

REPORT OF THE 1st Flow Cross Match Exchange JUNE 27, 2014

Cells	1-2
Serum	3-6

Flow Cytometric Crossmatch

We would like to express our appreciation to the reference laboratories that participated in the first International Cell Exchange – Flow Cross Match

Exchange. Flow crossmatch results are summarized on Table 1 and individual laboratory results, along with reported DSA, are listed in Tables 2-9.

Cell 1. The phenotype for this Hispanic sample is A11-A30-B7-B65-Cw7-Cw8/DR15-DR51-DQ6. Consensus results reveal the T-cell and B-cell crossmatches for this sample to be positive against all 4 sera (serum nos, 3 – 6). There were no discrepancies reported for the T-cell crossmatch, however, a few discrepancies were reported for the B-cell crossmatch. One lab reported the B-cell crossmatch for this sample as negative against serum 4. Two labs reported a negative B-cell crossmatch against serum 5, and 3 labs reported the B-cell crossmatch against serum 6 as negative.

Cell 2. The phenotype for this Asian sample is A2-B13-B60-Cw3-Cw7/DR12-DR15-DR51-DR52-DQ5-DQ7. When tested against serum 3 and 4, the consensus results revealed the T-cell and B-cell crossmatches for this sample to be positive. The B-cell crossmatch against serum 5 and 6 were also positive, with only 1 discrepancy reported for each serum. However, the T-cell crossmatch results for this sample against serum 5 and serum 6 were inconsistent. For serum 5, 9 labs reported a positive T-cell crossmatch and 7 reported it as negative. For serum 6, 10 labs reported a positive T-cell crossmatch, while 4 labs reported it as negative.

Table 1. Summary of Flow crossmatch results for Cell #001-#002 vs. Serum #003-#006

Cell no.	Serum no.	#Labs	T-cell Results	B-cell Results
1	3	17	Positive(17)	Positive(16) NT (1)
1	4	17	Positive(17)	Positive(15) <i>Negative(1)</i> NT (1)
1	5	17	Positive(17)	Positive(14) <i>Negative(2)</i> NT(1)
1	6	17	Positive(17)	Positive(13) <i>Negative(3)</i> NT(1)

Cell no.	Serum no.	#Labs	T-cell Results	B-cell Results
2	3	17	Positive(17)	Positive(16) Positive(15) <i>Negative(1)</i>
2	4	17	Positive(17) Positive(9) Negative(7) NT(1)	Positive(15) NT(1) <i>Negative(1)</i> NT(1)
2	5	17	Positive(10) Negative(4) NT(3)	Positive(13) <i>Negative(1)</i> NT(3)

Antibody Identification

Class I and Class II Luminex Single Antigen results are summarized on

Tables 10-13 and individual laboratory results for Luminex and Flow PRA are listed in Tables 14-21.

For **serum 3**, donor-specific antibodies (DSA) against cell 1 and cell 2 were detected by Luminex and 2 labs using Flow PRA beads. Reactivity to B7, B13, and B60 resulted in median MFI values of 22153, 11168, and 17371, respectively. For class II, anti-DR15 and –DR51 reactivity was detected by Luminex and Flow PRA, with median MFI values of 16672 and 10701, respectively. Weaker reactivity to other DSA present in this sample (A11, B65, DQ6 against cell 1 and DQ5, DR7 against cell 2) were also reported by Luminex.

Serum 4 was found to be strongly positive for DSA (B13, B60, B7, and Cw7) against cell 1 and cell 2 by Luminex and Flow PRA. Median MFI values from Luminex range from 18378 to 22734. Anti-A30 (3523) and –Cw8 (7662) reactivity was also reported by Luminex against cell 1.

For **serum 5**, class I and class II DSA against cell 1 were reported by Luminex and Flow PRA. Anti-A30 reactivity was reported with a median

MFI of 8262, and reactivity to DQ6, DR15, and DR51 was reported with median MFI values of 19445, 14872, and 8191, respectively. In addition, class I DSA (Cw7) against cell 2 were reported by Luminex, with median MFI of 2749. Strong class II reactivity against cell 2 was reported by Luminex and Flow PRA. Luminex labs reported median MFI values of 20988, 19459, and 18697 for DQ5, DR12, and DR52, respectively.

Serum 6 was found to be positive for DSA (A11, A30, and B7) against cell 1 by Luminex and Flow PRA. Median MFI values were reported as 7744 for A11, 13869 for A30, and 4944 for B7. There were no class II donor-specific antibodies detected against cell 1 by Luminex. Weak class II reactivity was reported by 1 lab using Flow PRA beads. By contrast, there were no class I DSA reported against cell 2. Only class II DSA, DR12 (11086) and DR52 (9492), were detected.

Conclusion:

For the **T-cell Flow crossmatch**, all labs were consistent in their results for serum 3 and serum 4 against cells 1 and 2. All labs were also consistent in their results for serum 5 and 6 against cell 1. However, results were mixed for serum 5 and 6 against cell 2. For serum 5, 9 out of 11 labs detected a single DSA of Cw7 (MFI = 2749 ± 2686). With regards to the Flow crossmatch, 6 reported positivity and 5 reported negativity. This suggests the sensitivity of the T-Flow crossmatch is widely variable when the DSA strength is low to moderate at the C-locus. For serum 6, all 15 labs reporting Luminex single antigen results detected no class I DSA against cell 2. However, 11 of those labs reported T-Flow crossmatch positivity. The presence of non-HLA antibodies in serum 6 is suspected. We plan to

investigate this further.

For the **B-cell Flow crossmatch**, only in 2 instances were all labs in agreement. For the other 6 Flow crossmatches, the majority were positive, with 3 labs reporting a number (n=9) of negative results. One lab accounted for 5 of the negative results, another accounted for 3, and 1 other lab accounted for 1 of the negative results.

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Table 2 . Individual Flow crossmatch results and DSA reported for Cell #001 vs. Serum #003

Center	Investigator	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 MCS	B Cell NEG Control MCS	Pronase Treated
4345	Blasczyk, Rainer					POS						POS				NO
3224	Chen, Dong-Fen	70	325			POS	B7(21991)	140	376			POS	DR15(17044), DR51(10402)	248	228	YES
3135	Enczmann, J	1.2	757	2.2		POS								621		NO
792	Gandhi, Manish	52	355			POS	B7(19933)	106	480			POS	DR15(14573), DR51(9241)	219	226	YES
216	Gebel, Bray &	1500			37,250	POS	B7(27928)	4500			164,470	POS	DR15(26284), DR51(20836)	MESF-1920	MESF- 2533	YES
615	Holdsworth, Rho	80	180			POS		80	349			POS		500	421	YES
859	Kamoun, Malek	Ratio - 1.5	409	39.7	124374	POS	B7 (23000)	Ratio - 1.5	530.5	118.2	419420	POS	DR15(18700), DR51(11300)	122	123	YES
23	Mah, Helen	60	7318			POS	B7(19002)	1000	25569			POS	DR15(13871), DR51(8637)	303	1400	NO
206	McAlack-Hanau	2.98	220.63	30.94		POS	B7(22005)	4.94	759.7	42.51		POS	DR15(17419), DR51(11907)	7.37	18.3	YES
4661	Nishimura, Kenji	15	139.5			POS		20	729.9			POS		11.65	11.86	YES
3966	Permpikul, Vejba	40	161			POS		100	173			POS		78	216	NO
2400	Phelan, Donna	40	378			POS	B7(23274)	80	311			POS	DR15(15729), DR51(9589)	134	385	NO
735	Ramon, Daniel	39	471			POS	B7(23650)	59	512		759927	POS	DR15(19194), DR51(12416)	204	295	YES
3753	Reed, Elaine F.	50	310			POS	B7(22600)	100	394			POS	DR15(17944), DR51(11333)	231	344	NO
3625	Rees, Tracey	40 MCS	337		NT	POS	B7(16857)	40 MCS	337		NT	POS	DR15(12588), DR51(7630)	104	259	NO
3798	Reinsmoen, Nan	70	360		76468	POS	B7(22300)	120	504		314911	POS	DR15(16300), DR51(11000)	232	229	YES
1160	Rosen-Bronson	90	423			POS	B7(19360)	120	471			POS	DR15(14893), DR51(8153)	278	341	YES

