Report of the 19th Single Antigen, Flow and Virtual Crossmatch Exchange

Cells	109-110
Serum	111-114

For the 19h Flow and Virtual Crossmatch Exchange, Serum 107 (patient 1) and virtual donor V2 from Flow Crossmatch Exchange 18 (September 2019) were re-examined as serum 111 and cell 109. A comparison of virtual crossmatch (VXM) predictions (serum 107 vs. V2) against the physical flow crossmatch (FXM) (**serum 111 vs. cell 109**) are summarized in **Part 1** of this report. **Part 2** examines the single antigen data for the 4 sera examined (**serum nos. 111 - 114**) in this study. **Part 3** summarizes the flow crossmatch results for 2 cells (**cell nos. 109 - 110**) against the 4 sera. Finally, in **Part 4**, the virtual crossmatch predictions for 4 potential donors (V1 - V4) against 2 sera (serum 113 and serum 114) are examined.

Part 1

Physical Flow Cytometric Crossmatch vs. Virtual Crossmatch

Direct comparisons of virtual crossmatch predictions with physical FXM outcomes are shown in Tables 1a – 1c. Twenty-two labs submitted VXM predictions for serum 107 vs. donor V2 in Exchange 18. Of the 22 labs, 16 labs reported back physical T–cell FXM results and 15 labs reported physical B-cell FXM results for this patient-donor pair in Exchange 19 (Table 1a). Physical T-cell FXM for serum 111 vs. cell 109 were just as mixed as virtual T-cell predictions, which resulted in little agreement between predictions and the physical crossmatch (Table 1b). Among the 9 labs which predicted the T-cell FXM to be negative, only 4 reported the actual physical FXM as negative. By contrast, good agreement was achieved between B-cell predictions and the physical B-cell FXM. Among the 14 labs which predicted the B-cell FXM to be positive, 13 reported the physical B-cell FXM as positive as well.

The variability observed among T-cell predictions and the physical T-

Table 1a. Summary of Virtual XM predictions vs. Physical Flow XM results - Direct comparison

Exchange 018						Exchange 019				
Virtual Crossmatch - Serum 107 (Patient 1) vs. Donor V2						Physical Flow Crossmatch - Serum 111 vs. Cell 109				
Donor	Serum no.	#Labs	T-cell Prediction	B-cell Prediction		Cell	Serum no.	#Labs	T-cell Results	B-cell Results
V2	107	16	NEG (9) POS (4) Borderline (3)	POS (14) Borderline (1) NT (1)		109	111	16	NEG (7) POS (7) Borderline (1) NT (1)	POS (14) NEG (1) NT (1)

Table 1b. Direct comparison of Physical Flow Crossmatch results vs. Virtual Crossmatch results

		T-cell Virtual XM (Exchange 18)		
		+	-	Ø
Physical T-cell FXM (Exchange 19)	+	1	4	2
	-	2	4	
	Ø	1	1	1

		B-cell Virtual XM (Exchange 18)		
		+	-	Ø
Physical B-cell FXM (Exchange 19)	+	13	0	1
	-	0	0	1
	Ø	1	0	0

+/ - = postive/negative   Ø = uncertain/not typed   n = number of labs

cell FXM may have been due to weakness of the DSA (A68) present. Labs were consistent in the reporting of DSA strength across the 2 studies. In Exchange 18, A68 was reported with an MFI value of 2016, compared to 2018 in Exchange 19. The reporting of the DSA, however, was mixed in among labs (Table 1c). Of the 8 labs which reported A68 as a DSA in Exchange 18, only 4 reported it as a DSA in Exchange 19.

The reporting of class II DSA across the 2 studies was also a bit mixed among labs. Some labs reported the presence of a single DSA (DR11), while others reported DR52, DQ7, and/or DP3 as DSA as well. The reporting of DSA strength, however, was consistent across the 2 studies. In Exchange 18, DR11, DP3, DR52, and DQ7 were reported with respective MFI's of 10468, 13183, 6321, and 1824. In Exchange 19, respective MFI's were 11200, 13870, 6579, and 1799. The presence of strong DSA resulted in the agreement observed between predictions and the physical FXM.

Table 1c. Individual Physical Flow Crossmatch results vs. Virtual Crossmatch predictions - Direct Comparison

Cell #109 (Donor V2) HLA Genotype: A*02:01:01G-A*68:01:02G-B*07:02-B*49:01-C*07:01-C*07:02-DRB1*04:05-DRB1*11:02-DRB3*02:02-DRB4*01:03-DQA1*03:03-DQA1*05:05-DQB1*03:01-DQB1*03:02-DPB1*04:01-DPB1*104:01

| | Exchange 018 | | | | | Exchange 019 | | | |
| | Virtual Crossmatch - Serum 107 (Patient 1) vs. Donor V2 | | | | | Physical Flow Crossmatch - Serum 111 vs. Cell 109 | | | |
Ctr	Virtual T-cell Prediction	Class I DSA(MFI)	Virtual B-cell Prediction	Class II DSA(MFI)	Ctr	T-Cell RESULT	Class I DSA(MFI)	B-Cell RESULT	Class II DSA(MFI)
54	Positive	A68 (2061)	Positive	DR11 (11387) DR52 (8929) DQ7 (1617) DPw3 (13838)	54	NEGATIVE	A*68:01(2235)	POSITIVE	DQB1*03:01 DQA1*05:05(2148) DR11(12556)
230	Negative	no class I DSA	Positive	DR11 (10044) DR52 (6890) DPw3 (19065)	230	POSITIVE	A68(2122)	POSITIVE	DR11, DR52 (11832)
774	Negative	no class I DSA	Positive	DR11 (11132)	774	NEGATIVE	no class I DSA	POSITIVE	DP4(12669.53), DR11(12040.96), DR52(9393.73), DQ7(2010.67)
792	Negative	no class I DSA	Positive	DR11 (7012)	792	NEGATIVE	A68(1757)	POSITIVE	DR11(9696)
2400	Positive	A68 (2724)	Positive	DR11 (12945) DR52 (2046) DQ5 (2121)	2400	POSITIVE	A*68:01(2420)	POSITIVE	DRB1*11:02(Bead 11:04-11611), DRB3*02:02(1770) DQA*05:05(1937)
3224	Borderline	A68 (2265)	Positive	DR11 (12347) DR52 (9437) DQ7 (2184) DQ8 (1257) DPw3 (15292) DQA1*05 (2184)	3224	POSITIVE	A68(2612)	POSITIVE	DR11(11010), DR52(8514), DQ7(1890), DQ8(1018), DP3(14318)
3753	Negative	no class I DSA	Positive	DR11 (8511) DPw3 (11533) DPw6 (10533) DP17 (11218) DP14 (11162)	3753	NEGATIVE	no class I DSA	POSITIVE	DR11(10446), DR52(4544), DQA1*05(1329), DP3(13421)
3966	Positive	A68 (942)	Positive	DR11 (18814) DR52 (4816) DPw4 (11471)	3966	Borderline		POSITIVE	
4661	Negative	no class I DSA	Positive	DR11 (5552) DPw3 (5344)	4661	POSITIVE	no class I DSA	POSITIVE	DRB1*11:01(6037), DRB3*02:02(1588), DPB1*03:01(7337)
8001	Borderline	A68 (1760)	Positive	DR52 (1395) DQ7 (1824) DQ8 (1103)	8001	POSITIVE	A68(1914)	POSITIVE	DQ8(1090) DRB3*02:02(1251) DQ7(1812)
8035	Negative	no class I DSA	NT	DR52 (1284) DQ5 (1976)	8035	NT	A*68:01(782), also Epitope 65RNA detected	POSITIVE	DQ7(1744), DQ8(1220), DQA1*05(2568), DR52(1566), Pos DR*11:02 ;no bead.Other DR11 alleles Pos
8050	Negative	no class I DSA	Positive	DR11 (9921) DR52 (4781) DPw3 (13183) DQA1*05 (1697)	8050	NEGATIVE	None	POSITIVE	DR11(12386) DR52(5859) DQ7(1695) DQ8(1173) DPB1*104:01(DP3,16355)
8083	Negative	no class I DSA	Positive	DPw3 (13000)	8083	POSITIVE	A68(2872)	POSITIVE	DR11(11418) , DR52(2003)
8096	Negative	A68 (2506)	Positive	DR11 (13950) DR52 (1906) DQ7 (2510) DPw3 (17516)	8096	POSITIVE		NT	
8103	Borderline	A68 (2984)	Borderline	DQ7 (2459)	8103	NEGATIVE	no class I DSA	NEGATIVE	
8111	Positive	A2 (353) B7 (517) A68 (598) Cw7 (600)	Positive	DR52 (844) DR53 (759) DQ7 (721) DQ8 (718) DPw4 (729) DQA1*05 (314)	8111	NEGATIVE	no class I DSA	POSITIVE Untreated	DR11(10000) DR52(1200) DQ7(1900)

Part 2

Class I and class II Luminex single antigen results for serum samples 111 - 114 are summarized in Tables 12 - 15 and individual results for each participating laboratory are listed in Tables 16 – 22. In addition, individual cutoff values and sera pretreatment methods are shown on Table 31.

Antibody Identification

Serum 111: This sample was previously examined as serum 107 in Exchange 18. In this present study, A25, A26, A43, B57, B63, A29, A34, and B58 were once again reported by > 90% of labs. Median MFI values ranged from 4191 to 12341. By comparison, in Exchange 18, MFI's ranged from 3960 to 11733. Strong class II reactivity was also detected in this sample, with labs reporting reactivity to a number of DP and DR antigens with > 90% consensus, including DP9, DP3, DP2, DP6, DP28, DR11, DP18, DR17, DR52, DR18, DR13, DR10, and DR14. MFI values in this present study ranged from 3753 to 14103 compared to 3214 to 13768 in Exchange 18.

Multiple DSA were detected against cell 109, including A68 (2018), DP3 (13870), DR11 (11200), DR52 (6579), DQ7 (1799) and DQ8 (1108). Multiple DSA (A34, DR11, DP18, DR13, DQ6, DQ7) were also reported against cell 110, with respective MFI = 5050, 11200, 11025, 6579, 5354, 3066, and 1799.

Serum 112: Anti-A33 (5161), -B44 (5774), -B45 (6992), -B49 (10207), and –B50 (9793) reactivity was detected in this sample by 100% of labs. Additional reactivity to a number of 5C and 7C specificities was also reported. Strong class II reactivity was reported in this sample, with 100% of labs reporting reactivity to DR17, DR8, DR13, DR18, DR14, DR11, DR12, DR52, DQ2, DP2, DP18, and DP28. Median MFI values ranged from 5508 to 19780.

Strong DSA (B49, DR11, DR52, DP3, DQA1*05) were detected against cell 109, with respective MFI = 10207, 17051 12467, 4406, and 5892. Weak anti-A68 (2074) and -DR4 (1644) reactivity was also reported by labs. Multiple DSA (A34, B53, B81, DR13, DR11, DR52, DP18, DQA1*05) were also reported against donor 110. Respective MFI's for each were 2366, 1900, 2072, 17904, 17051, 12467, 6242, and 5892.

Genotypes of cells provided by UCLA

Cell 109 (Hispanic) - A*02:01:01G-A*68:01:02G-B*07:02-B*49:01-C*07:01-C*07:02-DRB1*04:05-DRB1*11:02-DRB3*02:02-DRB4*01:03-DQA1*03:03-DQA1*05:05-DQB1*03:01-DQB1*03:02-DPB1*04:01-DPB1*104:01

Cell 110 (Black) - A*23:01:01G, A*34:02-B*53:01-B*81:01:01G-C*04:01:01G-C*18:01:01G-DRB1*11:01-DRB1*13:01-DRB3*02:02:01G-DQA1*01:03-DQA1*05:01:01G-DQB1*03:01:01G-DQB1*06:08-DPB1 *01:01-DPB1*18:01

Serum 113: Strong reactivity to Cw7, B56, and a number of 5C specificities, including B35, B51, B52, B53, B62, B63, B71, B75, B77 B49, B50, B56, B57, and B72 were detected in this sample. Each were reported by > 90% of labs, with MFI values ranging from 5483 to 18046. For class II, the majority of labs (83%) reported this sample as negative. A few labs (n = 3) reported weak anti-DR9 (3000) reactivity. This sample was not graded for class II as consensus was < 90%.

A single DSA (B53) was reported against cell 110, with MFI = 10342. Against cell 109, anti-B49 (7376) and –Cw7 (16909) reactivity was reported by labs.

Serum 114: Strong 2C reactivity was detected in this sample with > 90% of labs reporting anti-A2 (22937), -A24 (3146), -A68 (15556), -A69 (17626), -B57 (15453), -B58 (12893), and –A23 (2300) reactivity. Class II reactivity was also strong in this sample, as > 90% of labs reported reactivity to a number of DR, DQ, and DP antigens, including DR4, DP2, DP18, DP28, DQ9, DQ7,DP3, DQ8, and DR11. Median MFI values ranged from 13550 to 18733.

Strong class I (A2, A68) and class II (DR4, DQ7, DP3, DQ8, DR11, DP4, DQA1*05) DSA were reported against cell 109 in this sample. Respective MFI values for each were 22937, 15556, 18733, 14929, 14188, 14008, 13550, 13764, and 7645. Against cell 110, labs reported weak anti-A23 (2300) reactivity, along with much stronger class II reactivity to DP18 (15988), DQ7 (14929) , and DR11 (13550).

Conclusion:

Good agreement (≥90%) was achieved among labs in the reporting of class I antibodies for all 4 sera. For each sample, MFI values for peak antibodies were ≥ 10000. For class II antibody identification, labs achieved ≥ 90% agreement for 3 out of 4 sera. In each of these cases, peak DSA MFI strength was ≥ 12000. No consensus was achieved for sample 113 in which 83% (15 out of 18) of labs reported it as negative for class II.

Part 3

Flow cytometric crossmatch results for cell 109 and cell 110 against sera sample nos. 111 - 114 are summarized in Table 2. Individual results for each laboratory, along with reported class I and class II DSA for each sera, are listed in tables 4 - 11.

Flow Cytometric Crossmatch

Cell 109. For cell 109, 7 out of 8 FXM against serum samples 111 - 114 achieved ≥ 80% agreement among labs. In each case, T– and B-cell FXM outcome was reported as positive in the presence of peak DSA, with median MFI values > 10000. Against serum 111, labs were evenly split, with 10 labs reporting the T-cell FXM as positive, 10 reporting it as negative, and 1 reporting borderline results. Weak anti-A68 (2018) reactivity was reported by some labs, while others indicated no class I DSA were present.

Cell 110. For cell 110, all 8 FXM against the 4 sera achieved ≥ 80% agreement. Each were reported as positive in the presence of class I and/or class II DSA. Among the 8 FXM, 6 were reported with a few discrepancies. For example, in the case of cell 110 against serum 112 and serum 114, a single DSA, A68 (2018) and A23 (2300), respectively, was detected against cell 110 in each serum. The weak DSA resulted in some labs to report a negative T-cell FXM and others to report borderline results.

Table 2. Summary of Flow crossmatch results for Cell #109 - #110 vs. Serum #112 - #114

Cell no.	Serum no.	#Labs	T-cell Results	B-cell Results	Cell no.	Serum no.	#Labs	T-cell Results	B-cell Results
109	111	23	POS(10) NEG(10) Borderline(1) NT(2)	**POS(19)** *NEG(1)* NT(3)	110	111	23	**POS(21)** NEG(1) NT(1)	**POS(20)** NT(3)
109	112	23	**POS(21)** Borderline(1) NT(1)	**POS(20)** NT(3)	110	112	23	**POS(18)** *NEG(4)* NT(1)	**POS(20)** NT(3)
109	113	23	**POS(20)** *NEG(2)* NT(1)	**POS(17)** *NEG(2)* Borderline(1) NT(3)	110	113	23	**POS(21)** Borderline(1) NT(1)	**POS(18)** NEG(2) NT(3)
109	114	23	**POS(21)** NT(2)	**POS(19)** *NEG(1)* NT(3)	110	114	23	**POS(17)** NEG(2) Borderline(2) NT(2)	**POS(19)** NEG(1) Borderline(1) NT(2)

indicates consensus < 80%

Conclusion:

In the presence of strong (> 10000) DSA, fewer discrepancies were observed among labs with respect to physical FXM crossmatch outcome. This was the case for cell 109 vs. serum 112. The presence of strong anti-B49 (10207) reactivity combined with strong anti-DR11 (17051) reactivity resulted in 21 out of 22 labs to report the T-cell FXM as positive and all 22 labs to report the B-cell FXM as positive. However, when DSA strength fell below 3000, greater variability was observed in FXM outcome among labs. This was most apparent in the case of cell 109 vs. serum 111, in which weak anti-A68 (2018) reactivity resulted in < 50% of labs to report the T-cell FXM as positive.

Part 4

Virtual crossmatch predictions for donor V1 - V4 against sera (patient) samples 101 and 102 are summarized in Table 3 and individual laboratory predictions are listed in Tables 23 - 30. Fictional donor histories precede each patient-donor summary.

Virtual Crossmatch Paper Challenge

For the **T-cell VXM,** 7 out of 8 pairs of predictions achieved ≥ 80% agreement among labs. In each case, MFI values for peak DSA were > 10000. For the remaining pair, donor V2 vs. serum 113, no agreement was achieved, as 14 out of 19 labs predict the physical T-cell FXM to be negative. Among the 14 labs, 5 indicated no class I DSA were present, while 8 reported the presence of weak anti-Cw10 (2423) reactivity.

For the virtual **B-cell crossmatch**, all 8 pairs of predictions were reported with ≥ 80% agreement among labs. Among the 8, 7 are predicted to be positive in the presence of strong (MFI > 14000) class II and/or strong (MFI > 10000) class I DSA. For the remaining B-cell prediction, V2 vs. serum 113, 16 out of 19 labs predict the physical B-cell FXM to be negative in the presence of a single weak DSA (Cw10), with MFI = 2423.

