2400													LMX-SAB	
3224	61	+	+	+	+			+	+				LMX-SAB	
3753									+		+		LMX-SAB	
3766	100				+	+	+	+	+			B7801,B8201,A*29:02, B*27:08	LMX-SAB	
3808				+	+							B7801	LMX-SAB	
3966													LMX-SAB	
4322		+	+							+	+	Cw4,Cw6,A11,B47 >	LMX-SAB	
5219	32			+		+	+					+	A9,B5,A28,B12 >	LMX-SAB
5462				+	+	+		+					B8101,B7801,B8201	LMX-SAB
6649	62												LMX-SAB	
8082		+	+								+		LMX-SAB	
8086	54												LMX-SAB	
8090		+	+								+		LMX-SAB	
8098				+		+	+				+	Bw4,B12C,B5C,B8C >	LMX-SAB	
8100		+	+									B8C,A2C	LMX-SAB	
8103		+		+	+	+	+	+	+			B40,B15,B703,B14 >	LMX-SAB	
8112													LMX-SAB	
8125		+	+									Cw18,B4005	LMX-SAB	

Table 35. Individual laboratory results for Serum #1317 - 1320 by C1q - class II

		**** Serum 1317 ****				**** Serum 1318 ****						**** Serum 1319 ****				**** Serum 1320 ****																			
Ctr	% POS			Other	% POS	DQ7	DR11	DR13	DR8	DQ8	DQ9	Other	% POS			Other	% POS	DQ4	DQ5	DQ6	DR1	DR10	DR103	DR11	DR12	DR13	DR15	DR16	DR51	DR8	DR9	DR14	Other	Method	
2400	0					+	+	+	+	+	+		0					+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	C1q
3753	0					+	+	+	+			DRB1*13:03	0					+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	C1q

Table 36. Individual laboratory results for Serum #1317 - 1320 by Luminex PRA - class II

**** Serum 1317 ****														**** Serum 1318 ****																									
Ctr	% POS	DR10	DR11	DR12	DR13	DR14	DR17	DR18	DR52	DR8	DR9	DR1403	DR1404	Other	% POS	DQ7	DQ8	DQ9	DR11	DR4	DR8	DQ6	DQA1*03	DQA1*05													Other	Method	
2400	89														60																								LMX-PRA
3753	80	+	+	+	+	+	+	+	+	+	+				83	+	+	+	+	+	+	+															DR16	LMX-PRA	
8043	23	+	+	+	+	+	+	+	+	+	+	+	+	DR53	23	+	+	+	+	+	+		+	+													DR13	LMX-PRA	

**** Serum 1319 ****														**** Serum 1320 ****																												
Ctr	% POS	DQ7	DQ8	DQ9	DQA1*03									Other	% POS	DQ4	DQ5	DQ6	DR1	DR10	DR103	DR11	DR12	DR13	DR14	DR15	DR16	DR17	DR18	DR51	DR52	DR7	DR8	DR9	DPw1	DPw4	DPw5	Other	Method			
2400	0														100																										LMX-PRA	
3753	12														97	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+				LMX-PRA
8043	5	+	+	+	+										74	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	DR4,DR1403,DR1404,DR53 >	LMX-PRA	

Table 37. Individual laboratory results for Serum #1317 by Single Antigen - class II

**** Serum 1317 ****																	
Ctr	% POS	DR14	DR11	DR12	DR13	DR17	DR18	DR8	DR9	DR53	DR10	DR52	DR7	DQ5	DQ2	Other	Method
615		+	+	+	+	+	+	+	+	+	+	+	+	+	+	DQB1*05:02	LMX-SAB
774	89	+	+	+	+	+	+	+	+	+	+	+					LMX-SAB
910		+	+	+	+	+	+	+	+	+	+	+	+			DQB1*05:02	LMX-SAB
2400		+	+	+	+	+	+	+	+	+	+	+					LMX-SAB
3224	23	+	+	+	+	+	+	+	+	+	+	+	+		+	DQB1*05:02	LMX-SAB
3753		+	+	+	+	+	+	+	+	+	+	+					LMX-SAB
3766	92	+	+	+	+	+	+	+	+	+	+					DQB1*05:02, DRB3*03:01, DRB3*02:02	LMX-SAB
3808	0																LMX-SAB
3966		+	+	+	+	+	+	+	+	+	+	+		+		DR4,DR16,DQ7,DQ8 >	LMX-SAB
4322		+	+	+	+	+	+	+	+	+	+	+	+	+	+	DQ6,DQA1*01,DQA1*05	LMX-SAB
5219	19	+	+	+	+	+	+	+	+	+	+					DR3,DR5,DR6,DR1403 >	LMX-SAB
5462		+	+	+	+	+	+	+	+	+	+	+					LMX-SAB
6649	24	+	+	+	+	+	+	+	+	+	+	+	+				LMX-SAB
8082		+	+	+	+	+	+	+	+	+	+	+	+	+		DQA1*05	LMX-SAB
8086	19	+	+	+	+	+	+	+	+	+	+	+	+	+			LMX-SAB
8090		+	+	+	+	+	+	+	+	+	+	+	+	+	+	DQA1*05	LMX-SAB
8098		+	+	+	+	+	+	+	+	+	+	+				DR1403,DR1404	LMX-SAB
8100		+	+	+	+	+	+	+	+	+	+	+	+	+	+		LMX-SAB
8103		+	+	+	+	+	+	+	+	+	+	+				DR3,DR1403,DR1404	LMX-SAB
8112		+															LMX-SAB
8125		+	+	+	+	+	+	+	+	+	+	+		+			LMX-SAB