Table 3 . Individual Flow crossmatch results and DSA reported for Cell #001 vs. Serum #004

Center	Investigator	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 MCS	B Cell NEG Control MCS	Pronase Treated
4345	Blasczyk, Rainer					POS						NEG				NO
3224	Chen, Dong-Fen	70	405			POS	B7(21651), A30(2695), Cw8(6422)	140	355			POS	no antigens assigned	248	228	YES
3135	Enczmann, J	1.2	4372	8,0		POS								621		NO
792	Gandhi, Manish	52	452			POS	B7(20434), A30(3144), Cw8(6357)	106	464			POS	DPW1(373)	219	226	YES
216	Gebel, Bray &	1500			115,380	POS	B7(28684), A30(5301), Cw8(12038)	4500			168,880	POS	no antigens assigned	MESF-1920	MESF- 2533	YES
615	Holdsworth, Rho	80	250			POS		80	340			POS		500	421	YES
859	Kamoun, Malek	Ratio - 1.5	466	66.1	218470	POS	B7(22800), A30(2400), CW8(7300)	Ratio - 1.5	466	66	220639	POS	no antigens assigned	122	123	YES
23	Mah, Helen	60	20530			POS	B7(17868), A30(2984), Cw8(8334)	1000	23341			POS	no antigens assigned	303	1400	NO
206	McAlack-Hanau	2.98	611.13	83.92		POS	B7(21751)	4.94	1791.7	98.91		POS	no antigens assigned	7.37	18.3	YES
4661	Nishimura, Kenji	15	339.8			POS		20	504.8			POS		11.65	11.86	YES
3966	Permpikul, Vejbe	40	273			POS		100	221			POS		78	216	NO
2400	Phelan, Donna	40	508			POS	B7(23036), A30(5384), Cw8(9708)	80	312			POS	no antigens assigned	134	385	NO
735	Ramon, Daniel	39	532			POS	B7(23583), A30(3982), Cw8(8070)	59	461		465710	POS	no antigens assigned	204	295	YES
3753	Reed, Elaine F.	50	399			POS	B7(22268), A30(3361), Cw8(7662)	100	296			POS	no antigens assigned	231	344	NO
3625	Rees, Tracey	40 MCS	490		NT	POS	B7(16865), A30(4050), Cw8(6920)	40 MCS	357		NT	POS	no antigens assigned	104	259	NO
3798	Reinsmoen, Nan	70	435		162350	POS	B7(21750), A30(4550), Cw8(8950)	120	487		265506	POS	no antigens assigned	232	229	YES
1160	Rosen-Bronson	90	498			POS	B7(19607), A30(3523), Cw8(6875)	120	449			POS	no antigens assigned	278	341	YES

Table 4 . Individual Flow crossmatch results and DSA reported for Cell #001 vs. Serum #005

Center	Investigator	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 MCS	B Cell NEG Control MCS	Pronase Treated
4345	Blasczyk, Rainer					POS						NEG				NO
3224	Chen, Dong-Fen	70	282			POS	A30(9269), Cw7(2135)	140	411			POS	DQ6(20544), DR15(14812), DR51(6662)	248	228	YES
3135	Enczmann, J	1.2	548	1,9		POS								621		NO
792	Gandhi, Manish	52	289			POS	A30(7190), A11(16786), Cw7(2730)	106	468			POS	DQ6(18871), DR15(12952), DR51(7193)	219	226	YES
216	Gebel, Bray &	1500			29,650	POS	A30(20089), Cw7(11045)	4500			24,570	POS	DQ6(28029), DR15(24404), DR51(11038)	MESF-1920	MESF- 2533	YES
615	Holdsworth, Rho	80	125			POS		80	327			POS		500	421	YES
859	Kamoun, Malek	Ratio - 1.5	358	25.2	74296	POS	A30(10100), Cw7(2800)	Ratio - 1.5	518	105.3	369792	POS	DQ6(22100), DR15(15700), DR51(8400)	122	123	YES
23	Mah, Helen	60	3092			POS	A30(8186), A11(17013)	1000	30244			POS	DQ6(15689), DR15(11400)	303	1400	NO
206	McAlack-Hanau	2.98	189.13	26.66		POS	A30(8338), A11(19588)	4.94	1251.7	69.4		POS	DQ6(19167), DR15(15331), DR51(8332)	7.37	18.3	YES
4661	Nishimura, Kenji	15	102.7			POS		20	736.5			POS		11.65	11.86	YES
3966	Permpikul, Vejba	40	129			POS		100	52			NEG		78	216	NO
2400	Phelan, Donna	40	336			POS	A30(7357), A11(19891), Cw7(3193)	80	335			POS	DQ6(19723), DR15(15264), DR51(8848)	134	385	NO
735	Ramon, Daniel	39	405			POS	A30(10395), A11(22503), Cw7(2749)	59	503		692432	POS	DQ6(22739), DR15(15912), DR51(8049)	204	295	YES
3753	Reed, Elaine F.	50	254			POS	A30(6795), A11(19444), Cw7(2164)	100	365			POS	DQ6(17934), DR15(13357), DR51(7813)	231	344	NO
3625	Rees, Tracey	40 MCS	265		NT	POS	A30(4932), Cw7(1946)	40 MCS	347		NT	POS	DQ6(16072), DR15(9733), DR51(6260)	104	259	NO
3798	Reinsmoen, Nan	70	299		41451	POS	A30(9300), A11(19475), Cw7(4150)	120	465		210767	POS	DQ6(18250), DR15(14000), DR51(8750)	232	229	YES
1160	Rosen-Bronson	90	377			POS	A30(4645), A11(15085)	120	494			POS	DQ6(22130), DR15(14931), DR51(8191)	278	341	YES

Table 5 . Individual Flow crossmatch results and DSA reported for Cell #001 vs. Serum #006