Table 3. Summary of Virtual Crossmatch Predictions (Serum #113 - #114 vs. Donors V1 - V4)

Donor no.	Serum no.	#Labs	T-cell Prediction	B-cell Prediction	Predicted Risk Assessment	Donor no.	Serum no.	#Labs	T-cell Prediction	B-cell Prediction	Predicted Risk Assessment
V1	113	21	POS(19) Borderline(1) NT(1)	POS(17) NEG(3) NT(1)	Unacceptable(19) Acceptable(1)	V2	113	21	NEG(14) POS(3) Borderline(2) NT(2)	NEG(16) POS(1) Borderline(2) NT(2)	Acceptable(12) Unacceptable(4) Other(4)
V1	114	21	POS(20) NT(1)	POS(19) NEG(1) NT(1)	Unacceptable(20)	V2	114	21	POS(17) NEG(2) NT(2)	POS(20) NT(1)	Unacceptable(19) Other(1)

Donor no.	Serum no.	#Labs	T-cell Prediction	B-cell Prediction	Predicted Risk Assessment	Donor no.	Serum no.	#Labs	T-cell Prediction	B-cell Prediction	Predicted Risk Assessment
V3	113	21	POS(19) Borderline(1) NT(1)	POS(17) NEG(2) Borderline(1) NT(1)	Unacceptable(19) Acceptable(1)	V4	113	21	POS(20) NT(1)	POS(18) NEG(2) NT(1)	Unacceptable(20)
V3	114	21	POS(20) NT(1)	POS(20)	Unacceptable(20)	V4	114	21	POS(17) NEG(3) NT(1)	POS(20) NT(1)	Unacceptable(20)

indicates consensus < 80%

DSA Identification

Patient 1 (Serum 113)

Patient's fictional case history:
This individual is a 24 year old female being evaluated for her second transplant. The HLA typing of her first transplant was A*02:01-A*32:01-B*27:05-B*44:03-C*02:02-C*04:01-DRB1*11:01-DRB1*13:01-DRB3*01:01-DRB3*02:02-DQA1*01:03-DQA1*05:01-DQB1*03:02-DQB1*06:03-DPB1*01:01-DPB1*04:01. The patients HLA type is A*02:01-A*32:01-B*27:05-B*44:02 C*02:02-C*05:01-DRB1*11:01-DRB1*13:01-DRB3*01:01-DRB3*02:02-DQA1*01:02-DQA1*05:01-DQB1*03:01-DQB1*06:03-DPA1*02:01-DPA1*01:03 DPB1*01:01-DPB1*04:01.

Against **donor V1,** strong class I DSA (B77, Cw7) were reported by labs in sample 113. Median MFI values for each were 10131 and 16909, respectively. No class II DSA were reported. Out of 20 labs, 19 reported the virtual T-cell predictions as positive, and 17 labs reported the virtual B-cell prediction as positive due to class I DSA. For predicted transplant risk, all but 1 lab assessed the risk for this donor-patient pair as unacceptable.

The reporting of DSA for serum 113 against **donor V2** was mixed among labs. Thirteen labs reported weak anti-Cw10 (2423) reactivity, while 6 labs indicated no class I DSA were present. Variability in reporting of DSA resulted in predictions to be mixed among labs, with 14 labs predicting the physical T-cell FXM to be negative, 3 predicting it to be positive and 2 predicting borderline results. For B-cell predictions, 16 labs predict the physical B-cell FXM to be negative, 1 predicts it to be positive, and 2 predict it to be borderline. Twelve labs assessed the predicted transplant risk for this donor-patient pair as acceptable. The remaining labs noted the risk as unacceptable or requiring a physical crossmatch to assess.

Against **donor V3**, anti-B75 (12499) and anti-B57 (5548) reactivity was reported in serum 113. No class II DSA were detected against the donor. Among the 20 labs reporting virtual predictions, 19 labs predict the expected physical T-cell FXM to be positive and 17 labs predict the expected physical B-cell FXM to be positive due to the presence of class I DSA. For renal transplant risk, all but 1 lab assessed the risk as unacceptable.

Multiple DSA (B51, B49, Cw7, Cw9) were detected in serum 113 by labs against **donor V4**. Respective median MFI values for each were 18046, 7376, 16909, and 2532. Not surprisingly, all 20 labs predict the expected physical T-cell FXM to be positive. For virtual B-cell predictions, 18 labs reported it as positive and 2 reported it as negative. Among the 2 labs reporting a negative B-cell prediction, 1 noted the expected B-cell FXM would be positive due to class I DSA. As a reminder, when reporting B-cell predictions, labs should report the expected physical B-cell FXM. Predicted renal transplant risk for this donor-patient pair was assessed as unacceptable by all 20 labs.

Virtual Donors – HLA genotype

Donor 1 (V1): A*02:01-A*11:01-B*15:13-B*38:02-C*07:02-C*08:01-DRB1*15:02-DRB5*01:01-DRB5*01:08N-DQA1*01:01-DQA1*01:02-DQB1*05:01-DQB1*05:02-DPA1*02:01-DPA1*02:02-DPB1*01:01-DPB1*13:01

Donor 2 (V2): A*29:02-A*68:03-B*40:02-B*44:03-C*03:04-C*16:01-DRB1*04:07-DRB1*07:01-DRB4*01:01-DRB4*01:03-DQA1*02:01-DQA1*03:01-DQB1*02:02-DQB1*03:02:01G-DPA1*01:03-DPA1*02:01-DPB1*04:01:01G-DPB1*14:01:01G

Donor 3 (V3): A*24:02-A*24:07-B*15:02-B*57:01-C*04:01-C*06:02-DRB1*07:01-DRB1*12:02-DRB3*03:01-DRB4*01:03:01N-DQA1*02:01-DQA1*06:01-DQB1*03:01-DQB1*03:03-DPA1*01:03-DPA1*02:01-DPB1*04:01-DPB1*13:01:01G

Donor 4 (V4): A*02:05-A*11:01-B*49:01-B*51:01-C*03:03-C*07:01-DRB1*03:01-DRB1*04:05-DRB3*01:01-DRB4*01:03-DQA1*03:03-DQA1*05:01-DQB1*02:01-DQB1*03:02-DPA1*01:03-DPA1*02:01-DPB1*04:01:01G-DPB1*14:01:01G

Patient 2 (Serum 114)

Patient's fictional case history:

This individual is a 45 year old male being evaluated for his first transplant. The patient's HLA type is *A*11:01-A*34:01-B*15:02-B*15:21-C*04:03-C*08:01-DRB1*15:02-DRB5*01:01-DQA1*01:02:01G-DQB1*05:02-DPA1*02:01-DPA1*02:02-DPB1*01:01:01G-DPB1*05:01:01G.*

Against **donor V1**, a single DSA (A2) was detected in serum 114, with median MFI = 22937. The presence of this strong antibody resulted in all 20 labs to predict the expected physical T-cell FXM to be positive. For the virtual B-cell crossmatch, 19 out of 20 labs reported it as positive. In line with VXM predictions, renal transplant risk was assessed as unacceptable in complete consensus.

Multiple DSA (A68, DR4, DQ4, DP14) were reported to be present in sample 114 against **donor V2.** Respective MFI values for each were 15556, 18733, 3607, and 12687. Three labs, noting A*68:03 and DRB1*04:07, are not included in their SAB panel, did not report A68 and DR4 as a DSA. When retested internally with a supplemental SAB panel, DRB1*04:07 was detected, with MFI = 19835. Seventeen labs reported a positive T-cell prediction and 20 labs reported a positive B-cell prediction. For renal transplant risk, 19 out of 20 labs assessed the risk as unacceptable.

Strong class I and class II DSA (B57, A24, DQ7, DQ9) were reported in serum 114 against **donor V3.** Respected MFI values for each were 15453, 3146, 14929, and 15222. The presence of these DSA resulted in 100% of labs to predict the expected T– and B-cell FXM to be positive. Consequently, all 20 labs assessed the predicted risk as unacceptable.

Against **donor V4**, strong class II DSA (DR4, DQ8, DP14) were detected by labs, with respective MFI = 18733, 14008, and 12687. Anti-A2 (22937) reactivity was also reported against this serum by 17 labs. Three other labs indicated no class I DSA were present, with 1 of them noting A*02:05 is not included in their LSAB panel. As expected, these 3 labs reported the virtual T-cell prediction as negative, while the remaining 17 labs reported it as positive. Virtual B-cell predictions were reported as positive by 100% of labs. For renal transplant risk, all 20 labs assessed the predicted risk as unacceptable.

Conclusion

Overall, good agreement was achieved among labs with respect to virtual predictions. Only 1 out of 16 virtual-donor pairs (serum 113 vs. donor V2) did not achieve a consensus of 80% for predictions. The variability observed, in this case, was due to the presence of a weak antibody (Cw10) in serum 113. Only 12 out of 18 labs reported Cw10 (2423) by SAB, and only 14 out of 20 labs reported it as a DSA against donor V2. Among labs reporting it as a DSA, 8 predict the expected T-cell FXM to be negative and 2 predict it to be borderline due to the weakness of the antibody.

NEXT MAILING DATE: December 9, 2020

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Flow Cytometric Crossmatch

Cell #109 HLA Genotype: A*02:01:01G-A*68:01:02G-B*07:02-B*49:01-C*07:01-C*07:02-DRB1*04:05-DRB1*11:02-DRB3*02:02-DRB4*01:03-DQA1*03:03-DQA1*05:05-DQB1*03:01-DQB1*03:02-DPB1*04:01-DPB1*104:01

Table 4. Individual Flow crossmatch results and DSA reported for Cell #109 vs. Serum #111

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
54	111	>61	31			NEGATIVE	A*68:01(2235)	>91	452			POSITIVE	DQB1*03:01 DQA1*05:05(2148) DR11(12556)	<60	<90	YES
230	111	2.1	2			POSITIVE	A68(2122)	2.9	21.4			POSITIVE	DR11, DR52 (11832)	1.1	0.9	YES
615	111	325	432			POSITIVE Weak	A*68:01	337	745			POSITIVE Strong	DRB1*11:01; DRB3*02:02; DQA1*03:02 DQB1*03:02; DQA1*05:03 DQB1*03:01	260	239	YES
774	111	≥ 50 MCS	4			NEGATIVE	no class I DSA	≥ 120 MCS	227			POSITIVE	DP4(12669.53), DR11(12040.96), DR52(9393.73), DQ7(2010.67)	241	392	NO
792	111	52	44			NEGATIVE	A68(1757)	106	352			POSITIVE	DR11(9696)	234	301	YES
1160	111	60	89			POSITIVE	A68(1365)	70	524			POSITIVE	DR11(9747); DQ7(1075); DR52(771); DP104(12161)	162	198	YES
1426	111	50	41			NEGATIVE	no class I DSA	92	419			POSITIVE	DR11(9796), DP3(13327)	263	560	YES
2400	111	17	29			POSITIVE	A*68:01(2420)	23	321			POSITIVE	DRB1*11:02(Bead 11:04-11611), DRB3*02:02(1770) DQA*05:05(1937)	84	32	YES
3135	111	1,2	1429	1,1		NEGATIVE						NT		1318		NO
3224	111	70	10			POSITIVE	A68(2612)	140	389			POSITIVE	DR11(11010), DR52(8514), DQ7(1890), DQ8(1018), DP3(14318)	240	212	YES
3753	111	50	28			NEGATIVE	no class I DSA	100	387			POSITIVE	DR11(10446), DR52(4544), DQA1*05(1329), DP3(13421)	219	228	YES
3966	111	20	34			Borderline		50	278			POSITIVE		168	282	NO
4345	111					NEGATIVE						POSITIVE				NO
4661	111	10	10			POSITIVE	no class I DSA	10	258			POSITIVE	DRB1*11:01(6037), DRB3*02:02(1588), DPB1*03:01(7337)	181	217	YES

Table 4. Individual Flow crossmatch results and DSA reported for Cell #109 vs. Serum #111

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
5214	111	15	16		1383	POSITIVE	A68(3104)	25	113		267677	POSITIVE	DR11(16449), DR52(6056), DQ7(2162), DQ8(1466), DP3(19887)	10	20	YES
8001	111	50	61			POSITIVE	A68(1914)	100	322			POSITIVE	DQ8(1090) DRB3*02:02(1251) DQ7(1812)	170-275	175-400	YES
8035	111	>48	61/43			NT	A*68:01(782), also Epitope 65RNA detected	>90	453			POSITIVE	DQ7(1744), DQ8(1220), DQA1*05(2568), DR52(1566), Pos DR*11:02 ;no bead.Other DR11 alleles Pos	159 or 115	188 or 127	YES
8050	111	50	54		680	NEGATIVE	no class I DSA	120	269		63385	POSITIVE	DR11(12386) DR52(5859) DQ7(1695) DQ8(1173) DPB1*104:01(DP3, MFI=16355)	52	251	YES
8062	111					NT						NT				YES
8083	111	90	214			POSITIVE	A68(2872)	150	460			POSITIVE	DR11(11418) , DR52(2003)	194	262	YES
8096	111	5	5.82			POSITIVE						NT		8.93		NO
8103	111	247	245	1.2		NEGATIVE		564	408	1.7		NEGATIVE		332	206	NO
8111	111	7	2			NEGATIVE	no class I DSA	28	214			POSITIVE Untreated	DR11(10000) DR52(1200) DQ7(1900)	182	174	YES

Table 5. Individual Flow crossmatch results and DSA reported for Cell #109 vs. Serum #112

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
54	112	>61	215			POSITIVE	A*68:01(2235), B*49:01(9600)	>91	492			POSITIVE	DQB1*03:01 DQA1*05:05(3453); DR11(12556); DRB3*02:02(8064)	<60	<90	YES
230	112	2.1	2.2			POSITIVE	B49(13067)	2.9	8.9			POSITIVE	DR11,DR52 (17864)	1.1	0.9	YES
615	112	325	482			POSITIVE	A*68:01; B*49:01	337	465			POSITIVE Moderate	DRB1*04:05; DRB1*11:01; DRB3*02:02; DQA1*05:03 DQB1*03:01	260	239	YES
774	112	≥ 50 MCS	126			POSITIVE	B49(10777.51)	≥ 120 MCS	286.5			POSITIVE	DR11(16350.25), DR52(10097.51), DP4(6169.98), DQ7(3977.93)	241	392	NO
792	112	52	160			POSITIVE	B49(8184), A68(2074)	106	402			POSITIVE	DR11(15220), DR52(8088), DQ7(3257)	234	301	YES
1160	112	60	293			POSITIVE	B49(6487); A68(1210)	70	534			POSITIVE	DR11(14760); DR52(5767); DQA1*05(2038)	162	198	YES
1426	112	50	190			POSITIVE	B49(8304)	92	451			POSITIVE	DR11(14686). DR52(7631), DP3(4523)	263	560	YES
2400	112	17	100			POSITIVE	A*68:01(2803), B49:01(10478)	23	354			POSITIVE	DRB1*11:02(Bead 11:04-16839)DRB3*02:02(12815)DQA1*05:05(4108)DPB1*104:01(Bead 03:01-4969)	84	32	YES
3135	112	1,2	1645	1,2		POSITIVE						NT		1318		NO
3224	112	70	160			POSITIVE	A68(2725), B49(11740)	140	398			POSITIVE	DR4(1644), DR11(17234), DR52(13945), DQA1*05:05(4807), DP3(5964)	240	212	YES
3753	112	50	166			POSITIVE	A68(1427), B49(9941)	100	423			POSITIVE	DR11(17881), DR4(1274), DQA1*05(4099), DR52(11623), DP3(4406)	219	228	YES
3966	112	20	174			POSITIVE		50	315			POSITIVE		168	282	NO
4345	112					POSITIVE						POSITIVE				NO

Table 5. Individual Flow crossmatch results and DSA reported for Cell #109 vs. Serum #112

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
4661	112	10	119			POSITIVE	B*49:01(1948)	10	232			POSITIVE	DRB1*04:05(665), DRB1*11:01(11890), DRB3*02:02(4442), DPB1*03:01(2283)	181	217	YES
5214	112	15	74		27384	POSITIVE	A68(3382), B49(14702)	25	127		456124	POSITIVE	DR4(2288), DR11(21125), DR52(18094), DQA05:05(6053), DP3(9642)	10	20	YES
8001	112	50	270			POSITIVE	A68(2431) B49(10473)	100	416			POSITIVE	DRB3*02:02(7835) DRB1*04:05(857) DQA1*05:05(3476)	170-275	175-400	YES
8035	112	>48	108			POSITIVE	A*68:01(1684), B*49:01(13982)	>90	398			POSITIVE	DR4(1330), DQA1*05(4732), DR52(10,527), Poss DSA to DRB1*11:02; no bead. Other DR11 alleles Pos	159 or 115	188 or 127	YES
8050	112	50	224		4378	POSITIVE	B49(12861)	120	269		63385	POSITIVE	DR4(1825) DR11(19895) DR52(15139) DQA1*05(5760) DPB1*104:01(DP3, MFI=5653)	52	251	YES
8062	112					NT						NT				YES
8083	112	90	99			POSITIVE	A68(3664), B49(13312)	150	230			POSITIVE	DR11(19029), DR52(10995), DQ7(5134)	194	262	YES
8096	112	5	19.6			POSITIVE						NT		8.93		NO
8103	112	247	273	1.2		Borderline	B*49:01(534)	564	628	1.7		POSITIVE	DRB1*11(8618), DRB3*02:02(2847), DQB1*03:02(660)	332	206	NO
8111	112	7	110			POSITIVE	B49(9200)	28	283			POSITIVE	DR11(16000) DR52(11900) DQ7(3800) DR4(1500)	182	174	YES