Table 38. Individual laboratory results for Serum #1318 - 1319 by Single Antigen - class II

**** Serum 1318 ****																	**** Serum 1319 ****									
Ctr	% POS	DQ7	DQ8	DQ9	DR11	DR4	DR8	DR13	DR16	DQ6	DR53	DQA1*03	DR52	DPw5	DQ4	DQA1*05	DQA1*06	Other	% POS	DQ8	DQ7	DQ9	DQA1*03	DQA1*05	Other	Method
615		+	+	+	+	+	+	+	+	+	+				+			DPA1*02, DRB1*13:03		+	+	+				LMX-SAB
774	57	+	+	+	+	+	+	+		+									0				+			LMX-SAB
910		+	+	+	+	+	+		+		+							DQA1*03:03, DQB1*06:01, DQB1*06:03, DQB1*06:09, DRB1*13:03		+	+	+				LMX-SAB
2400		+	+	+	+	+	+	+	+	+										+	+	+				LMX-SAB
3224	28	+	+	+	+	+	+	+	+	+	+							DQA1*01:03, DQA1*03:02, DQA1*03:03	8	+	+	+			DQA1*03:02	LMX-SAB
3753		+	+	+	+	+	+	+	+	+	+							DRB1*13:03		+	+	+				LMX-SAB
3766	65	+	+	+	+	+	+		+			+				+	+	DRB1*13:03, DQA1*01:03, DQA1*06:01, DQA1*05:03, DQA1*05:05, DQA1*03:02>	0							LMX-SAB
3808	23	+	+	+	+	+	+	+										DR1404	5				+		DQ3	LMX-SAB
3966		+	+	+	+	+	+	+	+	+	+	+				+	+	DQA1*01	0							LMX-SAB
4322		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	DR12,DR15,DR51,DPw1 >		+	+	+	+	+	DQA1*06	LMX-SAB
5219	22	+	+	+	+	+	+	+										DR1404,DQ3	5							LMX-SAB
5462		+	+	+	+	+	+	+	+	+										+	+	+				LMX-SAB
6649	32	+	+	+	+	+	+	+	+	+	+								8				+	+	DQA1*06	LMX-SAB
8082		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	DR103,DR12,DR15,DR51 >		+	+	+	+	+	DQA1*06	LMX-SAB
8086	200	+	+	+	+	+	+	+	+	+	+	+	+													LMX-SAB
8090		+	+	+	+	+	+	+	+	+	+	+	+	+				DP9,DP17,DP14					+	+		LMX-SAB
8098		+	+	+	+	+	+	+	+				+	+				DR1404,DR15,DPw1,DP11 >		+						LMX-SAB
8100		+	+	+	+	+	+	+	+	+	+		+	+	+			DPw3		+	+	+				LMX-SAB
8103		+	+	+	+	+	+	+										DR14,DR1404,DQ3		+	+		+		DQ3	LMX-SAB
8112		+	+	+	+	+	+	+				+					+						+			LMX-SAB
8125		+	+	+	+	+	+	+	+	+	+				+			DR14								LMX-SAB

Table 40. Individual laboratory results for Serum #1320 by Single Antigen - class II, cont.

**** Serum 1320 ****									
Ctr	DP401	DQ2	DQA1*03	DR1404	DP10	DPA1*03	DR1403	Other	Method
615	+							DRB1*04:02, DPB1*04:01, DPB1*02:01	LMX-SAB
774		+							LMX-SAB
910								DRB1*04:02, DQA1*04:01, DQA1*05:01, DQA1*05:03, DQA1*05:05, DQA1*06:01, DPA1*01:03	LMX-SAB
2400									LMX-SAB
3224						+		DRB1*04:02	LMX-SAB
3753	+							DRB1*04:02	LMX-SAB
3766								DRB1*04:02, DPA1*01:03, DQA1*05:05, DQA1*05:01, DQA1*05:03, DQA1*06:01>	LMX-SAB
3808	+			+			+		LMX-SAB
3966		+	+						LMX-SAB
4322		+	+		+	+		DQA1*02	LMX-SAB
5219	+			+			+	DR2,DR3,DR5,DR6 >	LMX-SAB
5462	+								LMX-SAB
6649									LMX-SAB
8082			+		+				LMX-SAB
8086		+							LMX-SAB
8090									LMX-SAB
8098			+	+		+			LMX-SAB
8100		+							LMX-SAB
8103	+			+			+	DR3,DPA1*05	LMX-SAB
8112			+						LMX-SAB
8125		+			+			DP26	LMX-SAB