Center	Investigator	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 MCS	B Cell NEG Control MCS	Pronase Treated
4345	Blasczyk, Rainer					POS						NEG				NO
3224	Chen, Dong-Fen	70	230			POS	A30(15676), B7(6249)	140	146			POS	no DSA reported	248	228	YES
3135	Enczmann, J	1.2	169	1,3		POS								621		NO
792	Gandhi, Manish	52	250			POS	A30(12078), B7(3584)	106	364			POS	no DSA reported	219	226	YES
216	Gebel, Bray &	1500			16,326	POS	A30(25330), B7(11159)	4500			19,180	POS	no DSA reported	MESF-1920	MESF- 2533	YES
615	Holdsworth, Rho	80	94			POS		80	132			POS		500	421	YES
859	Kamoun, Malek	Ratio - 1.5	250	9.5	24035	POS	A30(11200), B7(5600)	Ratio - 1.5	217	7.1	17003	POS	no DSA reported	122	123	YES
23	Mah, Helen	60	1627			POS	A30(13429), B7(4489)	1000	2189			POS	no DSA reported	303	1400	NO
206	McAlack-Hanau	2.98	79.63	11.8		POS	A30(15514), B7(5201)	4.94	355.2	20.41		POS	no DSA reported	7.37	18.3	YES
4661	Nishimura, Kenji	15	51.9			POS		20	62.6			POS		11.65	11.86	YES
3966	Permpikul, Vejba	40	78			POS		100	47			NEG		78	216	NO
2400	Phelan, Donna	40	263			POS	A30(14187), B7(4699)	80	114			POS	no DSA reported	134	385	NO
735	Ramon, Daniel	39	295			POS	A30(14186), B7(5188)	59	204		352775	POS	no DSA reported	204	295	YES
3753	Reed, Elaine F.	50	146			POS	A30(13551), B7(4671)	100	85			NEG	no DSA reported	231	344	NO
3625	Rees, Tracey	40 MCS	205		NT	POS	A30(10052), B7(2830)	40 MCS	123		NT	POS	no DSA reported	104	259	NO
3798	Reinsmoen, Nan	70	247		24594	POS	A30(15100), B7(5650)	120	320		49412	POS	no DSA reported	232	229	YES
1160	Rosen-Bronson	90	340			POS	A30(11602), B7(3577)	120	254			POS	no DSA reported	278	341	YES

Table 6 . Individual Flow crossmatch results and DSA reported for Cell #002 vs. Serum #003

Center	Investigator	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 MCS	B Cell NEG Control MCS	Pronase Treated
4345	Blasczyk, Rainer					POS						POS				NO
3224	Chen, Dong-Fen	70	303			POS	B13(13389), B60(17147)	140	393			POS	DR15(17044), DR51(10402)	248	212	YES
3135	Enczmann, J	1.2	888	1.7		POS						NT		1263		NO
792	Gandhi, Manish	52	293			POS	B13(10240), B60(14458)	106	409			POS	DR15(14573), DR51(9241)	274	279	YES
216	Gebel, Bray &	1500			48,800	POS	B13(24212), B60(27419)	4500			143,790	POS	DR15(26284), DR51(20836)	MESF-2343	MESF-3185	YES
615	Holdsworth, Rho	80	152			POS		80	234			POS		478	509	YES
859	Kamoun, Malek	Ratio = 1.5	336	20.5	69616	POS	B13(14300), B60(18600)	Ratio = 1.5	441	52.8	281305	POS	DR15(18700), DR51(11300)	133	166	YES
23	Mah, Helen	60	4886			POS	B13(11036), B60(15614)	1000	14355			POS	DR15(13871), DR51(8637)	405	2146	NO
206	McAlack-Hanau	2.98	228.55	29.73		POS	B13(11399), B60(18880)	4.94	1100.13	112.46		POS	DR15(17419), DR51(11907)	7.96	9.87	YES
4661	Nishimura, Kenji	15	15.1			POS		20	62.1			POS		11.3	25.2	YES
3966	Permpikul, Vejba	40	154			POS		100	222			POS		95	171	YES
2400	Phelan, Donna	40	393			POS	B13(8759), B60(16482)	80	420			POS	DR15(15729), DR51(9589)	102	244	NO
735	Ramon, Daniel	39	358		75395	POS	B13(11668), B60(17742)	59	379		161300	POS	DR15(19194), DR51(12416)	208	268	YES
3753	Reed, Elaine F.	50	268			POS	B13(9374), B60(17594)	100	338			POS	DR15(17944), DR51(11333)	246	355	NO
3625	Rees, Tracey	40 MCS	242		NT	POS	B13(9506), B60(12697)	40 MCS	239		NT	POS	DR15(12588), DR51(7630)	165	332	NO
3798	Reinsmoen, Nan	70	215		13439	POS	B13(11300), B60(17900)	120	340		73385	POS	DR15(16300), DR51(11000)	204.5	249	YES
1160	Rosen-Bronson	90	271			POS	B13(8275), B60(13151)	120	330			POS	DR15(14893), DR51(8153)	334	406	YES

Table 7 . Individual Flow crossmatch results and DSA reported for Cell #002 vs. Serum #004

Center	Investigator	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 MCS	B Cell NEG Control MCS	Pronase Treated
4345	Blasczyk, Rainer					POS						NEG				NO
3224	Chen, Dong-Fen	70	445			POS	B13(19600), B60(20841), Cw7(22155)	140	435			POS	no antigens assigned	248	212	YES
3135	Enczmann, J	1.2	3942	4.1		POS						NT		1263		NO
792	Gandhi, Manish	52	447			POS	B13(17895), B60(19339), Cw7(21637)	106	476			POS	no DSA reported	274	279	YES
216	Gebel, Bray &	1500			200,890	POS	B13(28902), B60(28842), Cw7(27138)	4500			219,950	POS	no antigens assigned	MESF-2343	MESF-3185	YES
615	Holdsworth, Rho	80	287			POS		80	348			POS		478	509	YES
859	Kamoun, Malek	Ratio = 1.5	473	70.1	278219	POS	B13(21300), B60(22700), Cw7(23100)	Ratio = 1.5	443	53.7	285759	POS	no antigens assigned	133	166	YES
23	Mah, Helen	60	24658			POS	B13(15932), B60(18054), Cw7(16480)	1000	40879			POS	no antigens assigned	405	2146	NO
206	McAlack-Hanau	2.98	742.55	94.34		POS	B13(18525), B60(21871), Cw7(22667)	4.94	1895.13	193.01		POS	no antigens assigned	7.96	9.87	YES
4661	Nishimura, Kenji	15	28.9			POS		20	105.5			POS		11.3	25.2	YES
3966	Permpikul, Vejbe	40	238			POS		100	143			POS		95	171	YES
2400	Phelan, Donna	40	552			POS	B13(19496), B60(23172), Cw7(23438)	80	463			POS	no antigens assigned	102	244	NO
735	Ramon, Daniel	39	275		35456	POS	B13(22227), B60(23311), Cw7(24257)	59	467		381423	POS	no antigens assigned	208	268	YES
3753	Reed, Elaine F.	50	410			POS	B13(18230), B60(22180), Cw7(23199)	100	367			POS	no antigens assigned	246	355	NO
3625	Rees, Tracey	40 MCS	448		NT	POS	B13(15429), B60(17129), Cw7(17560)	40 MCS	341		NT	POS	no antigens assigned	165	332	NO
3798	Reinsmoen, Nan	70	497		228328	POS	B13(18200), B60(22000), Cw7(22800)	120	492		337827	POS	no antigens assigned	204.5	249	YES
1160	Rosen-Bronson	90	434			POS	B13(17322), B60(19960), Cw7(20146)	120	391			POS	no antigens assigned	334	406	YES