Table 6. Individual Flow crossmatch results and DSA reported for Cell #109 vs. Serum #113

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
54	113	>61	195			POSITIVE	B*49:01(9596); C*07:02(16715)	>91	238			POSITIVE	Positive due to Class I Antibodies. B*49:01(MFI 9596); C*07:02(MFI 16715)	<60	<90	YES
230	113	2.1	7.8			POSITIVE	B49(9752)	2.9	13.7			POSITIVE	No Class II DSA	1.1	0.9	YES
615	113	325	431			POSITIVE Moderate	B*49:01; C*07:02	337	792			POSITIVE Strong	No Class II DSA	260	239	YES
774	113	≥ 50 MCS	111			POSITIVE	B49(7743.49)	≥ 120 MCS	42			POSITIVE	No Class II DSA	241	392	NO
792	113	52	128			POSITIVE	Cw7(16767), B49(7376)	106	121			POSITIVE	No Class II DSA	234	301	YES
1160	113	60	249			POSITIVE	B49(6067)	70	242			POSITIVE	No Class II DSA	162	198	YES
1426	113	50	131			POSITIVE	B49(7174), Cw7(15700).	92	206			POSITIVE	No Class II DSA	263	560	YES
2400	113	17	84			POSITIVE	B*49:01(8444) C*07:02(20863)	23	75			POSITIVE	No Class II DSA	84	32	YES
3135	113	1,2	1501	1,1		NEGATIVE						NT		1318		NO
3224	113	70	104			POSITIVE	B49(6328), Cw7(16579)	140	72			POSITIVE	No Class II DSA	240	212	YES
3753	113	50	84			POSITIVE	B49(5839), Cw7(17213)	100	88			NEGATIVE	No Class II DSA	219	228	YES
3966	113	20	118			POSITIVE		50	169			POSITIVE		168	282	NO
4345	113					POSITIVE						NEGATIVE				NO
4661	113	10	55			POSITIVE	B*49:01(1136), C*07:01(1300), C*07:02(929)	10	103			POSITIVE	No Class II DSA	181	217	YES
5214	113	15	55		12028	POSITIVE	B49(12780), C7(22977)	25	60		31488	POSITIVE	No Class II DSA	10	20	YES
8001	113	50	219			POSITIVE	B49(8152)	100	201			POSITIVE	No Class II DSA	170-275	175-400	YES
8035	113	>48	174			POSITIVE	B*49:01(8701), C*07:01(16240), C*07:02(19719)	>90	175			POSITIVE	No Class II DSA	159 or 115	188 or 127	YES
8050	113	50	143		1803	POSITIVE	B49(7164) Cw7(15430)	120	240		9739	POSITIVE	No Class II DSA	52	251	YES
8062	113					NT						NT				YES
8083	113	90	293			POSITIVE	B49(9057), Cw7(21228)	150	340			POSITIVE	No Class II DSA	194	262	YES
8096	113	5	13.84			POSITIVE						NT		8.93		NO
8103	113	247	177	1.2		NEGATIVE		564	574			Borderline		332	206	NO
8111	113	7	60			POSITIVE	Cw7(15800) B49(6800)	28	71			POSITIVE	No Class II DSA	182	174	YES

Table 7. Individual Flow crossmatch results and DSA reported for Cell #109 vs. Serum #114

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
54	114	>61	446			POSITIVE	A*02:01(23432); A*68:01(17343)	>91	563			POSITIVE	DQB1*03:01 DQA1*05:05(17566); DQB1*03:02(15250); DR11(MFI 15447) DRB*04:05(MFI 15066)	<60	<90	YES
230	114	2.1	14.2			POSITIVE	A2, A68 (28284)	2.9	40.5			POSITIVE	DR4,DR11,DQ7,DR8 (21220)	1.1	0.9	YES
615	114	325	482			POSITIVE	A*02:01; A*68:01	337	727			POSITIVE Strong	DRB1*04:05; DRB1*11:01; DQA1*05:03 DQB1*03:01; DQA1*03:02 DQB1*03:02	260	239	YES
774	114	≥ 50 MCS	324			POSITIVE	A2(22900.72), A68(15058.41)	≥ 120 MCS	345			POSITIVE	DR4(18961.36), DQ7(16491.43), DP4(16017.55), DQ8(14567.26), DR11(14131.02)	241	392	NO
792	114	52	327			POSITIVE	A2(21062), A68(15956)	106	468			POSITIVE	DR4(14372), DQ7(13408)	234	301	YES
1160	114	60	525			POSITIVE	A2(22094); A68(13666)	70	629			POSITIVE	DR4(13960); DR11(12400); DQ8(11497); DQ7(13045)	162	198	YES
1426	114	50	355			POSITIVE	A2(20282), A68(12321)	92	519			POSITIVE	DP3(13077), DQ7(12751), DQ8(11804), DR11(11940), DR4(12366)	263	560	YES
2400	114	17	281			POSITIVE	A*02:01(24613) A*68:01(19549)	23	447			POSITIVE	DRB1*04:05(15981) DRB1*11:02(Bead 11:04-12499) DQB1*03:01(13908) DQB1*03:02(13003)	84	32	YES
3135	114	1,2	5681	4,3		POSITIVE						NEGATIVE		1318		NO
3224	114	70				NT	A2(24696), A68(20143)	140				NT	DR4(20837), DQ11(15535), DQ7(19208), DQ8(16540), DP3(16337)	240	212	YES

Table 7. Individual Flow crossmatch results and DSA reported for Cell #109 vs. Serum #114

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
3753	114	50	338			POSITIVE	A2(22310), A68(16254)	100	507			POSITIVE	DR11(13500), DR4(18865), DQ7(14890), DQ8(14250), DP3(14376)	219	228	YES
3966	114	20	370			POSITIVE		50	398			POSITIVE		168	282	NO
4345	114					POSITIVE						POSITIVE				NO
4661	114	10	347			POSITIVE	A*02:01(10911), A*68:(7737)	10	413			POSITIVE	DRB1*04:05(11735),DRB1*11:01(9193), DQB1*03:01(6369), DQB1*03:02(4629), DPB1*03:01(7303)	181	217	YES
5214	114	15	130		248677	POSITIVE	A2(23692), A68(22571)	25	145		935363	POSITIVE	DR4(22601), DR11(18896), DQ7(21379), DQ8(20268), DP3(20173)	10	20	YES
8001	114	50	500			POSITIVE	A*02:01(23191) A68(18947)	100	503			POSITIVE	DRB1*04:05(16133) DQ7(18182) DQ8(15970)	170-275	175-400	YES
8035	114	>48	400			POSITIVE	A*02:01(25112), A*68:01(15269)	>90	525			POSITIVE	DR4(16815) DQ7(15278), DQ8(14746), DQA*05(18494),Pos DR*11:02;no bead	159 or 115	188 or 127	YES
8050	114	50	457		56190	POSITIVE	A2(22973) A68(14982)	120	384		223382	POSITIVE	DR4(19466) DR11(13756) DQ7(14967) DQ8(13815) DPB1*104:01(DP3, MFI=14863)	52	251	YES
8062	114					NT						NT				YES
8083	114	90	427			POSITIVE	A2(28575), A68(23873)	150	464			POSITIVE	DR4(18981), DR11(15807), DQ7(20379), DQ8(18295)	194	262	YES
8096	114	5	124.73			POSITIVE						NT		8.93		NO
8103	114	247	247	1.2		POSITIVE	A*02:01(5803), A*68:01(4627),	564	903	1.7		POSITIVE	A*02:01(5803), A*68:01(4627), DQB1*03:01(3630), DRB1*04:05(8360),	332	206	NO

Table 7. Individual Flow crossmatch results and DSA reported for Cell #109 vs. Serum #114

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)		B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)		T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
8111	114	7	282			POSITIVE	A2(21300) A68(14700)		28	389			POSITIVE	DR4(16600) DR11(11100) DQ7(15500) DQ8(12100)		182	174	YES

Cell #110 HLA Genotype: A*23:01:01G, A*34:02-B*53:01-B*81:01:01G-C*04:01:01G-C*18:01:01G-DRB1*11:01-DRB1*13:01-DRB3*02:02:01G-DQA1*01:03-DQA1*05:01:01G-DQB1*03:01:01G-DQB1*06:08-DPB1 *01:01-DPB1*18:01

Table 8. Individual Flow crossmatch results and DSA reported for Cell #110 vs. Serum #111

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
54	111	>61	128			POSITIVE	A*34:02(5742)	>91	480			POSITIVE	DPB1*18:01(13353); DQ7(2148); DRB1*11:01(12556); DRB1*13:01(5742)	<60	<90	YES
230	111	2.3	4.05			POSITIVE	A34(6837)	2.9	39.5			POSITIVE	DR11,DR52(11832)	1.3	0.9	YES
615	111	291	732			POSITIVES trong	A*34:02	402	801			POSITIVESt rong	DRB1*11:01; DRB3*02:02; DQA1*05:03 DQB1*03:01; DQA1*01:03 DQB1*06:03; DPB1*01:01; DPB1*18:01	226	304	YES
774	111	≥ 50 MCS	81			POSITIVE	A34(5486.14)	≥ 120 MCS	271			POSITIVE	DR11(12040.96), DR13(7535.42), DP18(12365.84)	261	344	NO
792	111	52	107			POSITIVE	A34(5050)	106	386			POSITIVE	DR11(9696), DR13(5804), DQ6(3220), DQ7(1539)	263	283	YES
1160	111	60	181			POSITIVE	A34(3940)	70	498			POSITIVE	DR11(9747); DR13(4270); DR52(771); DP18(9624); DQ7(619)	185	201	YES
1426	111	50	138			POSITIVE	A34(3782)	92	450			POSITIVE	DP18(10312), DR11(10012)	278	591	YES
2400	111	17	70			POSITIVE	A*34:02(5970)	23	299			POSITIVE	DRB1*11:01(11666) DRB1*13:01(6354) DQA1*01:03(3870) DPB1*18:01(11183)	93	45	YES
3135	111	1,2	1865	1,5		POSITIVE						NT		1268		NO
3224	111	70	76			POSITIVE	A34(7002)	140	400			POSITIVE	DR11(11010), DR13(6720), DR52(8514), DQ7(1890), DP18(11364), DQA1*01:03(4150)	240	212	YES

Table 8. Individual Flow crossmatch results and DSA reported for Cell #110 vs. Serum #111

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
3753	111	50	106			POSITIVE	A34(4069)	100	423			POSITIVE	DR11(10446), DR13(3441), DR52(4544), DP18(9919), DQA1*05(1329)	241	230	YES
3966	111	20	172			POSITIVE		50	373			POSITIVE		168	269	NO
4345	111					POSITIVE						POSITIVE				NO
4661	111	10	82			POSITIVE	A*34:02(1293)	10	313			POSITIVE	DRB1*11:01(6037), DRB1*13:01(2316), DRB3*02:02(1588), DQA1*01:03(1615), DPB1*18:01(5904)	200	216	YES
5214	111	15	63		21303	POSITIVE	A34(10175)	25	120		267473	POSITIVE	DR11(16449), DR13(6612), DR52(6056), DQ7(2162), DQA05:01(1396), DP18(18017)	10	20	YES
8001	111	50	203			POSITIVE	A*34:02(6269)	100	397			POSITIVE	DR13(5697) DRB3*02:02(1251) DQ7(1812) DPB1*18:01(11624)	170-275	175-400	YES
8035	111	>48	163			POSITIVE	A*3402(5794)	>90	454			POSITIVE	DR11:01(13401), DR13:01(7747), DP18(12931), DQA*01(3037), DQ7(1744), DR52(1566), DQA*05(1095)	169 or 154	158 or 166	YES
8050	111	50	164		3017	POSITIVE	A34(3402)	120	261		44158	POSITIVE	DR11(12386) DR13(5011) DR52(5859) DQ7(1695) DP18(12538)	78	226	YES
8062	111					NT						NT				YES
8083	111	90	305			POSITIVE	A34(8301)	150	405			POSITIVE	DR11(11418), DR13(7427), DP18(10584)	286	389	YES
8096	111	5	19.64			POSITIVE						NT		6.84		NO

Table 8. Individual Flow crossmatch results and DSA reported for Cell #110 vs. Serum #111

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
8103	111	528	381	1.2		NEGATIVE		579.6	1120	1.7		POSITIVE	DRB1*11:01(3242), DRB1*13:01(1257), DQA1*01:03, DQB1*06(828), DR52(1812), DPB1*18:01(2852)	341	528	NO
8111	111	11	59			POSITIVE	A34(4200)	38	202			POSITIVE	DP18(10000) DR11(10000) DR13(4600) DR52(1200) DQ7(1900) DQ6(2700)	214	197	YES

Table 9. Individual Flow crossmatch results and DSA reported for Cell #110 vs. Serum #112

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
54	112	>61	116			POSITIVE	A*34:02(2869)	>91	540			POSITIVE	DPB1*18:01(2869); DQ7(3453); DRB1*11:01(15866); DRB1*13:01(15853); DR52(11642)	<60	<90	YES
230	112	2.3	1.68			NEGATIVE		2.9	11.7			POSITIVE	DR11,DR13 (19667)	1.3	0.9	YES
615	112	291	410			POSITIVE Moderate	A*34:02; B*53:01; B*81:01	402	481			POSITIVE Weak	DRB1*11:01; DRB3*02:02; DQA1*05:03 DQB1*03:01; DPB1*18:01	226	304	YES
774	112	≥ 50 MCS	62			POSITIVE	A34(2310.7), B53(2010.14)	≥ 120 MCS	317			POSITIVE	DR11(16350.25), DR13(17651.54), DR52((10097.51), DP18(6145.98)	261	344	NO
792	112	52	110			POSITIVE	A34(2679), B53(1653)	106	468			POSITIVE	DR13(15785), DR11(15144), DR52(8088), DP18(5730), DQ7(3599)	263	283	YES
1160	112	60	146			POSITIVE	A34(1813); B53(1113); B81(1041)	70	516			POSITIVE	DR11(14760); DR13(14635); DR52(5767); DP18(4794); DQ7(1789)	185	201	YES
1426	112	50	107			POSITIVE	B53(1853)	92	523			POSITIVE	DP18(6736), DR11(15039), DR13(15451), DR52(7631)	278	591	YES
2400	112	17	53			POSITIVE	A*34:02(3539) B*53:01(2240) B*81:01(2238)	23	371			POSITIVE	DRB1*11:01(16810) DRB1*13:01(17563) DRB3*02:02(8614) DQA1*01:05(10339) DPB1*18:01(5881)	93	45	YES
3135	112	1,2	1705	1,3		POSITIVE						NT		1268		NO
3224	112	70	59			POSITIVE	A34(3505), B53(2024), B81(1806)	140	439			POSITIVE	DR11(17234), DR13(18737), DR52(13945), DQA1*05:01, DP18	240	212	YES

Table 9. Individual Flow crossmatch results and DSA reported for Cell #110 vs. Serum #112

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
3753	112	50	113			POSITIVE	A34(2012), B53(2135), B81(1232)	100	496			POSITIVE	DR11(17881), DR13(19158), DR52(11623), DP18(6384), DQA1*05(4099)	241	230	YES
3966	112	20	119			POSITIVE		50	415			POSITIVE		168	269	NO
4345	112					NEGATIVE						POSITIVE				NO
4661	112	10	43			POSITIVE	A*34:02(542)	10	246			POSITIVE	DRB1*11:01(11890), DRB1*13:01(10332), DRB3*02:02(4422), DQA1*05:01(981), DPB1*18:03522	200	216	YES
5214	112	15	54		14673	POSITIVE	A34(4671), B53(3263), B81(3194)	25	137		529449	POSITIVE	DR11(21125), DR13(22013), DR52(18094), DP18(12208)	10	20	YES
8001	112	50	179			POSITIVE	A*34:02(2859) B81(1577) B53(1871)	100	492			POSITIVE	DR11(16161) DRB3*02:02(7835) DPB1*18:01(6284) DRB1*13:01(17013)	170-275	175-400	YES
8035	112	>48	23			NEGATIVE	B53(3537), B81(2345), A*34:02(2816)	>90	290			POSITIVE	DR11:01(19,138), DR13:01(21,362), DP18(7944), DQA*05(12,910), DR52(10,527)	169 or 154	158 or 166	YES
8050	112	50	127		2011	POSITIVE	A34(1482) B53(1742)	120	257		42265	POSITIVE	DR11(19895) DR13(22215) DR52(15139) DQA1*05(5760) DP18(8747)	78	226	YES
8062	112					NT						NT				YES
8083	112	90	210			POSITIVE	A34(4450), B53(2767)	150	421			POSITIVE	DR11(19029), DR13(19205), DR52(10995), DP18(9363)	286	389	YES
8096	112	5	8.5			POSITIVE						NT		6.84		NO
8103	112	528	331	1.2		NEGATIVE		579.6	1870	1.7		POSITIVE	DQB1*03:01(678), DRB1*11:01(8618), DRB1*13:01(7435), DRB3*02:02(2847), DQA1*05:01(904)	341	528	NO

Table 9. Individual Flow crossmatch results and DSA reported for Cell #110 vs. Serum #112

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)		B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)		T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
8111	112	11	37			POSITIVE	A34(1700) B53(1500)		38	253			POSITIVE	DR13(18,300) DR11(16,000) DR52(11,900) DP18(4700) DQ7(3700)		214	197	YES

Table 10. Individual Flow crossmatch results and DSA reported for Cell #110 vs. Serum #113

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
54	113	>61	210			POSITIVE	B*53:01(10800)	>91	237			POSITIVE	Positive due to Class I Antibody B*53:01(10800)	<60	<90	YES
230	113	2.3	8.7			POSITIVE	B53(13577)	2.9	10.1			POSITIVE	No Class II DSA	1.3	0.9	YES
615	113	291	507			POSITIVE	B*53:01	402	733			POSITIVE Strong	No Class II DSA	226	304	YES
774	113	≥ 50 MCS	113			POSITIVE	B53(10986.12)	≥ 120 MCS	84.5			POSITIVE	No Class II DSA	261	344	NO
792	113	52	122			POSITIVE	B53(10012)	106	124			POSITIVE	No Class II DSA	263	283	YES
1160	113	60	204			POSITIVE	B53(7558)	70	206			POSITIVE	No Class II DSA	185	201	YES
1426	113	50	144			POSITIVE	B53(10346)	92	145			POSITIVE	No Class II DSA	278	591	YES
2400	113	17	107			POSITIVE	B*53:01(12312)	23	98			POSITIVE	No Class II DSA	93	45	YES
3135	113	1,2	1867	1,5		POSITIVE						NT		1268		NO
3224	113	70	152			POSITIVE	B53(9892)	140	80			POSITIVE	No Class II DSA	240	212	YES
3753	113	50	152			POSITIVE	B53(10694)	100	125			POSITIVE	No Class II DSA	241	230	YES
3966	113	20	192			POSITIVE		50	209			POSITIVE		168	269	NO
4345	113					POSITIVE						NEGATIVE				NO
4661	113	10	89			POSITIVE	B*53:01(2614)	10	100			POSITIVE	No Class II DSA	200	216	YES
5214	113	15	78		40238	POSITIVE	B53(17191)	25	64		28528	POSITIVE	No Class II DSA	10	20	YES
8001	113	50	246			POSITIVE	B53(11668)	100	242			POSITIVE	No Class II DSA	170-275	175-400	YES
8035	113	>48	194			POSITIVE	B*53(12,098)	>90	183			POSITIVE	No Class II DSA	169 or 154	158 or 166	YES
8050	113	50	211		5048	POSITIVE	B53(9809)	120	141		6216	POSITIVE	No Class II DSA	78	226	YES
8062	113					NT						NT				YES
8083	113	90	239			POSITIVE	B53(12643)	150	123			POSITIVE	No Class II DSA	286	389	YES
8096	113	5	18.76			POSITIVE						NT		6.84		NO
8103	113	528	430	1.2		Borderline	B*53:01(1326)	579.6	569	1.7		NEGATIVE		341	528	NO
8111	113	11	86			POSITIVE	B53(8900)	38	84			POSITIVE	No Class II DSA	214	197	YES

Table 11. Individual Flow crossmatch results and DSA reported for Cell #110 vs. Serum #114

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
54	114	>61	152			POSITIVE	A*23:01(3084)	>91	500			POSITIVE	DPB1*23:01(17385); DQ7(17566); DRB1*11:01(15447)	<60	<90	YES
230	114	2.3	2.1			POSITIVE	A23(3982)	2.9	13.1			POSITIVE	DR11,DQ7 (17246)	1.3	0.9	YES
615	114	291	283			Borderline	A*23:01	402	656			POSITIVE	DRB1*11:01; DQA1*05:03 DQB1*03:01; DPB1*18:01	226	304	YES
774	114	≥ 50 MCS	33			NEGATIVE	A23(2279.32)	≥ 120 MCS	296			POSITIVE	DR11(14131.02), DQ7(16086.63)	261	344	NO
792	114	52	121			POSITIVE	A23(3294)	106	424			POSITIVE	DQ7(14764), DP18(13732), DR11(11892)	263	283	YES
1160	114	60	162			POSITIVE	A23(1939)	70	502			POSITIVE	DR11(12400); DP18(13748); DQ7(11427)	185	201	YES
1426	114	50	112			POSITIVE	A23(1270)	92	465			POSITIVE	DP18(14566), DQ7(12751), DR11(12217).	278	591	YES
2400	114	17	53			POSITIVE	A*23:01(4054)	23	331			POSITIVE	DRB1*11:01(13482) DQB1*03:01(13908) DPB1*18:01(13626)	93	45	YES
3135	114	1,2	1500	1,2		POSITIVE						NEGATIVE		1268		NO
3224	114	70	89			POSITIVE	A23(4221)	140	435			POSITIVE	DR11(15535), DQ7(19208), DP18(17835)	240	212	YES
3753	114	50	66			POSITIVE	A23(2573)	100	438			POSITIVE	DR11(13500), DQ7(14890), DP18(15876)	241	230	YES
3966	114	20	89			POSITIVE		50	402			POSITIVE		168	269	NO
4345	114					POSITIVE						POSITIVE				NO
4661	114	10	55			POSITIVE	A*23:01(625)	10	293			POSITIVE	DRB1*11:01(9193), DQB1*03:01(5970), DPB1*18:01(9926)	200	216	YES
5214	114	15	58		16962	POSITIVE	A23(5893)	25	124		312331	POSITIVE	DR11(18896), DQ7(20268), DP18(21387)	10	20	YES
8001	114	50	226			POSITIVE	A23(3844)	100	437			POSITIVE	DR11(14722) DQ7(18182) DPB1*18:01(16413)	170-275	175-400	YES

Table 11. Individual Flow crossmatch results and DSA reported for Cell #110 vs. Serum #114

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
8035	114	>48	25/92			NT	A*23:01(1977), also Epitope 127K detected	>90	393			POSITIVE	DR11:01(15013), DQ7(15278), DP18(17378)	169 or 154	158 or 166	YES
8050	114	50	142		2371	POSITIVE	A23(1883)	120	248		38297	POSITIVE	DR11(13756) DQ7(14967) DP18(16876)	78	226	YES
8062	114					NT						NT				YES
8083	114	90	13			NEGATIVE	A23(6033)	150	256			POSITIVE	DR11(15807), DQ7(20379), DP18(18625)	286	389	YES
8096	114	5	6.77			POSITIVE						NT		6.84		NO
8103	114	528	386	1.2		Borderline	A23:01(504)	579.6	429	1.7		Borderline	DQB1*03:01(3630), DRB1*11:01(4533), DQA1*05:01(3367), DPB1*18:01(4841)	341	528	NO
8111	114	11	38			POSITIVE	A23(2200)	38	222			POSITIVE	DR11(11100) DQ7(14700) DP18(13000)	214	197	YES

Single Antigen

Table 12. Summary of Single Antigen results for Serum #111

Class I							
*** Serum 111 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
A25	18	100%	12341	11220	4555	2110	19163
A26	18	100%	12128	11813	4592	2297	19785
A43	18	100%	7568	7427	3250	979	14016
B57	18	100%	8253	7713	3596	751	14674
B63	18	100%	6948	6409	3045	971	12600
A29	17	94%	4191	4311	1921	868	8807
A34	17	94%	5050	5056	2397	1175	10676
B58	17	94%	6324	6267	2675	1247	11545
B38	16	88%	2819	2790	1121	454	5037
B54	16	88%	4744	4599	1742	660	8482
B55	16	88%	2762	2695	1089	434	5190
A11	15	83%	3100	3573	1809	732	7338
A30	15	83%	3624	3830	1717	662	7804
A66	14	77%	8854	9393	4211	2914	17350
A80	14	77%	2374	2467	862	1112	4776
B39	14	77%	2955	2978	1131	377	5072
A33	13	72%	2212	2239	1173	191	4767
B56	12	66%	1838	1976	681	1094	3673
B67	11	61%	1814	1905	683	723	3215
A68	10	55%	2018	2056	856	782	3730
A1	9	50%	1545	1609	677	748	3001
A36	8	44%	1262	1546	717	885	3082
A6601	5	27%	13156	11228	6537	2914	20263
A69	5	27%	2079	2074	814	897	3332
A1101	4	22%	2285	2506	1512	732	4725
A1102	4	22%	2567	2822	2061	568	5588
A6602	4	22%	3215	3306	1943	688	6108
A31	3	16%	1043	1253	699	522	2195
B41	3	16%	1186	1181	82	1079	1280
B42	3	16%	1259	1234	135	1058	1385
B3901	2	11%	2076	2076	770	1306	2846

Blue = DSA against cell #109 only
Gold = DSA against cell #110 only
Green = DSA aginst cell #109 and #110

Class II							
*** Serum 111 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DP9	18	100%	14103	12758	4426	3638	20087
DPw3	18	100%	13870	12678	4260	3792	20159
DPw2	18	100%	13445	12057	4229	2932	19490
DPw6	18	100%	12723	11657	3822	3492	18763
DP28	18	100%	11401	10877	3997	3042	19004
DR11	18	100%	11200	10232	3314	3423	17397
DP18	18	100%	11025	10149	3667	2852	18017
DR17	18	100%	6732	6665	2453	1700	11332
DR52	18	100%	6579	6850	2805	1386	12322
DR18	18	100%	5631	5487	1897	1633	9307
DR13	18	100%	5354	5128	2350	1257	9981
DR10	18	100%	4568	4158	1811	727	7253
DR14	18	100%	3753	3630	1505	957	6912
DP14	17	94%	13200	11798	4191	3235	19165
DP17	17	94%	13118	11441	4243	2896	18805
DP10	15	83%	9235	9352	2369	2584	14528
DP20	15	83%	14160	13997	3119	4970	19679
DR12	15	83%	2051	1949	797	400	3854
DR9	15	83%	2461	2307	846	608	3442
DR7	14	77%	2337	2194	760	875	3729
DP402	12	66%	12173	11706	3789	3067	18378
DQ6	11	61%	3066	2824	1057	828	4375
DQ7	8	44%	1799	1978	536	1539	3356
DPw4	7	38%	10075	8689	3955	3067	12962
DQ9	6	33%	1259	1409	311	1223	2092
DQA1*01	5	27%	1927	2215	1232	828	4150
DQ8	4	22%	1108	1101	57	1018	1173
DPA1*01	3	16%	3792	6574	4391	3157	12774
DQA1*05	3	16%	1329	1204	562	462	1822
DR1403	3	16%	2598	2081	796	957	2688
DPA1*04	2	11%	8269	8269	5201	3068	13470
DQA1*06	2	11%	1805	1805	317	1488	2122
DR1404	2	11%	1409	1409	257	1152	1666
DPA1*02	1	5%	3638	3638	-	3638	3638
DPA1*03	1	5%	3067	3067	-	3067	3067
DPw1	1	5%	1776	1776	-	1776	1776
DQA1*03	1	5%	1590	1590	-	1590	1590
DR3	1	5%	1700	1700	-	1700	1700

Table 13. Summary of Single Antigen results for Serum #112

Class I

Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
A33	18	100%	5161	5011	2263	632	9709
B44	18	100%	5774	5415	2240	538	9299
B45	18	100%	6992	6281	2628	506	9966
B49	18	100%	10207	9253	4001	534	14702
B50	18	100%	9793	8944	3470	936	13642
A30	17	94%	3283	3493	1462	1183	6460
A31	17	94%	4184	4461	1692	1339	7609
A34	17	94%	2366	2542	1140	542	4990
B13	17	94%	7287	6954	2700	1078	11241
B41	17	94%	6868	6382	2279	1233	9988
B47	17	94%	3725	3761	1386	908	5931
B60	17	94%	10535	9729	3370	1863	15285
B61	17	94%	7492	6739	2450	1357	10758
B62	17	94%	4913	4697	1667	1010	7312
B72	17	94%	5219	4823	1856	729	7686
B76	17	94%	4982	5206	2113	1128	9934
B35	16	88%	2975	2945	948	1320	4793
B56	16	88%	3514	3385	1125	1355	5690
B71	16	88%	3443	3462	1031	1549	5395
B48	15	83%	6215	6356	1528	4022	9445
B53	15	83%	1900	2060	694	1113	3537
B75	15	83%	2339	2312	720	873	3653
A66	13	72%	2433	2307	855	1353	4005
A68	13	72%	2074	2251	954	1086	4128
B27	13	72%	2164	2146	728	1058	3596
B39	13	72%	1819	1951	614	861	3197
B8	12	66%	1623	1712	575	772	2932
B51	11	61%	1695	1690	598	612	2776
B38	10	55%	1318	1399	555	616	2550
B59	10	55%	1426	1535	557	822	2672
B77	10	55%	1401	1530	530	809	2587
B18	9	50%	1269	1316	508	651	2247
B52	8	44%	1295	1318	439	676	2304
B81	8	44%	1644	1713	637	797	2681
B8101	2	11%	2500	2500	694	1806	3194
A29	7	38%	1137	1113	446	606	2034
A69	7	38%	1187	1223	491	576	2129
A25	5	27%	689	809	233	541	1110

Class II

Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DR17	18	100%	19780	19129	3772	9061	24172
DR8	18	100%	17913	17774	3242	9361	21505
DR13	18	100%	17904	17549	3616	8029	22215
DR18	18	100%	17827	17204	3350	9144	21498
DR14	18	100%	17471	17184	3063	9332	21833
DR11	18	100%	17051	16550	2818	8857	21125
DR12	18	100%	16195	15646	2996	7970	20859
DR52	18	100%	12467	12276	3036	4904	18094
DQ2	18	100%	7416	7771	3907	904	14171
DPw2	18	100%	7259	7389	2566	1853	12897
DP18	18	100%	6242	6538	2278	1708	11970
DP28	18	100%	5508	5725	2093	1417	11225
DP9	17	94%	5392	5552	2154	1308	11121
DPw3	17	94%	4406	4622	1770	1142	9642
DP14	16	88%	4581	4686	1773	1123	9155
DP17	16	88%	4815	4809	1935	1215	9721
DPw6	16	88%	3803	3984	1543	1093	8458
DP10	15	83%	6143	6534	1664	4215	10601
DP20	14	77%	5475	5647	1534	3660	9808
DQA1*05	14	77%	5892	6290	3815	904	13128
DP402	13	72%	6952	6874	2532	1931	11881
DQA1*06	11	61%	3371	3519	774	2335	4836
DR4	11	61%	1644	1577	440	725	2288
DQ4	8	44%	1884	1943	640	653	2867
DPw4	6	33%	6011	5419	1671	1931	7003
DQ7	5	27%	3599	3201	1698	678	5662
DQA1*04	5	27%	4295	3670	1437	1725	5644
DQA1*03	3	16%	1100	1213	504	660	1879
DR10	3	16%	1319	1203	245	863	1428
DR1403	2	11%	11980	11979	2643	9337	14622
DR1404	2	11%	14471	14470	2808	11663	17278
DPA1*01	1	5%	6653	6653	-	6653	6653
DPA1*04	1	5%	7039	7039	-	7039	7039
DQ3	1	5%	678	678	-	678	678

Blue = DSA against cell #109 only
Gold = DSA against cell #110 only
Green = DSA aginst cell #109 and #110

Table 14. Summary of Single Antigen results for Serum #113

Class I							
*** Serum 113 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
B35	18	100%	10612	10040	3670	1207	17138
B51	18	100%	18046	16188	5796	1047	22573
B52	18	100%	9679	9103	3288	475	15123
B53	18	100%	10342	9931	3572	1326	17191
B62	18	100%	6486	6137	2543	489	11462
B63	18	100%	8390	8040	3084	1114	14443
B71	18	100%	10029	9553	3253	1063	15851
B75	18	100%	12499	11710	4379	782	19624
B77	18	100%	10131	9515	3541	653	15902
B49	17	94%	7376	7023	2658	1136	12780
B50	17	94%	5483	5145	1963	803	9385
B56	17	94%	5684	5536	2006	919	10173
B57	17	94%	5548	5199	1935	920	9841
B72	17	94%	5545	5366	2194	606	10142
Cw7	17	94%	16909	15519	6245	833	22977
B18	16	88%	4368	4423	1481	1962	8252
B46	16	88%	6270	6117	2093	1925	11182
B58	16	88%	3281	3287	1113	1629	6225
B64	16	88%	3726	3775	1188	1684	6809
B65	16	88%	2668	2859	806	1562	5071
B73	16	88%	2540	2564	1058	566	5302
B78	16	88%	16782	15518	4473	2402	21872
B8	16	88%	2128	2200	741	856	3883
Cw9	13	72%	2532	2480	982	980	4981
Cw10	12	66%	2423	2352	921	1075	4623
A33	9	50%	1610	1877	677	1164	3327
B7801	3	16%	5295	7420	5187	2402	14563
B15	1	5%	1114	1114	-	1114	1114
B27	1	5%	1063	1063	-	1063	1063
B4005	1	5%	7643	7643	-	7643	7643
B48	1	5%	3542	3542	-	3542	3542

Class II							
*** Serum 113 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
NEG	15	83%	-	-	-	-	-
DR9	3	17%	3000	3326	730	2642	4338

Blue = DSA against cell #109 only

Gold = DSA against cell #110 only

Green = DSA aginst cell #109 and #110

Table 15. Summary of Single Antigen results for Serum #114

Class I

Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
A2	18	100%	22937	21396	5341	7951	28797
A24	18	100%	3146	4022	2511	1113	9155
A68	18	100%	15556	15434	5038	4939	23873
A69	18	100%	17626	16778	5744	3735	24624
B57	18	100%	15453	14294	5095	2616	21874
B58	18	100%	12893	12280	4728	1532	20129
A23	17	94%	2300	2863	1577	504	6033
A203	5	27%	17435	16651	6124	7399	24027
A2403	4	22%	1906	2113	1008	1113	3529

Blue = DSA against cell #109 only
Gold = DSA against cell #110 only
Green = DSA aginst cell #109 and #110