Table 8 . Individual Flow crossmatch results and DSA reported for Cell #002 vs. Serum #005

Center	Investigator	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 MCS	B Cell NEG Control MCS	Pronase Treated
4345	Blasczyk, Rainer					POS						POS				NO
3224	Chen, Dong-Fen	70				NEG	Cw7(2135)	140	456			POS	DQ5(21445), DR12(18642), DR52(19750)	248	212	YES
3135	Enczmann, J	1.2	1059	1.8		POS						NT		1263		NO
792	Gandhi, Manish	52	104			POS	Cw7(2730)	106	480			POS	DQ5(18995), DR12(16418), DR52(17872)	274	279	YES
216	Gebel, Bray &	1500			448	NEG	Cw7(11045)	4500			227,512	POS	DQ5(27928), DR12(27106), DR52(27148)	MESF-2343	MESF-3185	YES
615	Holdsworth, Rho	80	-54			Repeat		80	276			POS		478	509	YES
859	Kamoun, Malek	Ratio = 1.5	62	1.74	2167	POS	Cw7(2800)	Ratio = 1.5	483	76.91	427254	POS	DQ5(22400), DR12(20300), DR52(21600)	133	166	YES
23	Mah, Helen	60	155			POS	no DSA reported	1000	30645			POS	DQ5(15881), DR12(14787), DR52(14019)	405	2146	NO
206	McAlack-Hanau	2.98	14.05	2.77		NEG	no DSA reported	4.94	1225.13	125.13		POS	DQ5(20882), DR12(19930), DR52(18443)	7.96	9.87	YES
4661	Nishimura, Kenji	15	12			NEG		20	973.4			POS		11.3	25.2	YES
3966	Permpikul, Vejbe	40	11			NEG		100	39			NEG		95	171	YES
2400	Phelan, Donna	40	163			POS	Cw7(3193)	80	493			POS	DQ5(21094), DR12(20621), DR52(18951)	102	244	NO
735	Ramon, Daniel	39	67		2346	POS-weak	Cw7(2749)	59	511		576581	POS- strong	DQ5(22877), DR12(20621), DR52(21845)	208	268	YES
3753	Reed, Elaine F.	50	76			POS	Cw7(2164)	100	389			POS	DQ5(19956), DR12(19292), DR52(17868)	246	355	NO
3625	Rees, Tracey	40 MCS	54		NT	POS	Cw7(1946)	40 MCS	295		NT	POS	DQ5(16041), DR12(13781), DR52(15408)	165	332	NO
3798	Reinsmoen, Nan	70	47		2486	NEG	Cw7(4150)	120	482		307080	POS	DQ5(19675), DR12(17850), DR52(17030)	204.5	249	YES
1160	Rosen-Bronson	90	<0			NEG	no DSA reported	120	418			POS	DQ5(217535), DR12(19625), DR52(20958)	334	406	YES

Table 9 . Individual Flow crossmatch results and DSA reported for Cell #002 vs. Serum #006

Center	Investigator	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 MCS	B Cell NEG Control MCS	Pronase Treated
4345	Blasczyk, Rainer					NEG						NEG				NO
3224	Chen, Dong-Fen	70				NEG	no DSA reported	140	401			POS	DR12(9463), DR52(9384)	248	212	YES
3135	Enczmann, J	1.2	737	1.6		POS						NT		1263		NO
792	Gandhi, Manish	52	190			POS	no DSA reported	106	446			POS	DR12(9706), DR52(7547)	274	279	YES
216	Gebel, Bray &	1500			2,239	POS-Weak	no DSA reported	4500			153,830	POS	DR12(24906), DR52(18444)	MESF-2343	MESF-3185	YES
615	Holdsworth, Rho	80	67			POS-weak		80	240			POS		478	509	YES
859	Kamoun, Malek	Ratio = 1.5	209	6.5	17723	POS	no DSA reported	Ratio = 1.5	417	42.7	220853	POS	DR12(12200), DR52(9300)	133	166	YES
23	Mah, Helen	60	2064			POS	no DSA reported	1000	17261			POS	DR12(7242), DR52(6953)	405	2146	NO
206	McAlack-Hanau	2.98	5.95	1.75		NEG	no DSA reported	4.94	1995.13	203.14		POS	DR12(11814), DR52(10273)	7.96	9.87	YES
4661	Nishimura, Kenji	15	71.1			POS		20	655.3			POS		11.3	25.2	YES
3966	Permpikul, Vejba	40	32			NEG		100	194			POS		95	171	YES
2400	Phelan, Donna	40	265			POS	no DSA reported	80	427			POS	DR12(10696), DR52(9601)	102	244	NO
735	Ramon, Daniel	39	269		30892	NT	no DSA reported	59	394		188046	NT	DR12(12340), DR52(9599)	208	268	YES
3753	Reed, Elaine F.	50	154			POS	no DSA reported	100	320			POS	DR12(9512), DR52(8346)	246	355	NO
3625	Rees, Tracey	40 MCS	128		NT	POS	no DSA reported	40 MCS	284		NT	POS	DR12(6972), DR52(6186)	165	332	NO
3798	Reinsmoen, Nan	70				NT	no DSA reported	120				NT	DR12(11475), DR52(10350)	204.5	249	YES
1160	Rosen-Bronson	90	124			POS	no DSA reported	120	352			POS	DR12(12400), DR52(9858)	334	406	YES

Table 10 . Summary of Single Antigen results for Serum #003

Class I							
*** Serum 3 ***							
12 typing Labs							
Antigen	no. labs	Consensus	MFI				
			Median	Mean	Std Dev	Min	Max
A24	12/12	100%	4449	4817	1327	3216	8317
A3	12/12	100%	5197	5600	1624	3644	10249
A80	12/12	100%	4821	5132	1452	3823	9536
B13	12/12	100%	11168	11955	4070	8275	24212
B27	12/12	100%	16529	16931	3744	11448	27502
B42	12/12	100%	17970	17783	3296	13705	26918
B47	12/12	100%	10636	10654	3923	6212	22413
B48	12/12	100%	17033	17034	3699	11430	27068
B54	12/12	100%	4586	4720	1449	2986	8941
B55	12/12	100%	12738	13195	3005	10106	22383
B56	12/12	100%	11323	11601	2551	8682	19255
B60	12/12	100%	17371	17307	3620	12697	27419
B61	12/12	100%	11354	11797	3940	8061	23962
B67	12/12	100%	20097	19682	3122	14838	27493
B7	12/12	100%	22153	21825	2696	16857	27928
B73	12/12	100%	7565	7830	2705	4723	15999
B8	12/12	100%	4877	5470	2015	3339	11487
B82	11/12	92%	9800	9763	1038	7794	11181
Cw2	11/12	92%	5755	6298	2630	3711	14061
A23	10/12	83%	2627	2871	1012	1819	5091
A1	9/12	75%	2800	3040	891	2063	5327
A36	9/12	75%	2100	2301	595	1546	3750
B41	9/12	75%	2226	2536	1347	530	5463
B81	9/12	75%	21600	20205	1912	16746	22300
B57	8/12	67%	1703	1852	570	1320	3188
Cw17	7/12	58%	2100	2672	1151	1316	5058
A66	6/12	50%	7166	7392	1610	5410	9643
A11	5/12	42%	2766	2698	457	2040	3350
A32	5/12	42%	1128	1375	733	717	2807
A6602	5/12	42%	8500	9618	4225	6173	17772
A1101	4/12	33%	2382	2806	796	2278	4183
A1102	4/12	33%	2953	3379	1009	2512	5098
A2403	4/12	33%	4818	5697	1687	4550	8601
B58	4/12	33%	987	954	203	638	1205
B63	4/12	33%	909	842	213	493	1059
B65	4/12	33%	1149	1079	362	528	1488