Class II

Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DR4	18	100%	18733	17709	3985	7634	22601
DPw2	18	100%	17565	16241	4528	5119	22218
DP18	18	100%	15988	14718	4118	4841	21221
DP28	18	100%	15360	14252	4221	4742	21120
DQ9	18	100%	15222	14036	4665	3717	20519
DQ7	18	100%	14929	14342	4980	3630	21379
DPw3	18	100%	14188	13109	3772	4274	18649
DQ8	18	100%	14008	13324	4143	4324	20268
DR11	18	100%	13550	12862	3262	5042	18896
DPw6	18	100%	12959	11922	3386	3807	18035
DQ4	18	100%	3607	3984	1565	1479	7193
DP14	17	94%	12687	11740	3542	3589	18273
DP17	17	94%	12971	11916	3734	3438	18406
DP9	17	94%	14000	13412	3990	4248	20417
DP10	15	83%	13945	13698	2886	5274	18940
DP20	15	83%	14596	14062	2865	5559	19352
DP402	14	77%	17064	16090	3905	5543	21209
DPw4	5	27%	13764	11340	4295	5543	15456
DQA1*03	3	16%	4656	6412	3214	3660	10921
DQA1*05	3	16%	7645	9623	5946	3534	17691
DPA1*01	2	11%	10625	10624	5199	5426	15823
DPA1*04	2	11%	10459	10459	4723	5736	15182
DQA1*06	2	11%	12980	12979	5633	7347	18612
DQ3	1	5%	4324	4324	-	4324	4324
DQA1*04	1	5%	3366	3366	-	3366	3366
DR8	1	5%	981	981	-	981	981

Table 16a. Individual laboratory results for Serum #111 - class I by One Lambda Single Antigen

Ctr	A25	A26	A43	B57	B63	A29	A34	B58	B38	B54	B55	A11	A1101	A1102	A30	A66	A6601	A6602	A80	B39	Manufacturer
										**** Serum 111 ****											
230	16375	16580	10964	11461	9157	6703	7592	8775	4083	5888	2912	5833				5489	17350		3247	4213	One Lambda
774	13151	12955	8198	9430	8101	4660	5486	7191	2804	5112	3272		2983	4004	3624		13156	2782	2632		One Lambda
792	10178	11023	7192	6692	5363	3779	5050	5359	2328	3923	2351	3912			3464	10583			1944	2421	OneLambda
1160	9193	9616	5423	5651	4817	2735	3940	4255	1762	3295	1792	2682			2395	9190			1367	1871	One Lambda
1426	10543	11231	7122	8139	6843	4191	3782	6280	2157	4161	2604	2120			2915	6635			2741	2255	One Lambda
2400	13012	14502	9314	7871	6397	4430	5650	6324	2924	4861	2980	4648			4251	8546			2455	3052	One Lambda
3224	15005	15344	10114	10140	7688	5541	7002	7747	3758	5530	3078		4725	5588	4922		15181	3648	2340	3798	One Lambda
3753	13026	13752	7943	9104	7436	3930	4069	7063	2984	4691	2460	3078			1812	7797			2303	2968	One Lambda
5214	19163	19785	14016	14674	12600	8807	10676	11545	5037	8482	5190	7338			7804		20263	6108	4776	5072	One Lambda
8001	12996	14045	9047	8929	7266	4911	6269	6983	2833	4797	2724	4655			4517	13319			2408	2941	One Lambda
8035	13937	14576	9210	10717	9771	5501	5516	9151	3655	5967	3909	3437			4277	9162				3671	One Lambda
8050	11686	11032	6419	8366	7053	3117	3402	6305	2410	4054	2182	2478			2589	6174			1766	2488	One Lambda
8062	11400	11300	6500	7900	6100	3800	4306	5600	2300	4100	2800	3100			2900	11000			2300	2400	One Lambda
8083	16105	17542	11277	11347	9640	6508	8301	8810	4000	6230	3598	6077			5838	17287			3158	4176	One Lambda
8096	3206	3264	2200	1762	1445	868	1175	1315	454	660	434	796				3151				377	One Lambda
Avg	12598	13103	8329	8812	7312	4632	5481	6847	2899	4783	2819	3858	3854	4796	4057	10016	16200	4179	2572	2979	
Std Dev.S	3686	3885	2795	2931	2545	1873	2300	2359	1110	1699	1045	1808	1232	1120	1604	4271	3661	1725	838	1174	
MFI %CV	29%	30%	34%	33%	35%	40%	42%	34%	38%	36%	37%	47%	32%	23%	40%	43%	23%	41%	33%	39%	

Blue = DSA against cell #109 only

Gold = DSA against cell #110 only

Green = DSA aginst cell #109 and #110

Table 16b. Individual laboratory results for Serum #111 - class I by Lifecodes-Immucor Single Antigen

Ctr	A25	A26	A43	B57	B63	A29	A34	B58	B38	B54	B55	A11	A1101	A1102	A30	A66	A6601	A6602	A80	B39	Manufacturer
										**** Serum 111 ****											
4661	3845	5414	2896	2356	1440	1396	1293	1247					1586	1130			4626	688			Lifecodes
8029	7046	8376	4885	3557	3290	2425	2454	2592	1157	1837	837	2712			662	8395			1112		Lifecodes
8103	2110	2297	979	751	971							732	732	568		2914	2914				Lifecodes
Avg	4334	5362	2920	2221	1900	1911	1874	1920	-	-	-	1722	1159	849	-	5655	3770	-	-		
Std Dev.S	2504	3040	1953	1408	1226	728	821	951	-	-	-	1400	604	397	-	3876	1211	-	-		
MFI %CV	58%	57%	67%	63%	65%	38%	44%	50%	-	-	-	81%	52%	47%	-	69%	32%	-	-		

Table 16a. Individual laboratory results for Serum #111 - class I by One Lambda Single Antigen, cont.

Ctr	A33	B56	B67	A68	A1	A36	A69	Other	Manufacturer
	****	Serum	111	****					
230	3071		2551	2122	1986				One Lambda
774		2328						B3901	One Lambda
792	2212	1646		1757					OneLambda
1160	1661	1094	1133	1365	878	885	897	A31	One Lambda
1426		1896	1474						One Lambda
2400	2762			2445					One Lambda
3224	3076	1779	2417	2612	1823	1810	2079	A31,B41,B42	One Lambda
3753	1037	1557	1890						One Lambda
5214	4767	3673	3215	3730	3001	3082	3332	A31	One Lambda
8001	2462	1607	1814	1914	1545	1477	1618	B41,B42	One Lambda
8035	1339	2860	2507	782	1269	1046		B41,B42,B73,Cw7	One Lambda
8050		1249	1519						One Lambda
8062	1733	1962	1719		1065	1014			One Lambda
8083	3562	2069		2872	2167	2122	2448		One Lambda
8096	191								One Lambda
Avg	2323	1977	2024	2178	1717	1634	2075		
Std Dev.S	1236	711	632	867	686	783	910		
MFI %CV	53%	36%	31%	40%	40%	48%	44%		

Blue = DSA against cell #109 only
Gold = DSA against cell #110 only
Green = DSA aginst cell #109 and #110

Table 16b. Individual laboratory results for Serum #111 - class I by Lifecodes-Immucor Single Antigen, cont.

Ctr	A33	B56	B67	A68	A1	A36	A69	Other	Manufacturer
	****	Serum	111	****					
4661									Lifecodes
8029	1241		723	970	748	932		B3901	Lifecodes
8103								B15	Lifecodes
Avg	-	-	-	-	-	-			
Std Dev.S	-	-	-	-	-	-			
MFI %CV	-	-	-	-	-	-			

Table 17a. Individual laboratory results for Serum #112 - class I by One Lambda Single Antigen

Ctr	A33	B44	B45	B49	B50	A30	A31	A34	B13	B41	B47	B60	B61	B62	B72	B76	B35	B56	B71	B48	B53	B75	Manufacturer
230	7980	8091	8760	13067	12641	5507	6602	3687	10223	8756	5266	12971	9001	6169	6560	7345	3511	4448	4272	7772	2411	2853	One Lambda
774	5682	6185	7168	10778	10122	3296	4184	2311	8074	6868	3846	10611	7586	5210	5269	3888	2974	3401	3412	6215		2339	One Lambda
792	5121	5140	5712	8184	7862	3283	4140	2679	6278	5574	3356	8653	6121	3966	4005	5314	2368	2712	2856	5017	1653	1895	OneLambda
1160	3584	3770	4094	6487	5934	2074	2454	1813	4856	4105	2272	7116	4584	3042	3218	4871	1675	1910	2031	4102	1113	1367	One Lambda
1426	2792	4293	5906	8481	8329	1621	2606	1192	5598	5365	2775	8548	5462	3868	4151	3209	2508	2579	2641	5087	1853	1952	One Lambda
2400	5450	6041	7585	10521	10097	4401	5410	3392	7287	7181	4899	11491	7492	5188	5335	7860	3356	3752	3631	6553	2319	2671	One Lambda
3224	6365	6766	7269	11740	10379	4769	5434	3505	9006	7244	4349	10850	8088	5423	5600	5268	3078	3719	3899	6192	2024	2517	One Lambda
3753	4530	5101	6816	9941	9527	3130	4334	2012	6496	6436	3250	9755	6111	4913	5219	4982	2976	3428	3474	5571	2135	1840	One Lambda
5214	9709	9299	9966	14702	13642	6460	7609	4990	11241	9988	5931	15285	10758	6984	7515	9934	4558	4786	5118	9445	3263	3653	One Lambda
8001	6218	6467	7342	10473	10058	3978	5051	2859	8091	6997	4039	10535	7739	4633	4793	5489	2759	2964	3209	6255	1871	2186	One Lambda
8035	5563	7337	9460	13982	13269	3701	5530	2578	9074	8903	5512	12575	9257	7312	7686	6397	4793	5690	5395	8331	3537	3212	One Lambda
8050	3750	5847	7799	12861	11930	2533	4118	1482	6717	7399	3725	10873	7705	5660	5938	4258	2592	3737	3749	6246	1742	1725	One Lambda
8062	5200	5700	6600	9800	9100	2800	3900	2366	7700	6400	3500	10400	6800	4700	5000	4200	3000	3600	3200	6000	1900	2384	One Lambda
8083	8902	8472	9332	13312	12801	5896	7297	4450	10213	9264	5858	13882	9784	6671	6564	7990	4028	4381	4644	8546	2767	3227	One Lambda
8096	2943	3497	4620	6008	6038	2316	3226	1886	4100	4002	2197	6145	4170	2967	2706	3347	1624	1698	2325	4022	1121	873	One Lambda
Avg	5586	6134	7229	10689	10115	3718	4793	2747	7664	6965	4052	10646	7377	5114	5304	5623	3053	3520	3590	6357	2122	2313	
Std Dev.S	2043	1681	1710	2638	2436	1442	1555	1081	2056	1768	1225	2448	1880	1323	1432	1925	909	1064	967	1582	703	745	
MFI %CV	37%	27%	24%	25%	24%	39%	32%	39%	27%	25%	30%	23%	25%	26%	27%	34%	30%	30%	27%	25%	33%	32%	

Blue = DSA against cell #109 only
Gold = DSA against cell #110 only
Green = DSA aginst cell #109 and #110

Table 17b. Individual laboratory results for Serum #112 - class I by Lifecodes-Immucor Single Antigen

Ctr	A33	B44	B45	B49	B50	A30	A31	A34	B13	B41	B47	B60	B61	B62	B72	B76	B35	B56	B71	B48	B53	B75	Manufacturer
4661	2299	1518	1341	1948	2878	1183	1339	542	1078	1233	908	1863	1357	1010	729	1128							Lifecodes
8029	3491	3409	2797	3737	5452	2442	2609	1486	2193	2786	2265	3843	2551	2137	1715	3026	1320	1355	1549		1198		Lifecodes
8103	632	538	506	534	936																		Lifecodes
Avg	2141	1822	1548	2073	3089	1813	1974	1014	1636	2010	1587	2853	1954	1574	1222	2077	-	-	-	-	-		
Std Dev.S	1436	1459	1159	1605	2265	890	898	668	788	1098	960	1400	844	797	697	1342	-	-	-	-	-		
MFI %CV	67%	80%	75%	77%	73%	49%	45%	66%	48%	55%	60%	49%	43%	51%	57%	65%	-	-	-	-	-		

Table 17a. Individual laboratory results for Serum #112 - class I by One Lambda Single Antigen, cont.

Ctr	A66	A68	B27	B39	B8	B51	B38	B59	B77	B18	B52	B81	A29	A69	A25	A26	B2708	B73	A6602	A6601	B2705	Other	Manufacturer
230	3593	3141	3035	2186	2087																		One Lambda
774																	2339		2539				One Lambda
792	2447	2074	1802																				OneLambda
1160	1425	1210	1334	1090	772	956	719	838	809	675	676	1041	606	576	541	433		575				B78,B67,A32,A74 >	One Lambda
1426	1390		1741	1699	1272	1458	1234	1441	1292														One Lambda
2400	3142	2837	2265	2145								2323											One Lambda
3224		2725		1819	1602	1884	1321	1412	1621	1269	1315		1317	1349	1110		2446		2961	1431	1978	B8101	One Lambda
3753	1739	1427	2179	1681	1643	1363	1409	1440	1494	1296	1426	1232		1187									One Lambda
5214		4128		2830	2362	2776	2193	2351	2384	2057			2034	2129			3494		4539	2508	3035	B8101	One Lambda
8001	2824	2431	2044	1601	1403	1499	1296	1278	1343	1100	1144	1577	1137	1186									One Lambda
8035	2433	1454	3596	3197	2932	2401	2550	2672	2587	2247	2304	2345	1163	1505	1066	1058		2131				B78,B67,B64,B65 >	One Lambda
8050	1565		2164	1804	1702	1695	1314	1399	1380	1299	1417												One Lambda
8062	2500	1800	2400	2000	1547	1700	1347	1699	1421	1252	1275	1710						1515					One Lambda
8083	4005	3664	3083	2458	2197	2251						2681											One Lambda
8096	1353	1086	1198	861	1034	612	616	822	974	651	992	797	721	631	641	558		504					One Lambda
Avg	2368	2331	2237	1952	1713	1690	1400	1535	1531	1316	1319	1713	1163	1223	840	683	2760	1181	3346	1970	2507		
Std Dev.S	901	992	714	639	600	627	585	587	559	539	470	681	508	530	290	331	638	783	1054	762	747		
MFI %CV	38%	43%	32%	33%	35%	37%	42%	38%	37%	41%	36%	40%	44%	43%	35%	48%	23%	66%	32%	39%	30%		

Blue = DSA against cell #109 only

Gold = DSA against cell #110 only

Green = DSA aginst cell #109 and #110

Table 17b. Individual laboratory results for Serum #112 - class I by Lifecodes-Immucor Single Antigen, cont.

Ctr	A66	A68	B27	B39	B8	B51	B38	B59	B77	B18	B52	B81	A29	A69	A25	A26	B2708	B73	A6602	A6601	B2705	Other	Manufacturer
4661																							Lifecodes
8029	1585	1293	1058										813		689	726	1605						Lifecodes
8103																							Lifecodes
Avg	-	-	-										-	-	-	-							
Std Dev.S	-	-	-										-		-	-	-						
MFI %CV	-	-	-										-		-	-	-						

Table 18a. Individual laboratory results for Serum #113 - class I by One Lambda Single Antigen

										**** Serum 113 ****																
Ctr	B35	B51	B52	B53	B62	B63	B71	B75	B77	B49	B50	B56	B57	B72	Cw7	B18	B46	B58	B64	B65	B73	B78	B7801	B8	Other	Manufacturer
230	13884	21961	11956	13576	8878	10895	12409	15652	12611	9752	6882	7476	7200	7594	16909	5689	8029	4309	4957	3694	3224	20496		3319		One Lambda
774	11288	18676	10300	10986	6994	9197	10337	13399	11045	7744	5483	5684	5585	5919	18724	4903	6269	3430	3898	2824	2967	16871		2138		One Lambda
792	10434	16307	9552	10012	6731	8504	10155	12822	10140	7376	5520	5811	5858	5898	16767	4761	6270	3448	4064	3103	2645	14961		2287	Cw9,Cw10,A33	OneLambda
1160	7949	14906	7724	7558	5363	6512	8440	11088	8393	6067	4229	4381	4326	4856		3243	4255	2424	2850	2049	1353	12803		1314	Cw9	One Lambda
1426	10978	17041	9312	10671	6259	8656	9519	12172	10211	7500	5900	5805	4807	5545	16068	3847	6550	3132	3411	2433	2560	15703		1959	Cw9,Cw10	One Lambda
2400	12768	19097	11035	12381	8101	10853	11922	13719	12064	8477	6573	6903	6442	6848	21030	5505	7623	4425	4699	3709	3282	17646		2562	Cw9,Cw10,A33	One Lambda
3224	9107	16462	7862	9892	5914	7302	9012	11776	9362	6328	4427	5342	4751	4968	16579	3893	4817	2359	3077	2574	2063		14563	1849	Cw9,Cw10,A33	One Lambda
3753	10789	18291	9806	10694	5739	8276	10459	12498	9600	5839	4070	5076	4394	5118	17213	3560	5505	2659	3383	2549	2032	16693		2118	Cw9,Cw10	One Lambda
5214	17138	22573	15123	17191	11462	14443	15851	19624	15902	12780	9385	10173	9841	10142	22977	8252	11182	6225	6809	5071	5302	21872		3883	Cw9,Cw10,A33	One Lambda
8001	12262	20372	10762	11668	7294	9427	10982	14376	11475	8152	5963	6306	6132	6071	17836	4536	6715	3568	3852	2736	2519	17407		1792	Cw9,Cw10,A33	One Lambda
8035	12140	20007	10833	12098	7616	10266	11269	14505	11892	8701	6509	6802	5548	6620	19719	5021	7330	3669	4479	3302	3366	18418		2928	B48,B27,B4005	One Lambda
8050	10236	19271	10005	9809	6572	7978	9903	12239	10122	7164	4970	5339	4091	5138	15430	3625	5521	2059	3431	2440	2113	17476		2236	Cw9,Cw10	One Lambda
8062	10200	17800	9100	9400	6400	7900	9700	12500	9500	7100	5300	5300	5700	5100	16900	4200	5600	3000	3600	2600	2300	15800		2100	Cw9,Cw10,A33	One Lambda
8083	13025	21177	11221	12643	8018	10292	11999	15166	12008	9057	6692	6978	6844	6909	21228	5746	7477	4177	4426	3143	3438	18158		2615	Cw9,Cw10,A33	One Lambda
8096	7258	13140	9382	7767	3888	5191	8116	8207	7848	3483	2218	3172	2339	1609	17679	1962	2816	1629	1684	1562	1294	10687		1247		One Lambda
Avg	11297	18472	10265	11090	7015	9046	10672	13316	10812	7701	5608	6037	5591	5889	18219	4583	6397	3368	3908	2919	2697	16785	-	2290		
Std Dev.S	2440	2615	1785	2387	1741	2185	1912	2519	1982	2075	1619	1583	1701	1806	2222	1439	1915	1143	1145	826	987	2833	-	700		
MFI %CV	22%	14%	17%	22%	25%	24%	18%	19%	18%	27%	29%	26%	30%	31%	12%	31%	30%	34%	29%	28%	37%	17%	-	31%		

Blue = DSA against cell #109 only
Gold = DSA against cell #110 only
Green = DSA aginst cell #109 and #110

Table 18b. Individual laboratory results for Serum #113 - class I by Lifecodes-Immucor Single Antigen

										**** Serum 113 ****																
Ctr	B35	B51	B52	B53	B62	B63	B71	B75	B77	B49	B50	B56	B57	B72	Cw7	B18	B46	B58	B64	B65	B73	B78	B7801	B8	Other	Manufacturer
4661	3128	3571	1820	2614	1322	1965	2751	2722	1890	1136	803	919	920	606	1300								5295			Lifecodes
8029	6938	9694	7591	8472	3429	5962	8083	7538	6555	2744	2546	2660	3606	2296	6634	2034	1925	2089	1786	1967	566	10900		856	Cw9,Cw10,A33	Lifecodes
8103	1207	1047	475	1326	489	1114	1063	782	653					833								2402	2402		B15	Lifecodes
Avg	4610	6934	4474	4808	2555	3638	4657	5012	4249	2857	2132	2395	2359	2034	6698	2004	2611	1646	1705	1455	1109	7268	3849	1019		
Std Dev.S	4018	6976	4428	4234	2429	3204	4196	4831	4144	2669	1941	2122	2003	2066	7976	1657	2353	1237	1421	1110	1012	6506	2046	842		
MFI %CV	87%	101%	99%	88%	95%	88%	90%	96%	98%	93%	91%	89%	85%	102%	119%	83%	90%	75%	83%	76%	91%	90%	53%	83%		

Table 19a. Individual laboratory results for Serum #114 - class I by One Lambda Single Antigen

Ctr	A2	A203	A24	A2403	A68	A69	B57	B58	A23	Other	Manufacturer
				**** Serum 114 ****							
230	28367		5979		21468	23957	19745	17285	3981		One Lambda
774	22901	22010	2665	2603	15058	17951	15105	12986	2279		One Lambda
792	21062		5061		15956	17300	13769	11851	3294		OneLambda
1160	22094		3149		13666	15144	12243	10081	1939		One Lambda
1426	20282		1405		12321	15423	13985	11667	1435		One Lambda
2400	24532		6282		19026	21417	16765	14528	4138		One Lambda
3224	24696	24027	6449		20143	21189	17918	15359	4221		One Lambda
3753	22310		3143		16254	19164	16193	13770	2573		One Lambda
5214	23692		9155		22571	22927	21874	20129	5893		One Lambda
8001	23324		5746		18947	20578	16264	13789	3844		One Lambda
8035	24795		2018		15412	19661	17132	15368	1977		One Lambda
8050	22973		2042		14982	15382	14919	12772	1883		One Lambda
8062	24900		3300		15700	17000	15800	12800	2300		One Lambda
8083	28797		9122		23873	24624	21087	18912	6033		One Lambda
8096	12645		1371		7298	8112	5343	4887			One Lambda
Avg	23158	23019	4459	-	16845	18655	15876	13746	3271		
Std Dev.S	3726	1426	2592	-	4280	4232	3951	3665	1472		
MFI %CV	16%	6%	58%	-	25%	23%	25%	27%	45%		

Blue = DSA against cell #109 only
Gold = DSA against cell #110 only
Green = DSA aginst cell #109 and #110

Table 19b. Individual laboratory results for Serum #114 - class I by Lifecodes-Immucor Single Antigen

Ctr	A2	A203	A24	A2403	A68	A69	B57	B58	A23	Other	Manufacturer
				**** Serum 114 ****							
4661	12967	12387	1336	1208	8776	7476	7180	5345	625		Lifecodes
8029	16851	17435	3071	3529	11432	10978	9369	7989	1760		Lifecodes
8103	7951	7399	1113	1113	4939	3735	2616	1532	504		Lifecodes
Avg	11043	10278	1992	1950	7653	7598	6334	5309	1272		
Std Dev.S	7872	9058	1481	1368	5439	6027	5189	4540	1175		
MFI %CV	71%	88%	74%	70%	71%	79%	82%	86%	92%		

Table 20a. Individual laboratory results for Serum #111 - class II by One Lambda Single Antigen

Ctr	DP18	DP28	DP9	DPw2	DPw3	DPw6	DR10	DR11	DR13	DR14	DR17	DR18	DR52	DP14	DP17	DP10	DP20	DR12	DR9	Manufacturer
230	13501	15147	16856	15434	16569	14884	6207	12533	8233	5656	9589	7626	10452	15281	15358	10637	16249	2605	3006	One Lambda
774	12366	13835	15351	14183	14884	13697	5584	12041	7535	5012	8357	6470	9394	14055	14018	9900	15055		2778	One Lambda
792	9630	10709	11503	11241	11860	11340	4636	9696	5804	4194	6560	5193	6674	10977	11054	8242	11610	1605	1751	One Lambda
1160	9624	10537	12161	11474	12017	11201	2605	9747	4270	2882	4801	3845	4757	11288	10937	7998	11782			One Lambda
1426	10312	10557	14088	12671	13327	12166	3227	10012	2839	2142	5719	4633	6484	13321	12597	8622	13307	2287	3074	One Lambda
2400	11267	12054	14912	14316	14728	13622	5577	11678	6410	3652	7262	6054	7316	14556	13791	10441	14290	2084	2317	One Lambda
3224	11364	12569	14169	13489	14318	13176	5280	11010	6720	4671	7675	6438	8514	13440	13327	9235	13502	2051	2275	One Lambda
3753	9919	10748	14061	12999	13421	12586	3494	10446	3441	2626	6634	5617	4544	12985	13118	9219	14160	1299	1261	One Lambda
5214	18017	19004	20087	19490	20159	18763	7253	17397	9981	6912	11332	9307	12322	19165	18805	14528	19679	3854		One Lambda
8001	11624	12752	14118	13524	14507	13001	4905	11389	5697	4042	6829	5644	8265	13577	13266	9547	14103	2028	2461	One Lambda
8035	12931	13597	16836	15589	16360	14825	5222	12769	5011	3854	9006	7426	6076			10897	17051	1851	3442	One Lambda
8050	12538	13187	16702	15721	16355	14463	3854	12386	5011	3387	8816	7181	5859	15822	15315	10716	16259	2382	3272	One Lambda
8062	11400	12700	14500	13400	14700	12860	4500	11600	5900	3900	6200	5600	8400	13200	13150	9000	14200	2200	2700	One Lambda
8083	10782	10376	12764	13567	12219	11820	6388	11418	7427	5190	8755	6577	10380	12710	11467	8721	13748	2550	3045	One Lambda
8096	2910	3185	4155	4180	4151	4042	1165	3423	1514	1017	2590	2333	1386	4143	3825	2584	4970	400	608	One Lambda
Avg	11212	12064	14151	13419	13972	12830	4660	11170	5720	3942	7342	5996	7388	13180	12859	9352	13998	2092	2461	
Std Dev.S	3099	3332	3497	3240	3457	3061	1583	2829	2179	1467	2128	1665	2754	3287	3293	2452	3229	791	828	
MFI %CV	28%	28%	25%	24%	25%	24%	34%	25%	38%	37%	29%	28%	37%	25%	26%	26%	23%	38%	34%	

Blue = DSA against cell #109 only
Gold = DSA against cell #110 only
Green = DSA aginst cell #109 and #110

Table 20b. Individual laboratory results for Serum #111 - class II by Lifecodes-Immucor Single Antigen

Ctr	DP18	DP28	DP9	DPw2	DPw3	DPw6	DR10	DR11	DR13	DR14	DR17	DR18	DR52	DP14	DP17	DP10	DP20	DR12	DR9	Manufacturer
4661	5904	5767	6852	6629	7337	7054	1956	6387	2316	2642	4171	3371	6064	6217	5565			1154	1650	Lifecodes
8029	5741	6025	6906	6197	7503	6842	2275	6794	2939	2607	3989	3819	4606	6606	6021			893	977	Lifecodes
8103	2852	3042	3638	2932	3792	3492	727	3465	1257	957	1700	1633	1812	3235	2896					Lifecodes
Avg	4832	4945	5799	5253	6211	5796	1653	5549	2171	2069	3287	2941	4161	5353	4827			1024	1314	
Std Dev.S	1717	1653	1871	2021	2096	1998	817	1816	850	963	1377	1155	2161	1844	1688			185	476	
MFI %CV	36%	33%	32%	38%	34%	34%	49%	33%	39%	47%	42%	39%	52%	34%	35%			18%	36%	

Table 20a. Individual laboratory results for Serum #111 - class II by One Lambda Single Antigen, cont.

									**** Serum 111, cont. ****	
Ctr	DR7	DP402	DQ6	DQ7	DPw4	DQ9	DQA1*01	DQ8	Other	Manufacturer
230	2685	14251								One Lambda
774	2374		3681		12670					One Lambda
792			3220	1539	10075					One Lambda
1160	1037	10373								One Lambda
1426	2413				12071					One Lambda
2400			3966		12962					One Lambda
3224	1933	12045		1890		1236	4150	1018		One Lambda
3753	1802	11363	2464						DQA1*05,DQA1*06	One Lambda
5214	3729	18378		3356		2092				One Lambda
8001	2047	12374	3413	1812		1233		1090		One Lambda
8035	2975	14461		1744		1390	3037		DPA1*01,DPA1*04,DQA1*03,DQA1*05 >	One Lambda
8050	2638	14310	3066	1695		1282		1173		One Lambda
8062	2300	12300	2900	1785		1223		1126	DPw1	One Lambda
8083	2716	11261	4375	2008						One Lambda
8096			1399		3756		1137		DPA1*01,DPA1*04,DQA1*05	One Lambda
Avg	2387	13112	3165	1979	10307	1409	2775	1102		
Std Dev.S	668	2324	875	573	3831	340	1524	65		
MFI %CV	28%	18%	28%	29%	37%	24%	55%	6%		

Blue = DSA against cell #109 only
Gold = DSA against cell #110 only
Green = DSA aginst cell #109 and #110

Table 20b. Individual laboratory results for Serum #111 - class II by Lifecodes-Immucor Single Antigen, cont.

									**** Serum 111, cont. ****	
Ctr	DR7	DP402	DQ6	DQ7	DPw4	DQ9	DQA1*01	DQ8	Other	Manufacturer
4661	1199	6299					1927		DR1403,DR1404	Lifecodes
8029	875		1762		6223				DR1403,DR1404	Lifecodes
8103		3067	828		3067		828		DR3,DR1403,DPA1*01,DPA1*02 >	Lifecodes
Avg	1037	4683	1295		4645		1378			
Std Dev.S	229	2285	660		2232		777			
MFI %CV	22%	49%	51%		48%		56%			

Table 21a. Individual laboratory results for Serum #112 - class II by One Lambda Single Antigen

Ctr	DP18	DP28	DPw2	DQ2	DR11	DR12	DR13	DR14	DR17	DR18	DR52	DR8	DP9	DPw3	DP14	DP17	DPw6	DP10	DP20	DQA1*05	DP402	Manufacturer
									**** Serum 112 ****													
230	8291	6991	8741	13128	18432	18025	19969	20179	22983	19826	15407	19750	6208	4668	5346	5030		7068	5444	13128	7790	One Lambda
774	6146	5638	7020	11123	16350	15808	18198	17618	20259	18185	13612	17874	5337					5401		11123		One Lambda
792	5730	5232	5872	8555	15220	14693	15972	15819	17122	15144	11679	15719	4669	4105	4264	4280	3719	5061	4383		5423	One Lambda
1160	4794	4284	4983	5713	14760	13459	15020	14973	15916	13687	9239	15577	4004	3554	3473	3536	3210	4215	3660		4617	One Lambda
1426	6735	5510	8087	4502	14686	13002	15902	14432	17497	15937	9816	16608	6136	4522	4908	5186	3841	6489	5527	2581		One Lambda
2400	5980	5506	7498	5589	16878	15136	17578	16399	19252	17313	11726	19599	6159	5052	5226	5199	4405	5978	5506	6023		One Lambda
3224	8245	7364	9327	11550	17234	17064	18737	18722	20587	18539	13945	17869	6994	5964	6043	6383	5198	7351	6190	11550	7996	One Lambda
3753	6384	5385	7626	5819	17881	16542	19158	18421	20408	18459	11623	20207	5772	4406	4861	5072	3706	6143	5129	4099	6952	One Lambda
5214	11970	11225	12897	14171	21125	20859	22013	21833	22727	21316	18094	21412	11121	9642	9155	9721	8458	10601	9808	6053	11881	One Lambda
8001	6284	5506	6615	9850	16161	16175	17609	17323	18739	16942	12665	17951	4994	4179	4268	4380	3445	5581	4449	3476	5882	One Lambda
8035	7944	6730	9746	6779	18800	17638	21536	19389	23531	20504	13608	20892		5647			4689	7698	6568	7296	8608	One Lambda
8050	8747	7037	10721	8053	19895	19012	22215	20731	24172	21498	15139	21505	7928	5653	6220	6835	4509	8597	6957	5760	9506	One Lambda
8062	6200	5700	6800	10000	15400	15100	16800	17100	19300	16400	12200	17200	5392	4300	4300	4600	3900	5388	4800	3500	6100	One Lambda
8083	9363	8329	10129	13609	19029	17747	19738	19774	21391	19794	15347	19080	7631	6185	6240	6488	4993	8060	6822		8841	One Lambda
8096	4368	3777	5321	5932	18095	17135	20244	18903	21545	19345	12392	20689	3603	3281	3428	3247	2750	4388	3821	10831		One Lambda
Avg	7145	6281	8092	8958	17330	16493	18713	18108	20362	18193	13099	18795	6139	5083	5210	5381	4371	6535	5647	7118	7600	
Std Dev.S	1962	1809	2182	3229	1935	2076	2264	2137	2435	2284	2299	1989	1897	1577	1510	1689	1417	1723	1592	3641	2097	
MFI %CV	27%	29%	27%	36%	11%	13%	12%	12%	12%	13%	18%	11%	31%	31%	29%	31%	32%	26%	28%	51%	28%	

Blue = DSA against cell #109 only

Gold = DSA against cell #110 only

Green = DSA aginst cell #109 and #110

Table 21b. Individual laboratory results for Serum #112 - class II by Lifecodes-Immucor Single Antigen

Ctr	DP18	DP28	DPw2	DQ2	DR11	DR12	DR13	DR14	DR17	DR18	DR52	DR8	DP9	DPw3	DP14	DP17	DPw6	DP10	DP20	DQA1*05	DP402	Manufacturer
									**** Serum 112 ****													
4661	3522	2764	4085	1747	11890	10056	10332	11685	12327	10186	7047	10891	2730	2283	2236	2153	2072			1747	3846	Lifecodes
8029	5283	4662	5694	2856	17223	16215	16845	16691	17505	17468	12541	17751	4406	4001	3891	3626	3764					Lifecodes
8103	1708	1417	1853	904	8857	7970	8029	9332	9061	9144	4904	9361	1308	1142	1123	1215	1093			904	1931	Lifecodes
Avg	3504	2948	3877	1836	12657	11414	11735	12569	12964	12266	8164	12668	2815	2475	2417	2331	2310			1326	2889	
Std Dev.S	1788	1630	1929	979	4235	4287	4572	3758	4258	4535	3939	4468	1551	1439	1393	1215	1351			596	1354	
MFI %CV	51%	55%	50%	53%	33%	38%	39%	30%	33%	37%	48%	35%	55%	58%	58%	52%	59%			45%	47%	

Table 21a. Individual laboratory results for Serum #112 - class II by One Lambda Single Antigen, cont.

Ctr	DQA1*06	DR4	DQ4	DPw4	DQ7	DQA1*04	DQA1*03	DR10	DR1403	DR1404	Other	Manufacturer
**** Serum 112, cont ****												
230	4262	2025				4295						One Lambda
774	3324			6170	3978							One Lambda
792			1784		3599							One Lambda
1160		725										One Lambda
1426	2335			7003								One Lambda
2400	3194			6512								One Lambda
3224	3659	1644				5644						One Lambda
3753	3371	1274				2334						One Lambda
5214	4586	2288	2867									One Lambda
8001	2716	1362	1784									One Lambda
8035	3829	1647	1706			4352	1879	1428			DPA1*01,DPA1*04	One Lambda
8050	4836	1825	2029					1319				One Lambda
8062	2600	1315				1725	1100					One Lambda
8083		2082	2742		5662							One Lambda
8096				5051								One Lambda
Avg	3519	1619	2152	6184	4413	3670	1490	1374				
Std Dev.S	812	465	519	829	1098	1606	551	77				
MFI %CV	23%	29%	24%	13%	25%	44%	37%	6%				

Blue = DSA against cell #109 only

Gold = DSA against cell #110 only

Green = DSA aginst cell #109 and #110

Table 21b. Individual laboratory results for Serum #112 - class II by Lifecodes-Immucor Single Antigen, cont.