Class II							
*** Serum 3 ***							
12 typing Labs							
Antigen	no. labs	Consensus	MFI				
			Median	Mean	Std Dev	Min	Max
DR15	12/12	100%	16672	17045	3374	12588	26284
DR16	12/12	100%	8313	8825	2684	6573	16954
DR51	12/12	100%	10701	11037	3295	7630	20836
DR9	12/12	100%	3487	3823	1518	2490	8356
DP11	11/12	92%	4427	4701	2075	2554	10807
DP13	11/12	92%	3200	3437	1663	2017	8372
DP14	11/12	92%	9957	10381	4081	5497	22159
DP17	11/12	92%	8117	8366	3114	4365	17245
DP9	11/12	92%	10934	11137	4155	5967	22985
DPW1	11/12	92%	4449	4643	2125	2528	10978
DPW3	11/12	92%	11424	11987	4214	6321	23854
DPW5	11/12	92%	3935	4187	2012	2231	10197
DPW6	11/12	92%	10439	11067	4195	6081	23137
DQ5	9/12	75%	1846	2129	841	1363	4294
DR1	9/12	75%	2400	2584	1028	1466	5291
DR103	9/12	75%	2570	2745	1074	1622	5543
DR7	9/12	75%	2600	2977	1123	2142	5966
DP10	7/12	58%	2425	2668	1345	1466	5793
DQ6	7/12	58%	2200	2496	993	1625	4648

DSA present

Red = DSA against cell #001 only

Blue = DSA against cell #002 only

Green = DSA against cell #001 and cell #002

Table 11 . Summary of Single Antigen results Serum #004

Class I							
*** Serum 4 ***							
12 typing Labs							
Antigen	no. labs	Consensus	MFI				
			Median	Mean	Std Dev	Min	Max
A23	12/12	100%	5624	5830	1451	3200	8129
A29	12/12	100%	13248	14421	2783	12176	22695
B13	12/12	100%	18378	19422	3414	15429	28902
B27	12/12	100%	20347	20195	3207	15060	28622
B35	12/12	100%	3973	4203	969	2967	5714
B38	12/12	100%	6559	7149	1695	5352	11285
B41	12/12	100%	6644	7024	1883	5108	11911
B42	12/12	100%	20377	20040	3298	15267	28545
B47	12/12	100%	16485	16599	3564	12041	26929
B48	12/12	100%	21365	21348	2937	16857	28793
B55	12/12	100%	19382	19338	3290	15318	28324
B56	12/12	100%	17701	17508	3587	11862	26798
B59	12/12	100%	13523	13645	3047	10191	22618
B60	12/12	100%	21936	21617	2895	17129	28842
B61	12/12	100%	18758	19338	3335	14680	28713
B67	12/12	100%	21100	21126	3147	16458	28726
B7	12/12	100%	21751	21691	2882	16865	28684
B73	12/12	100%	22314	21752	3301	15329	28703
B8	12/12	100%	4095	4541	976	3392	6665
Cw17	12/12	100%	20897	20721	2907	16477	28377
Cw7	12/12	100%	22734	22048	2754	16480	27138
A30	11/12	92%	3523	3761	951	2400	5384
B37	11/12	92%	2504	2483	829	1075	4152
B39	11/12	92%	7511	7994	1538	6236	11325
B53	11/12	92%	2783	3053	770	2153	4212
B54	11/12	92%	4150	4454	1916	2081	8200
B57	11/12	92%	5483	5614	881	4364	6762
Cw12	11/12	92%	4469	4971	1291	3319	7593
Cw15	11/12	92%	4601	5102	1468	3547	8477
Cw16	11/12	92%	7434	7548	1756	5418	11930
Cw18	11/12	92%	12700	13089	3475	9393	23264
Cw2	11/12	92%	7400	7909	2279	5819	14252
Cw4	11/12	92%	2582	2720	844	1773	4511
Cw6	11/12	92%	10559	11078	3164	8503	20362
Cw8	11/12	92%	7662	8058	1608	6357	12038
B58	10/12	83%	2401	2356	528	1506	3424

Class II							
*** Serum 4 ***							
1 typing Lab							
Antigen	no. labs	Consensus	MFI				
			Median	Mean	Std Dev	Min	Max
		no consensus					

DSA present

Red = DSA against cell #001 only

Blue = DSA against cell #002 only

Green = DSA against cell #001 and cell #002

Table 12 . Summary of Single Antigen results Serum #005

Class I							
*** Serum 5 ***							
12 typing Labs							
Antigen	no. labs	Consensus	MFI				
			Median	Mean	Std Dev	Min	Max
A1	12/12	100%	13786	14261	4159	8348	26167
A24	12/12	100%	8984	10271	4241	6523	20600
A25	12/12	100%	15574	15677	4133	9158	26198
A26	12/12	100%	13568	13748	4112	7703	24829
A29	12/12	100%	9128	9058	3672	4899	19851
A30	12/12	100%	8262	8883	3803	4645	20089
A31	12/12	100%	8984	8819	3325	4354	18058
A32	12/12	100%	9066	8980	3590	4647	19427
A33	12/12	100%	8259	8245	3254	3954	17411
A34	12/12	100%	11878	12530	4316	7263	24994
A36	12/12	100%	11373	11793	3581	7171	22375
A43	12/12	100%	11675	11930	3670	7178	22187
A68	12/12	100%	5123	5385	2947	2169	14324
A74	12/12	100%	9463	9439	3729	4548	19885
A80	12/12	100%	12310	12509	3594	7803	22555
B73	12/12	100%	7616	7686	2343	4166	13797
A3	11/12	92%	13646	13630	4504	8083	25901
A69	11/12	92%	4254	4434	2410	1835	11586
Cw18	11/12	92%	4484	4575	1329	2839	7975
A23	10/12	83%	2628	2834	973	1800	5216
Cw6	10/12	83%	3455	3689	1094	2535	6395
B62	9/12	75%	2200	2315	892	1140	4360
Cw7	9/12	75%	2749	3657	2686	1946	11045
A11	8/12	67%	19460	18723	2162	15085	22503
A66	8/12	67%	11978	12354	2481	9709	18350
B50	7/12	58%	1089	1118	531	604	2324
B49	6/12	50%	975	1138	533	642	2237
A1101	4/12	33%	18706	19386	5511	12410	27722
A1102	4/12	33%	20848	20528	5100	13059	27355
A2403	4/12	33%	7592	9598	4222	6468	16739
A6601	4/12	33%	15767	16614	6135	8942	25979
A6602	4/12	33%	8853	10041	5130	4173	18285