Ctr	DQA1*06	DR4	DQ4	DPw4	DQ7	DQA1*04	DQA1*03	DR10	DR1403	DR1404	Other	Manufacturer
**** Serum 112, cont ****												
4661									9337	11663		Lifecodes
8029		1167	1984	5851	2091			863	14622	17278	DQ9	Lifecodes
8103			653	1931	678		660				DR3,DQ3,DQA1*02	Lifecodes
Avg		-	1319	3891	1385		660	-	11980	14471		
Std Dev.S		-	941	2772	999		#DIV/0!	-	3737	3970		
MFI %CV		-	71%	71%	72%		#DIV/0!	-	31%	27%		

Table 22a. Individual laboratory results for Serum #113 and #114 - class II by One Lambda Single Antigen

Ctr	**** Serum 113 **** DR9	Other	DP18	DP28	DPw2	DPw3	DPw6	DQ4	DQ7	DQ8	DQ9	DR11	DR4	DP14	DP17	DP9	DP10	DP20	DP402	DPw4	Other
230			18808	19111	20386	16050	14109	6047	20672	18789	20491	15217	22591	14649	14687	16468	15524	15908	19113		
774			16233	15652	17893	14175	13130	3481	16491	14567	15734	14131	18996	12687	13011	14495	13224	13568	16018		
792			13732	13722	14430	12029	10889	4603	14769	13381	14151	11892	17264	10797	11198	12643	11663	12057	13838		
1160			13748	13775	14878	12596	11377	3139	13045	11479	11945	12400	17096	11016	11376	12900	11921	12281	14319		
1426			14566	13267	17372	13077	11734	2048	12750	11804	12694	11939	15056	12002	12306	13911	12661	13662		15185	
2400			13708	13678	16879	13698	12823	4108	13986	13135	14320	13028	18386	12058	12971	13853	13116	13586		15456	
3224			17835	17801	19193	16337	14463	5546	19208	16540	17670	15535	20837	14195	14498	16455	15063	15247	17394		
3753			15876	15067	18884	14376	13094	3732	14890	14250	15084	13500	18865	13355	13953	15728	14718	14596	18002		
5214			21221	21120	22218	18649	18035	7193	21379	20268	20519	18896	22601	18273	18406	20417	18940	19352	21209		
8001			16413	16489	17729	15059	13519	4677	18182	15970	17703	14722	19615	13322	13787	15368	13945	14651	16733		
8035	4338		17377	15737	19830	15338	13795	3371	15278	14745	15456	14105	19604				15245	15208	18522		DPA1*01,DPA1*04>
8050	2642		16876	15800	18919	14863	13408	3270	14967	13815	15360	13756	19466	14225	13636	15278	14620	15289	18660		
8062	3000		16100	16000	17400	14200	12100	3300	16400	14200	15400	13600	18600	12700	12800	14000	13100	13400	16400		
8083			18625	18547	20650	17051	15124	6684	20379	18295	19511	15807	22362	14551	15388	17149	16458	16579	19040		
8096			6087	5910	7755	5443	5031	1854	6160	6420	6394	5663	10853	5699	5545	5902	5274	5559		6752	DPA1*01,DPA1*04>
Avg	3327		15814	15445	17628	14196	12842	4204	15904	14511	15495	13613	18813	12824	13112	14612	13698	14063	17437	12464	
Std Dev.S	894		3418	3455	3427	2975	2764	1584	3871	3358	3612	2823	3048	2771	2825	3203	2987	2966	2108	4949	
MFI %CV	27%		22%	22%	19%	21%	22%	38%	24%	23%	23%	21%	16%	22%	22%	22%	22%	21%	12%	40%	

Blue = DSA against cell #109 only
Gold = DSA against cell #110 only
Green = DSA aginst cell #109 and #110

Table 22b. Individual laboratory results for Serum #113 and #114 - class II by Lifecodes-Immucor Single Antigen

Ctr	**** Serum 113 **** DR9	Other	DP18	DP28	DPw2	DPw3	DPw6	DQ4	DQ7	DQ8	DQ9	DR11	DR4	DP14	DP17	DP9	DP10	DP20	DP402	DPw4	Other
4661			9926	8240	9757	7303	7559	2673	6491	6663	6879	9652	11735	6501	5871	8169			10469		
8029			12962	11881	13057	11444	10605	4507	9480	11188	9622	12641	17212	9971	9704	11024				13764	DR8
8103			4841	4742	5119	4274	3807	1479	3630	4324	3717	5042	7634	3589	3438	4248			5543	5543	DQA1*03,DQA1*04>
Avg			7578	7096	8106	6519	6087	2329	6505	6638	6531	7062	9899	5908	5785	6737			7111	7245	
Std Dev.S			5579	5236	5980	4917	4521	1597	5080	4880	4986	5076	6919	4375	4413	4953			6999	5111	
MFI %CV			74%	74%	74%	75%	74%	69%	78%	74%	76%	72%	70%	74%	76%	74%			98%	71%	

Paper Challenge

Table 23. Individual Virtual crossmatch results for Serum #113 vs Donor# V1

Donor #V1 HLA genotype: A*02:01-A*11:01-B*15:13-B*38:02-C*07:02-C*08:01-DRB1*15:02-DRB5*01:01-DRB5*01:08N-DQA1*01:01-DQA1*01:02-DQB1*05:01-DQB1*05:02-DPA1*02:01-DPA1*02:02-DPB1*01:01-DPB1*13:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	113	92	Positive	B77(11177) Cw7(16715)	Positive	No Class II DSA	Unacceptable	Positive due to Class I Antibodies.
230	113	76	Positive	B77(12611) Cw7(16909)	Negative	No Class II DSA	Unacceptable	
774	113	77	Positive	B77(11045)	Positive	No Class II DSA	Unacceptable	Prediction based on CI DSA
792	113	91	Positive	B77(10140) Cw7(16767)	Positive	No Class II DSA	Unacceptable	
1426	113	81	Positive	B77(10211) Cw7(16068)	Positive	No Class II DSA	Unacceptable	
1461	113	23	Positive	B77(2997) Cw7(1678)	Positive	No Class II DSA	Unacceptable	
2400	113	91	Positive	B77(12007) Cw7(20862)	Positive	No Class II DSA	Unacceptable	Positive due to Class I DSA.
3753	113	88.29	Positive	B77(9600) Cw7(17213)	Positive	No Class II DSA	Unacceptable	We recommend to avoid this donor.
3966	113	99	Positive	B77(12398) Cw7(18232)	Negative	No Class II DSA	Unacceptable	
4661	113	10	Positive	B77(1890) Cw7(929)	Positive	No Class II DSA	Unacceptable	163LW+65QI, 193PL3 .
5214	113	91	Positive	B77(15902) Cw7(22977)	Positive	No Class II DSA	Unacceptable	No CII DSA, but might be positive due to CI
8001	113	91	Positive	B77(11475) Cw7(17836)	Positive	No Class II DSA	Unacceptable	B*38:02 not included in LSAB panel
8029	113	29	Positive	B77(6555) Cw7(6079)	Positive	No Class II DSA	Unacceptable	
8035	113	83	Positive	B77(11892) Cw7(19719)	Positive	No Class II DSA	Unacceptable	Based on Class I DSA
8050	113	91	Positive	B77(10122) Cw7(15430)	Positive	No Class II DSA	Unacceptable	
8062	113		NT		NT	-	-	
8080	113	91	Positive	B77(13302) Cw7(18289)	Positive	No Class II DSA	Unacceptable	Patient demonstrates Class I reactivity
8083	113	91	Positive	B77(12008) Cw7(21228)	Positive	No Class II DSA	Unacceptable	Due to expression of Class I on B cells
8096	113		Positive	B77(7848) Cw7(17679)	Positive	No Class II DSA	Unacceptable	
8103	113	10	Borderline	B15(1114) B77(653) Cw7(814)	Negative	No Class II DSA	Acceptable	Low MFI antibodies. Acceptablerisk
8111	113	56	Positive	B77(9300) Cw7(15800)	Positive	No Class II DSA	Unacceptable	

Table 24. Individual Virtual crossmatch results for Serum #113 vs Donor# V2

Donor #V2 HLA genotype: A*29:02-A*68:03-B*40:02-B*44:03-C*03:04-C*16:01-DRB1*04:07-DRB1*07:01-DRB4*01:01-DRB4*01:03-DQA1*02:01-DQA1*03:01-DQB1*02:02-DQB1*03:02:01G-DPA1*01:03-DPA1*02:01-DPB1*04:01:01G-DPB1*14:01:01G

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	113	92	Negative	Cw10(2777)	Negative	No Class II DSA	Comments required	Low level DSA to C antigen would comment and communicate with the program
230	113	76	Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	
774	113	77	Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	
792	113	91	Positive	Cw10(2423)	Negative	No Class II DSA	Unacceptable	Weak Positive.
1426	113	81	NT	Cw10(2543)	NT	No Class II DSA	Potentially unacceptable	Possible epitope-specific antibody to the eplet 163LW that is shared between C*03:04 (Cw10) and multiple positive HLA-B (high-level antibodies to them). Need to perform physical crosss match to confirm the presence of epitope-specific antibody.
1461	113	23	Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	
2400	113	91	Negative	Cw10(2998)	Negative	No Class II DSA	Acceptable	
3753	113	88.29	Negative	Cw10(1763)	Negative	No Class II DSA	Unacceptable	We recommend to avoid this donor.
3966	113	99	Positive	Cw10(2673)	Negative	No Class II DSA	Unacceptable	
4661	113	10	Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	
5214	113	91	Borderline	Cw10(4623)	Borderline	No Class II DSA	might be weak positive	No CII DSA, but might be weak positive due to CI
8001	113	91	Positive	Cw10(2495)	Positive	No Class II DSA	Unacceptable	A*68:03 not included in LSAB panel; DRB1*04:07 not included in LSAB panel
8029	113	29	Borderline	Cw10(1147)	Borderline	No Class II DSA	MINIMAL RISK	
8035	113	83	Negative	Cw10(2694)	Negative	No Class II DSA	Acceptable	Based on Class I DSA
8050	113	91	Negative	Cw10(1075)	Negative	No Class II DSA	Acceptable	
8062	113		NT		NT	-	-	
8080	113	91	Negative	Cw10(2339)	Negative	No Class II DSA	Acceptable	
8083	113	91	Negative	Cw10(2987)	Negative	No Class II DSA	Acceptable	Weak DSA to Cw10 so a physical crossmatch would be required.
8096	113		Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	
8103	113	10	Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	
8111	113	56	Negative	Cw10(1500)	Negative	No Class II DSA	Acceptable	

Table 25. Individual Virtual crossmatch results for Serum #113 vs Donor# V3

Donor #V3 HLA genotype: A*24:02-A*24:07-B*15:02-B*57:01-C*04:01-C*06:02-DRB1*07:01-DRB1*12:02-DRB3*03:01-DRB4*01:03:01N-DQA1*02:01-DQA1*06:01-DQB1*03:01-DQB1*03:03-DPA1*01:03-DPA1*02:01-DPB1*04:01-DPB1*13:01:01G

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	113	92	Positive	B75(14257) B57(7095)	Positive	No Class II DSA	Unacceptable	Positive due to Class I Antibodies.
230	113	76	Positive	B75(15252) B57(6764)	Negative	No Class II DSA	Unacceptable	Would expect flow to be positive from Class I DSA
774	113	77	Positive	B75(13399) B57(5585)	Positive	No Class II DSA	Unacceptable	Prediction based on CI DSA
792	113	91	Positive	B57(5858)	Positive	No Class II DSA	Unacceptable	
1426	113	81	Positive	B75(12807) B57(5054)	Positive	No Class II DSA	Unacceptable	
1461	113	23	Positive	B75(3826) B57(1140)	Positive	No Class II DSA	Unacceptable	
2400	113	91	Positive	B75(14399) B57(6805)	Positive	No Class II DSA	Unacceptable	Positive due to Class I DSA.
3753	113	88.29	Positive	B75(12498) B57(4394)	Positive	No Class II DSA	Unacceptable	We recommend to avoid this donor.
3966	113	99	Positive	B75(12040) B57(5328)	Negative	No Class II DSA	Unacceptable	
4661	113	10	Positive	B75(2722) B57(920)	Positive	No Class II DSA	Unacceptable	163LW+65QI
5214	113	91	Positive	B75(19624) B57(9841)	Positive	No Class II DSA	Unacceptable	No CII DSA, but might be positive due to CI
8001	113	91	Positive	B75(14376) B57(6132)	Positive	No Class II DSA	Unacceptable	A*24:07 not included in LSAB panel
8029	113	29	Positive	B75(7538) B57(3606)	Positive	No Class II DSA	Unacceptable	No class II anti HLA antibodies
8035	113	83	Positive	B75(15108) B57(5887)	Positive	No Class II DSA	Unacceptable	Based on Class I DSA; no Class II DSA detected
8050	113	91	Positive	B75(12239) B57(4091)	Positive	No Class II DSA	Unacceptable	
8062	113		NT		NT	-	-	
8080	113	91	Positive	B75(15962) B57(6522)	Positive	No Class II DSA	Unacceptable	
8083	113	91	Positive	B75(15166) B57(6844)	Positive	No Class II DSA	Unacceptable	Due to expression of Class I on B cells
8096	113		Positive	B75(8207) B57(2339)	Positive	No Class II DSA	Unacceptable	No DSA Class II
8103	113	10	Borderline	B15(1114) B75(782)	Borderline	No Class II DSA	Acceptable	Low intensity class 1 antibody against B*15; Class 1 antibody (low MFI)
8111	113	56	Positive	B75(12000) B57(4700)	Positive	No Class II DSA	Unacceptable	

Table 26. Individual Virtual crossmatch results for Serum #113 vs Donor# V4

Donor #V4 HLA genotype: A*02:05-A*11:01-B*49:01-B*51:01-C*03:03-C*07:01-DRB1*03:01-DRB1*04:05-DRB3*01:01-DRB4*01:03-DQA1*03:03-DQA1*05:01-DQB1*02:01-DQB1*03:02-DPA1*01:03-DPA1*02:01-DPB1*04:01:01G-DPB1*14:01:01G

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	113	92	Positive	B49(9596) B51(18083) Cw9(2926) Cw7(11495)	Positive	No Class II DSA	Unacceptable	Positive due to Class I Antibodies
230	113	76	Positive	B49(9752) B51(20807)	Negative	No Class II DSA	Unacceptable	Would expect flow to be positive from Class I DSA
774	113	77	Positive	B49(7744) B51(18676)	Positive	No Class II DSA	Unacceptable	In addition to CII DSA, CI DSA taken into prediction consideration
792	113	91	Positive	B49(7376) B51(16307) Cw9(2532)	Positive	No Class II DSA	Unacceptable	
1426	113	81	Positive	B49(7500) B51(17640) Cw9(2768) Cw7(16068)	Positive	No Class II DSA	Unacceptable	
1461	113	23	Positive	B49(1477) B51(4698) Cw7(1266)	Positive	No Class II DSA	Unacceptable	
2400	113	91	Positive	B49(8444) B51(20062) Cw7(20863)	Positive	No Class II DSA	Unacceptable	Positive due to Class I DSA.
3753	113	88.29	Positive	B49(5839) B51(18291) Cw7(17213)	Positive	No Class II DSA	Unacceptable	We recommend to avoid this donor.
3966	113	99	Positive	B49(7079) B51(18182) Cw9(1920) Cw7(18232)	Negative	No Class II DSA	Unacceptable	
4661	113	10	Positive	B49(1136) B51(3571) Cw7(1300)	Positive	No Class II DSA	Unacceptable	163LW+65QI, 62REN, 193PL3
5214	113	91	Positive	B49(12780) B51(22573) Cw9(4981)	Positive	No Class II DSA	Unacceptable	No CII DSA, might be positive due to CI
8001	113	91	Positive	B49(8152) B51(20372) Cw9(2698)	Positive	No Class II DSA	Unacceptable	A*02:05, C*07:01 not included in LSAB panel
8029	113	29	Positive	B49(2744) B51(9694) Cw9(980) Cw7(6634)	Positive	No Class II DSA	Unacceptable	
8035	113	83	Positive	B49(8701) B51(21542) Cw9(2809) Cw7(16240)	Positive	No Class II DSA	Unacceptable	Based on Class I DSA
8050	113	91	Positive	B49(7164) B51(19271) Cw9(1469) Cw7(15430)	Positive	No Class II DSA	Unacceptable	
8062	113		NT		NT	-	-	
8080	113	91	Positive	B49(8815) B51(22093) Cw9(2669) Cw7(18588)	Positive	No Class II DSA	Unacceptable	Patient demonstrates Class I reactivity
8083	113	91	Positive	B49(9057) B51(21228) Cw9(3172)	Positive	No Class II DSA	Unacceptable	Due to expression of Class I on B cells
8096	113		Positive	B49(3483) B51(13140)	Positive	No Class II DSA	Unacceptable	
8103	113	10	Positive	B51(1047) Cw7(833)	Positive	No Class II DSA	Unacceptable	Class 1 antibodies
8111	113	56	Positive	B49(6800) B51(17000) Cw9(1700) Cw7(15800)	Positive	No Class II DSA	Unacceptable	