Class II							
*** Serum 5 ***							
12 typing Labs							
Antigen	no. labs	Consensus	MFI				
			Median	Mean	Std Dev	Min	Max
DQ2	12/12	100%	8159	7777	2631	2789	13046
DQ4	12/12	100%	14707	16019	4263	11357	27007
DQ5	12/12	100%	20988	20742	3043	15881	27928
DQ6	12/12	100%	19445	20104	3221	15689	28029
DR1	12/12	100%	11807	11609	2032	8309	16896
DR10	12/12	100%	19365	18980	3028	12802	25075
DR103	12/12	100%	11050	10736	1570	7921	14405
DR11	12/12	100%	19220	18863	3301	13362	26981
DR12	12/12	100%	19459	19096	3262	13781	27106
DR13	12/12	100%	21815	21058	3192	15064	27992
DR14	12/12	100%	21202	21067	3056	15924	27602
DR15	12/12	100%	14872	14816	3393	9733	24404
DR16	12/12	100%	12591	12840	2535	9282	19878
DR17	12/12	100%	22328	21452	3201	14942	28068
DR4	12/12	100%	13481	13560	2656	9916	20619
DR52	12/12	100%	18697	19241	3284	14019	27148
DR8	12/12	100%	19536	19064	3565	12194	27007
DR18	11/12	92%	21305	20119	2293	15019	22666
DR51	11/12	92%	8191	8140	1210	6260	11038
DQ7	3/12	25%	764	798	115	677	953

DSA present

Red = DSA against cell #001 only

Blue = DSA against cell #002 only

Green = DSA against cell #001 and cell #002

Table 13 . Summary of Single Antigen results Serum #006

Class I							
*** Serum 6 ***							
12 typing Labs							
Antigen	no. labs	Consensus	MFI				
			Median	Mean	Std Dev	Min	Max
A1	12/12	100%	21052	20729	3133	15297	28740
A23	12/12	100%	11164	11774	3487	7916	21935
A24	12/12	100%	10667	12078	4460	8587	25228
A25	12/12	100%	5168	5381	1244	3951	8808
A26	12/12	100%	3232	3447	1196	2271	6891
A3	12/12	100%	5017	5238	1779	3135	10392
A30	12/12	100%	13869	14325	3729	10052	25330
A36	12/12	100%	9761	10063	3043	6427	18962
A43	12/12	100%	10015	10668	3256	6973	20104
A80	12/12	100%	9723	10139	3220	6436	19615
B27	12/12	100%	8388	8966	3286	5304	18711
B42	12/12	100%	5988	6056	2328	3224	12894
B44	12/12	100%	4525	4811	1930	2852	10477
B45	12/12	100%	4475	4692	1595	2722	9075
B54	12/12	100%	5706	5765	2084	3366	11844
B55	12/12	100%	5743	5919	2160	3296	12236
B56	12/12	100%	6632	6892	2334	3944	13601
B57	12/12	100%	20330	19756	3601	13385	28456
B58	12/12	100%	19177	18683	3641	12364	27851
B63	12/12	100%	16341	16099	3855	10183	26630
B67	12/12	100%	7682	7760	2650	4267	15297
B7	12/12	100%	4944	5241	2018	2830	11159
B76	12/12	100%	12437	12415	3169	7812	21196
A29	11/12	92%	3188	3610	1338	2218	7227
B75	11/12	92%	3729	3600	830	1382	4443
CW17	11/12	92%	4581	4763	1828	2208	9319
CW18	11/12	92%	4070	4457	1565	2344	8205
B81	9/12	75%	5362	5374	752	4185	6400
B82	9/12	75%	5162	4981	793	3341	6050
A11	8/12	67%	7744	8766	3441	6108	17650
CW15	7/12	58%	1306	1520	709	604	2624
CW6	7/12	58%	1795	2085	759	1051	3578
A34	6/12	50%	993	1155	511	643	2202
A66	5/12	42%	2002	2049	538	1537	3050

Class II							
*** Serum 6 ***							
12 typing Labs							
Antigen	no. labs	Consensus	MFI				
			Median	Mean	Std Dev	Min	Max
DR12	12/12	100%	11086	11561	4401	6972	24906
DR52	12/12	100%	9492	9653	2942	6186	18444
DR53	12/12	100%	19446	18792	3765	11764	27082
DR7	12/12	100%	21676	20597	3688	12023	26612
DP10	11/12	92%	17200	16513	4027	10494	26419
DP11	11/12	92%	9479	9926	3514	5115	19891
DP13	11/12	92%	18578	18013	4333	11623	27736
DP14	11/12	92%	19815	18733	4076	11215	27513
DP15	11/12	92%	15849	15446	3973	9469	25902
DP17	11/12	92%	18098	17546	4026	10901	27273
DP9	11/12	92%	21600	20233	4017	12240	27296
DPW1	11/12	92%	16990	17801	4161	11058	25474
DPW3	11/12	92%	16999	16906	5367	8988	27343
DPW5	11/12	92%	21479	20401	4182	12672	28587
DPW6	11/12	92%	20850	18478	4920	10495	26843
DR9	11/12	92%	16881	16408	4226	9235	26870
DP18	10/12	83%	19496	17522	6548	8996	28431
DPW4	10/12	83%	4023	4122	1274	1994	7152
DR10	9/12	75%	1837	1895	576	971	2850
DR14	5/12	42%	1179	1276	599	512	2356

DSA present

Red = DSA against cell #001 only

Blue = DSA against cell #002 only

Green = DSA against cell #001 and cell #002

Table 14a. Individual laboratory results for Serum #003 - class I by Luminex

Investigator	A24	A3	A80	B13	B27	B42	B47	B48	B54	B55	B56	B60	B61	B67	B7	B73	B8	B82	Cw2	A23	Other	Vendor
MFI																						
Chen, Dong-Fe	4775	5328	4963	13389	17076	17933	10931	16241	4336	12451	11030	17147	12304	20074	21991	7502	4907	9408	5755	2753	A32,A1101>	One Lambda
Gandhi, Manis	3635	3956	3874	10240	15109	14419	7896	14404	3483	10703	9209	14458	9733	16616	19933	6069	3339	8179	4561	1819	A25,A32,A11>	One Lambda
Gebel, Bray	8317	10249	9536	24212	27502	26918	22413	27068	8941	22383	19255	27419	23962	27493	27928	15999	11487		14061	5091	A1101,A1102>	
Kamoun, Male	4500	5500	4600	14300	16800	19100	11300	18100	4900	13800	11800	18600	13300	21000	23000	8550	5500	10700	6600	2500	A1101,A1102>	One Lambda
Mah, Helen	6301	4976	4679	11036	15594	15752	11032	15774	5003	11867	11006	15614	11356	17071	19002	8343	6604	9621	6106	4163	A25,A32,A11>	One Lambda
McAlack-Hana	4963	6168	5711	11399	18337	18450	11687	18924	4580	13231	12017	18880	11516	20619	22005	7772	5625	10512			B81	
Phelan, Donna	4398	4932	4558	8759	14994	18007	8479	16787	3268	12372	11270	16482	9318	20476	23274	5815	4457	9800	4897	2236	A6602,B81	
Ramon, Daniel	4066	5065	3823	11668	18899	18755	10341	17949	4677	13598	11596	17742	11352	21332	23650	7627	4846	11181	6578	1956	A33,A11,A1>	One Lambda
Reed, Elaine F	3818	5581	5104	9374	16258	17923	9021	17279	4524	13024	11376	17594	9885	20120	22600	6735	4720	10084	5636	1911	A11,A1,A36>	One Lambda
Rees, Tracey	4260	4949	5024	9506	11448	13705	7537	11430	4591	11100	9672	12697	9098	14838	16857	6475	4661	9164	4573	2930	A25,A32 >	One Lambda
Reinsmoen, N	5550	6850	5650	11300	17525	18050	11000	17550	5350	13700	12300	17900	11675	20000	22300	8350	5900	10950	6800	3350	A11,A1,A36 >	One Lambda
Rosen-Bronso	3216	3644	4056	8275	13635	14389	6212	12903	2986	10106	8682	13151	8061	16539	19360	4723	3595	7794	3711		A66,B81	One Lambda
Avg	4817	5600	5132	11955	16931	17783	10654	17034	4720	13195	11601	17307	11797	19682	21825	7830	5470	9763	6298	2871		
Std Dev	1327	1624	1452	4070	3744	3296	3923	3699	1449	3005	2551	3620	3940	3122	2696	2705	2015	1038	2630	1012		
MFI %CV	28%	29%	28%	34%	22%	19%	37%	22%	31%	23%	22%	21%	33%	16%	12%	35%	37%	11%	42%	35%		