Table 27. Individual Virtual crossmatch results for Serum #114 vs Donor# V1

Donor #V1 HLA genotype: A*02:01-A*11:01-B*15:13-B*38:02-C*07:02-C*08:01-DRB1*15:02-DRB5*01:01-DRB5*01:08N-DQA1*01:01-DQA1*01:02-DQB1*05:01-DQB1*05:02-DPA1*02:01-DPA1*02:02-DPB1*01:01-DPB1*13:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	114	96	Positive	A2(23432)	Positive	No Class II DSA	Unacceptable	Positive due to Class I Antibodies
230	114	89	Positive	A2(28282)	Negative	No Class II DSA	Unacceptable	
774	114	94	Positive	A2(22727)	Positive	No Class II DSA	Unacceptable	Prediction based on CI DSA
792	114	94	Positive	A2(21062)	Positive	No Class II DSA	Unacceptable	
1426	114	94	Positive	A2(20282) A2C(11519)	Positive	No Class II DSA	Unacceptable	
1461	114	11	Positive	A2(8131)	Positive	No Class II DSA	Unacceptable	
2400	114	94	Positive	A2(24613)	Positive	No Class II DSA	Unacceptable	Positive due to Class I DSA.
3753	114	93.68	Positive	A2(22310)	Positive	No Class II DSA	Unacceptable	We recommend to avoid this donor.
3966	114	97	Positive	A2(21261)	Positive	DPA1*02(12590)	Unacceptable	
4661	114	57	Positive	A2(10911)	Positive	No Class II DSA	Unacceptable	127K, 62GE
5214	114	94	Positive	A2(23569)	Positive	No Class II DSA	Unacceptable	94% is for both CI and CII; No CII DSA, but might be positive due to CI
8001	114	94	Positive	A2(23191)	Positive	No Class II DSA	Unacceptable	B*38:02 not included in LSAB panel
8029	114	13	Positive	A2(15882)	Positive	DP9(11024) DP17(9704) DP14(9971) DP28(11881)	Unacceptable	
8035	114	89	Positive	A2(25112)	Positive	No Class II DSA	Unacceptable	Based on Class I DSA
8050	114	94	Positive	A2(22973)	Positive	No Class II DSA	Unacceptable	
8062	114		NT		NT		-	
8080	114	94	Positive	A2(27827)	Positive	No Class II DSA	Unacceptable	Patient demonstrates Class I reactivity
8083	114	94	Positive	A2(28575)	Positive	No Class II DSA	Unacceptable	Due to expression of Class I on B cells
8096	114		Positive	A2(12645)	Positive	No Class II DSA	Unacceptable	
8103	114	11	Positive	A2(7951)	Positive	No Class II DSA	Unacceptable	Class 1 antibody
8111	114	89	Positive	A2(21000)	Positive	No Class II DSA	Unacceptable	

Table 28. Individual Virtual crossmatch results for Serum #114 vs Donor# V2

Donor #V2 HLA genotype: A*29:02-A*68:03-B*40:02-B*44:03-C*03:04-C*16:01-DRB1*04:07-DRB1*07:01-DRB4*01:01-DRB4*01:03-DQA1*02:01-DQA1*03:01-DQB1*02:02-DQB1*03:02:01G-DPA1*01:03-DPA1*02:01-DPB1*04:01:01G-DPB1*14:01:01G

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	T-cell Comments
54	114	96	Positive	A68(17343)	Positive	DR4(17978) DQ8(13113) DP14(14058)	Unacceptable	
230	114	89	Positive	A68(21182)	Positive	DR4(21290) DQ8(16537)	Unacceptable	
774	114	94	Positive	A68(15058)	Positive	DR4(18961) DQ8(14567) DP14(12687)	Unacceptable	In addition to CII DSA, CI DSA taken into prediction consideration
792	114	94	Positive	A68(15956)	Positive	DR4(17264) DQ8(13381) DP14(10797)	Unacceptable	
1426	114	94	Positive	A68(12321) A2C(11519)	Positive	DR4(15056) DQ8(11804) DP14(12003)	Unacceptable	
1461	114	11	Positive	A68(4678)	Positive	DR4(7301) DQ8(3105) DP14(3759) DQA1*03(3105)	Unacceptable	
2400	114	94	Positive	A68(19549)	Positive	DR4(20511) DQ8(13003) DP14(11965)	Unacceptable	
3753	114	93.68	Positive	A68(16254)	Positive	DR4(18865) DQ8(14250) DP14(13355)	Unacceptable	We recommend to avoid this donor.
3966	114	97	Positive	A68(15881)	Positive	DR4(15897) DQ8(11797) DPw4(14583) DP14(11365) DPA1*01(11969) DPA1*02(12590) DQA1*02(8056) DQA1*03(9750)	Unacceptable	
4661	114	57	Positive	A68(8776)	Positive	DR4(11735) DQ8(6252) DP14(6501)	Unacceptable	127K; 96Y2, 52PL3, 57DEDP
5214	114	94	Positive	A68(22571)	Positive	DR4(22601) DQ8(20268) DP14(18273)	no A*68:03 bead	Other A alleles are positive
8001	114	94	Negative	A29(530)	Positive	DQ8(15970) DP14(13322) DQA1*03(618)	Unacceptable	A*68:03 not included in LSAB panel; DRB1*04:07 not included in LSAB panel
8029	114	13	Positive	A68(11432)	Positive	DR4(17212) DQ8(9880) DPw4(13764) DP14(9971)	Unacceptable	
8035	114	89	NT		Positive	DR4(18843) DQ8(14745) DP14(14501) DQA1*03(12231)	Unacceptable	While no Class I DSA was detected, possible DSA to A*68:03 exists. No bead available, but other alleles of A68 were Positive
8050	114	94	Positive	A68(14982)	Positive	DR4(19466) DQ8(13815) DP14(14225)	Unacceptable	
8062	114		NT		NT		-	
8080	114	94	Positive	A68(22008)	Positive	DR4(17858) DQ8(16866) DP14(15271)	Unacceptable	
8083	114	94	Positive	A68(23873)	Positive	DQ8(18295) DP14(14551)	Unacceptable	Also A68 which is expressed on B cells and possible DR*04:07 which has no bead.
8096	114		Negative	No Class I DSA	Positive	DQ8(6420) DQA1*03(5309)	Unacceptable	
8103	114	11	Positive	A68(4939)	Positive	DR4(7634) DQ3(4324) DQ8(4324) DPw4(3366) DP14(3589) DQA1*03(3660)	Unacceptable	
8111	114	89	Positive	A68(14500)	Positive	DR4(16500) DQ8(11000) DP14(11200)	Unacceptable	

Table 29. Individual Virtual crossmatch results for Serum #114 vs Donor# V3

Donor #V3 HLA genotype: A*24:02-A*24:07-B*15:02-B*57:01-C*04:01-C*06:02-DRB1*07:01-DRB1*12:02-DRB3*03:01-DRB4*01:03:01N-DQA1*02:01-DQA1*06:01-DQB1*03:01-DQB1*03:03-DPA1*01:03-DPA1*02:01-DPB1*04:01-DPB1*13:01:01G

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	T-cell Comments
54	114	96	Positive	A24(5135) B57(16049)	Positive	DQ7(16878) DQ9(14255)	Unacceptable	
230	114	89	Positive	A24(5861) B57(19396)	Positive	DQ7(17245) DQ9(17698)	Unacceptable	
774	114	94	Positive	A2(2665) B57(15078)	Positive	DQ7(16087) DQ9(15734)	Unacceptable	In addition to CII DSA, CI DSA taken into prediction consideration
792	114	94	Positive	A24(5061) B57(13769)	Positive	DQ7(14359) DQ9(14151)	Unacceptable	
1426	114	94	Positive	A24(1406) B57(13985) A2C(11519)	Positive	DQ7(12751) DQ9(12694)	Unacceptable	
1461	114	11	Positive	A24(656) B57(3797)	Positive	DQ7(3330) DQ9(3334) DQA1*06(2909)	Unacceptable	
2400	114	94	Positive	A24(6344) B57(16605)	Positive	DQ7(13908) DQ9(14217)	Unacceptable	
3753	114	93.68	Positive	A24(3143) B57(16193)	Positive	DQ7(14890) DQ9(15084)	Unacceptable	We recommend to avoid this donor.
3966	114	97	Positive	A24(4796) B57(12256)	Positive	DQ7(12564) DQ9(12390) DPw4(14583) DPA1*01(12125) DPA1*02(12590) DQA1*02(8056) DQA1*06(14566)	Unacceptable	
4661	114	57	Positive	A24(1336) B57(7180)	Positive	DQ7(5243) DQ9(6879)	Unacceptable	127K, 62GE; 52PL3
5214	114	94	Positive	A24(9155) B57(21874)	Positive	DQ7(21379) DQ9(20519) DQA1*06(20560)	Unacceptable	no A*24:07 bead
8001	114	94	Positive	A24(5746) B57(16264)	Positive	DQ7(17787) DQ9(17703) DQA1*06(17787)	Unacceptable	A*24:07 not included in LSAB panel
8029	114	13	Positive	A24(3071) B57(9369)	Positive	DQ8(11188) DQ9(8806) DPw4(13764) DP9(11024) DP17(9704) DP14(9971)	Unacceptable	
8035	114	89	Positive	A24(2040) B57(17052)	Positive	DQ7(15278) DQ9(15456) DQA1*06(18612)	Unacceptable	Additional DSA to A*24:07 may exist but no bead available
8050	114	94	Positive	A24(2042) B57(14919)	Positive	DQ7(14967) DQ9(15360)	Unacceptable	
8062	114		NT		NT		-	
8080	114	94	Positive	A24(7223) B57(19312)	Positive	DQ7(18068) DQ9(20009)	Unacceptable	
8083	114	94	Positive	A24(9122) B57(21087)	Positive	DQ7(20379) DQ9(19511)	Unacceptable	Also A24 and B57 which is expressed on B cells
8096	114		Positive	A24(1371) B57(5343)	Positive	DQ7(6160) DQ9(6394) DQA1*06(7347)	Unacceptable	
8103	114	11	Positive	A24(1113) B57(2616) A2403(1113)	Positive	DQ3(4324) DQ7(3630) DQ8(4324) DQ9(3717) DQA1*06(3534)	Unacceptable	
8111	114	89	Positive	A24(2500) B57(13700)	Positive	DQ7(12800) DQ9(13000)	Unacceptable	

Table 30. Individual Virtual crossmatch results for Serum #114 vs Donor# V4

Donor #V4 HLA genotype: A*02:05-A*11:01-B*49:01-B*51:01-C*03:03-C*07:01-DRB1*03:01-DRB1*04:05-DRB3*01:01-DRB4*01:03-DQA1*03:03-DQA1*05:01-DQB1*02:01-DQB1*03:02-DPA1*01:03-DPA1*02:01-DPB1*04:01:01G-DPB1*14:01:01G

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	T-cell Comments
54	114	96	Positive	A2(26948)	Positive	DR4(15066) DQ8(15250) DP14(14058)	Unacceptable	
230	114	89	Positive	A2(28283)	Positive	DR4(21219) DQ8(16537)	Unacceptable	
774	114	94	Positive	A2(22901)	Positive	DR4(15672) DQ8(14567) DP14(12687)	Unacceptable	In addition to CII DSA, CI DSA taken into prediction consideration
792	114	94	Negative	No Class I DSA	Positive	DR4(14372) DQ8(13381) DP14(10797)	Unacceptable	
1426	114	94	Positive	A2(20282) A2C(11519)	Positive	DR4(12537) DQ8(11804) DP14(12003)	Unacceptable	
1461	114	11	Positive	A2(7804)	Positive	DQ8(3105) DP14(3759) DQA1*03(3105)	Unacceptable	
2400	114	94	Positive	A2(24154)	Positive	DR4(15981) DQ8(13003) DP14(11965)	Unacceptable	
3753	114	93.68	Positive	A2(22310)	Positive	DR4(18865) DQ8(14250) DP14(13355)	Unacceptable	We recommend to avoid this donor.
3966	114	97	Positive	A2(21261)	Positive	DR4(15897) DQ8(11797) DPw4(14583) DP14(11365) DPA1*01(14583) DPA1*02(12590) DQA1*03(9750) DQA1*05(15861)	Unacceptable	
4661	114	57	Positive	A2(12967)	Positive	DR4(11735) DQ8(6663) DP14(6501)	Unacceptable	127K, 62GE; 96Y2, 52PL3, 57DEDP
5214	114	94	Positive	A2(23692)	Positive	DR4(20260) DQ8(20268) DP14(18273) DQA1*03(7193)	Unacceptable	no A*02:05 bead, but all other A alleles are positive
8001	114	94	Negative	No Class I DSA	Positive	DR4(16133) DQ8(15970) DP14(13322) DQA1*03(4677)	Unacceptable	A*02:05, C*07:01 not included in LSAB panel
8029	114	13	Positive	A2(16566)	Positive	DR4(17212) DQ7(9480) DQ8(11188) DPw4(13764) DP14(9971)	Unacceptable	
8035	114	89	Positive	A2(24241)	Positive	DR4(16815) DQ8(14745) DP14(14501) DQA1*03(3283)	Unacceptable	
8050	114	94	Positive	A2(22973)	Positive	DR4(19466) DQ8(13815) DP14(14225)	Unacceptable	
8062	114		NT		NT		-	
8080	114	94	Positive	A2(20720)	Positive	DR4(18819) DQ8(19000) DP14(15271)	Unacceptable	
8083	114	94	Positive	A2(28797)	Positive	DR4(18981) DQ8(18295) DP14(14551)	Unacceptable	Also A2 which is expressed on B cells
8096	114		Negative	No Class I DSA	Positive	DR4(10853) DQ8(6420) DP14(5699) DQA1*03(2135)	Unacceptable	
8103	114	11	Positive	A203(7399) A2(7951)	Positive	DR4(8360) DQ3(4324) DQ7(3630) DQ8(4324) DQ9(3717) DPw4(5543) DP14(3589) DP402(5543) DQA1*03(3660) DQA1*05(3367)	Unacceptable	
8111	114	89	Positive	A2(21000)	Positive	DR4(16500) DQ8(1200) DP14(11200)	Unacceptable	

Table 31: Individual Cutoff values and Pretreatment - Exchange 19

Ctr	Locus	Pos Cutoff Value	Locus	Pos Cutoff Value	Manufacturer	Sera pretreatment	Ctr	Locus	Pos Cutoff Value	Locus	Pos Cutoff Value	Manufacturer	Sera pretreatment
230	A	2000	DRB1	2000	One Lambda	None	3224	A	1000	DRB1	1000	One Lambda	EDTA
	B	2000	DRB3/4/5	2000				B	1000	DRB3/4/5	1000		
	C	4000	DQA1	2000				C	1000	DQA1	1000		
	Class I		DQB1	2000				Class I		DQB1	1000		
			DPB1	4000						DPB1	1000		
			Class II							Class II			
774	A	2000	DRB1	2000	One Lambda	DTT	3753	A	1000	DRB1	1000	One Lambda	DTT
	B	2000	DRB3/4/5	2000				B	1000	DRB3/4/5	1000		
	C	5000	DQA1	2000				C	2000	DQA1	1000		
	Class I	2000	DQB1	2000				Class I	1000	DQB1	1000		
			DPB1	5000						DPB1	2000		
			Class II	2000						Class II	1000		
792	A	1500	DRB1	1500	One Lambda	FBS/EDTA	4661	A	1000	DRB1	1000	Lifecodes	None
	B	1500	DRB3/4/5	1500				B	1000	DRB3/4/5	1000		
	C	1500	DQA1	1500				C	1000	DQA1	1000		
	Class I	1500	DQB1	1500				Class I	1000	DQB1	1000		
			DPB1	1500						DPB1	1000		
			Class II	1500						Class II	1000		
1160	A		DRB1		One Lambda	EDTA	5214	A	2000	DRB1	2000	One Lambda	None
	B		DRB3/4/5					B	2000	DRB3/4/5	2000		
	C		DQA1					C	2000	DQA1	2000		
	Class I	2000	DQB1					Class I	2000	DQB1	2000		
			DPB1							DPB1	2000		
			Class II	2000						Class II	2000		
1426	A	1000	DRB1	1000	One Lambda	DTBA	8001	A		DRB1		One Lambda	EDTA
	B	1000	DRB3/4/5	1000				B		DRB3/4/5			
	C	1000	DQA1	1000				C		DQA1			
	Class I	1000	DQB1	1000				Class I	1000	DQB1			
			DPB1	1000						DPB1			
			Class II	1000						Class II	1000		
2400	A	2000	DRB1	2000	One Lambda	EDTA	8029	A	500	DRB1	500	Lifecodes	None
	B	2000	DRB3/4/5	2000				B	500	DRB3/4/5	500		
	C	2000	DQA1	2000				C	500	DQA1	500		
	Class I	2000	DQB1	2000				Class I	500	DQB1	500		
			DPB1	2000						DPB1	500		
			Class II	2000						Class II	500		

Table 31: Individual Cutoff values and Pretreatment - Exchange 19

Ctr	Locus	Pos Cutoff Value	Locus	Pos Cutoff Value	Manufacturer	Sera pretreament	Ctr	Locus	Pos Cutoff Value	Locus	Pos Cutoff Value	Manufacturer	Sera pretreament
8035	A	700	DRB1	700	One Lambda	DTT,FCS	8083	A		DRB1		One Lambda	EDTA
	B	700	DRB3/4/5	700				B		DRB3/4/5			
	C	700	DQA1	700				C		DQA1			
	Class I		DQB1	700				Class I	2000	DQB1			
			DPB1	700						DPB1			
			Class II							Class II	2000		
8050	A	1000	DRB1	1000	One Lambda	DTT	8096	A		DRB1		One Lambda	None
	B	1000	DRB3/4/5	1000				B		DRB3/4/5			
	C	1000	DQA1	1000				C		DQA1			
	Class I	1000	DQB1	1000				Class I		DQB1			
			DPB1	1000						DPB1			
			Class II	1000						Class II			
8062	A	1000	DRB1	1000	One Lambda	DTT	8103	A	57	DRB1	1	Lifecodes	Heat Inactivation
	B	1000	DRB3/4/5	1000				B	47	DRB3/4/5	1		
	C	1000	DQA1	1000				C	58	DQA1	18		
	Class I		DQB1	1000				Class I	15496	DQB1	18		
			DPB1	1000						DPB1	7		
			Class II							Class II	15228		