Table 14b. Individual laboratory results for Serum #003 - class I by Flow PRA

Investigator	A24	A3	A80	B13	B27	B42	B47	B48	B54	B55	B56	B60	B61	B67	B7	B73	B8	B82	Cw2	A23	Other	Comments	
Holdsworth, Rf	1	390	406	446	571	550	392	569	382	528	477	581	529	411	639	432	428	509	322	1	A25,A32,A68>	LCS	
Nishimura, Kenji				9751								22710			79582							A1101,A2,A30>	MESF

Table 15a. Individual laboratory results for Serum #004 - class I by Luminex

Investigator	A23	A29	B13	B27	B35	B38	B41	B42	B47	B48	B55	B56	B59	B60	B61	B67	B7	Cw7	A30	B73	Other	Vendor	
MFI																							
Chen, Dong-Fe	3770	13016	19600	19270	3433	5839	5951	19083	15112	20118	18285	16576	12579	20841	18865	20527	21651	22155	2695	21706	A6602,A31>	One Lambda	
Gandhi, Manish	4932	12194	17895	18169	2967	5352	5276	17061	13869	19105	16444	13867	10756	19339	17589	18569	20434	21637	3144	21212	A33,A74,A31>	One Lambda	
Gebel, Bray	7846	22695	28902	28622	5597	11285	11911	28545	26929	28793	28324	26798	22618	28842	28713	28726	28684	27138	5301	28703	A6602,A31>		
Kamoun, Malek	3200	13000	21300	20700	3400	6200	5700	21200	17200	22400	20700	19300	13400	22700	20700	22900	22800	23100	2400	22800	A6602,B57>	One Lambda	
Mah, Helen	7188	13166	15932	17275	5714	8811	7861	16690	14623	18001	16044	15605	12833	18054	16297	17153	17868	16480	2984	15329	A33,A74,A31>	One Lambda	
McAlack-Hanau	5659	14662	18525	20169	4077	6918	7336	20454	16939	21430	19664	18301	13647	21871	18582	21149	21751	22667		22178	B8,B81,B39>		
Phelan, Donna	8129	16431	19496	21386	5664	8705	8555	21530	17849	23017	20467	18644	14772	23172	20270	22827	23036	23438	5384	23333	A6602,B44>		
Ramon, Daniel	6151	15081	22227	22380	4107	7290	7631	21679	17813	23265	20597	19039	14340	23311	21238	23090	23583	24257	3982	24014	A33,A74,A31>	One Lambda	
Reed, Elaine F.	5430	13330	18230	20920	3546	6169	5688	21192	16120	22016	20362	18598	13646	22180	19122	22262	22268	23199	3361	22927	A33,A31,A66>	One Lambda	
Rees, Tracey	5588	12176	15429	15060	3869	5831	5108	15267	12041	16857	15318	11862	10191	17129	14680	16458	16865	17560	4050	16660	A6602,A31>	One Lambda	
Reinsmoen, Na	6950	14650	18200	20525	4900	7950	7950	20300	16850	21300	19100	17100	13950	22000	18650	21050	21750	22800	4550	22450	A66,B57,B58>	One Lambda	
Rosen-Bronson	5117	12645	17322	17858	3161	5437	5320	17477	13841	19876	16746	14402	11011	19960	17353	18803	19607	20146	3523	19707	A66,B57,B8>	One Lambda	
Avg	5830	14421	19422	20195	4203	7149	7024	20040	16599	21348	19338	17508	13645	21617	19338	21126	21691	22048	3761	21752			
Std Dev	1451	2783	3414	3207	969	1695	1883	3298	3564	2937	3290	3587	3047	2895	3335	3147	2882	2754	951	3301			
MFI %CV	25%	19%	18%	16%	23%	24%	27%	16%	21%	14%	17%	20%	22%	13%	17%	15%	13%	12%	25%	15%			

Table 15b. Individual laboratory results for Serum #004 - class I by Flow PRA

Investigator	A23	A29	B13	B27	B35	B38	B41	B42	B47	B48	B55	B56	B59	B60	B61	B67	B7	Cw7	A30	B73	Other	Comments
Holdsworth, Rh	296	494	512	622	316	240	413	583	425	635	622	541	529	629	582	450	663	609	156	633	A24,A31,A66>	LCS
Nishimura, Kenji			13215											38866			99017	77346	216		A1101,A2,B65>	MESF

Table 16a. Individual laboratory results for Serum #005 - class I by Luminex

Investigator	A1	A24	A25	A26	A29	A31	A30	A32	A33	A34	A36	A43	A68	A74	A80	B73	A3	A69	Cw18	A23	Other	Vendor	
MFI																							
Chen, Dong-Fe	12822	7727	14972	12857	9411	9413	9269	9346	8507	12721	10748	10351	6173	9770	12082	7581	13646	4321	3695	1800	A1101,A1102>	One Lambda	
Gandhi, Manish	12155	8534	13200	11737	7026	6962	7190	6697	6138	10502	9834	10273	4015	7305	10332	6123	11045	3065	4009	2363	A11,A2,A66>	One Lambda	
Gebel, Bray	26167	18151	26198	24829	19851	18058	20089	19427	17411	24994	22375	22187	14324	19885	22555	13797	25901	11586	7975	5216	A1101,A1102>		
Kamoun, Malek	15000	9800	17600	15200	9500	9300	10100	9500	8800	13800	12300	13400	5800	9700	12700	7900	14400	4300	4700	2900	A1101,A1102>	One Lambda	
Mah, Helen	13407	10020	13355	11527	8845	8263	8186	8785	8011	10358	11349	10133	5128	9225	11664	6360	12808	4473	4397	3216	A11,A66,B72>	One Lambda	
McAlack-Hanau	13742	7703	16524	13907	9719	9277	8338	9448	8843	12061	11397	11537	5118	10200	14249	8748	15061	4254			A11,A66		
Phelan, Donna	14772	9470	14830	13486	8013	8691	7357	7873	7954	11695	11930	11812	4291	8917	12537	7651	13747	3535	4712	2292	A11,A66,Cw7>		
Ramon, Daniel	16052	9381	18886	16646	9733	9874	10395	9538	8890	15269	12288	14169	5455	10332	13143	8672		3821	4705	2893	A66,B72,B49>	One Lambda	
Reed, Elaine F.	13830	8586	16176	13649	7002	7503	6795	7335	6778	10455	11016	12002	3677	7993	11849	7534	12511	2778	4484	2072	A11,A66,B62>	One Lambda	
Rees, Tracey	8348	6762	9158	7703	4950	4354	4932	4647	3954	7263	7171	7178	2749	4548	7803	4166	8182	1835	2839	1934	A1101,A1102>	One Lambda	
Reinsmoen, Na	14900	20600	16400	14450	9750	9700	9300	10100	9350	12850	12900	12400	5725	10800	13350	8900	14550	4800	5750	3650	A11,A66,B62>	One Lambda	
Rosen-Bronson	9931	6523	10824	8984	4899	4435	4645	5063	4307	8388	8206	7713	2169	4596	7848	4805	8083		3060		A11,A66,Cw6	One Lambda	
Avg	14261	10271	15677	13748	9058	8819	8883	8980	8245	12530	11793	11930	5385	9439	12509	7686	13630	4433	4575	2834			
Std Dev	4159	4241	4133	4112	3672	3325	3803	3590	3254	4316	3581	3670	2947	3729	3594	2343	4504	2410	1329	973.1			
MFI %CV	29%	41%	26%	30%	41%	38%	43%	40%	39%	34%	30%	31%	55%	40%	29%	30%	33%	54%	29%	34%			

Table 16b. Individual laboratory results for Serum #005 - class I by Flow PRA

Investigator	A1	A24	A25	A26	A29	A31	A30	A32	A33	A34	A36	A43	A68	A74	A80	B73	A3	A69	Cw18	A23	Other	Comments	
Holdsworth, Rh	302	389	516	530	441	433	477	400	383	386	363	406	206	383	513	402	499	339	300	231	A1101,A11>	LCS	
Nishimura, Kenji							7617															A1101,A2,B60>	MESF

Table 17a. Individual laboratory results for Serum #006 - class I by Luminex

Investigator	A1	A23	A24	A25	A26	A3	A30	A36	A43	A80	B27	B42	B44	B45	B54	B55	B56	B57	B58	B7	Other	Vendor
MFI																						
Chen, Dong-Fe	21097	12985	15576	4983	3874	5822	15676	11067	11291	11330	10953	6945	5878	5317	6700	6943	8028	20409	19304	6249	A1101,A1102>	One Lambda
Gandhi, Manis	19018	9439	11829	4486	2496	3947	12078	7850	8436	7763	7002	4313	3616	3146	3997	4284	5058	16770	15993	3584	A11,A34,A29>	One Lambda
Gebel, Bray	28740	21935	25228	8808	6891	10392	25330	18962	20104	19615	18711	12894	10477	9075	11844	12236	13601	28456	27851	11159	A1101,A1102>	
Kamoun, Male	21100	10100	10600	4000	2700	4100	11200	8300	9900	9900	9700	6300	4900	4700	5900	6200	7300	21700	20400	5600	A1101,A1102>	One Lambda
Mah, Helen	17752	10986	8745	6198	3410	4937	13429	9149	9705	9669	7467	5344	4546	5192	5039	5117	6293	17268	16274	4489	A11,A34,A29>	One Lambda
McAlack-Hana	21007	13214	10752	5419	3782	5733	15514	10771	12236	11128	8540	6161	5668	5246	5901	6092	7264	20862	20271	5201	A11,A29,B76>	
Phelan, Donna	22331	11524	9283	5241	3335	5097	14187	10139	10522	9041	8236	5896	3464	4249	5713	5508	5913	20537	19758	4699	A11,A29,B75>	
Ramon, Daniel	22290	11341	14164	5224	3129	5368	14186	10347	10129	9777	9185	6080	4504	4092	5698	5978	6971	21640	19762	5188	B75,B76,B62>	One Lambda
Reed, Elaine F	21494	10743	8587	5112	2625	4746	13551	9383	9478	8947	7140	5409	3594	3841	4805	5082	6096	19828	18163	4671	A11,A29,A66>	One Lambda
Rees, Tracey	15297	7916	8959	4844	2597	3135	10052	6427	6973	6436	5304	3224	3402	3224	3366	3296	3944	13385	12364	2830	A1101,A1102>	One Lambda
Reinsmoen, N	20400	12900	10475	6300	4250	5950	15100	10950	12000	10950	8950	6350	4825	5500	6350	6300	7450	20250	19050	5650	A11,A29,A66>	One Lambda
Rosen-Bronso	18227	8202	10734	3951	2271	3632	11602	7408	7247	7108	6408	3750	2852	2722	3872	3989	4784	15965	15011	3577	A11,B75,B76>	One Lambda
Avg	20729	11774	12078	5381	3447	5238	14325	10063	10668	10139	8966	6056	4811	4692	5765	5919	6892	19756	18683	5241		
Std Dev	3133	3487	4460	1244	1196	1779	3729	3043	3256	3220	3286	2328	1930	1595	2084	2160	2334	3601	3641	2018		
MFI %CV	15%	30%	37%	23%	35%	34%	26%	30%	31%	32%	37%	38%	40%	34%	36%	36%	34%	18%	19%	38%		

Table 17b. Individual laboratory results for Serum #006 - class I by Flow PRA

Investigator	A1	A23	A24	A25	A26	A3	A30	A36	A43	A80	B27	B42	B44	B45	B54	B55	B56	B57	B58	B7	Other	Comments
Holdsworth, Rf	436	441	491	383	389	399	573	375	451	525	505	431	340	451	394	454	410	594	556	418	A32,A68,A1101>	LCS
Nishimura, Kenji							49690													12247	A1101,A2,B60>	MESF

Table 18a. Individual laboratory results for Serum #003 - class II by Luminex

Investigator	DR15	DR16	DR51	DR9	DP11	DP13	DP14	DP17	DP9	DPW1	DPW3	DPW5	DPW6	DQ5	DR1	DR103	DR7	DP10	DQ6	Other	Vendor	
MFI																						
Chen, Dong-Fer	17044	7267	10402	3957	5176	3765	10990	8541	11925	4610	13613	4572	12445	1846	2400	2393	2238	2425				One Lambda
Gandhi, Manish	14573	6573	9241	3092	3474	2363	7637	6425	8338	3443	9333	2961	8635	1467	1867	1907	2142	1610	1773			One Lambda
Gebel, Bray	26284	16954	20836	8356	10807	8372	22159	17245	22985	10978	23854	10197	23137	4294	5291	5543	5966	5793	4648			
Kamoun, Malek	18700	8000	11300	3500	4700	3200	10200	8100	11400	4600	12500	4000	11700	1700	2200	2200	2600	2200	2200			One Lambda
Mah, Helen	13871	6660	8637	3672	4427	3622	9704	8117	10226	4449	10756	3935	9462	1790	2231	2570	2165			DR11		One Lambda
McAlack-Hanau,	17419	8923	11907	4302																		
Phelan, Donna	15729	7137	9589	2900	3626	2507	9858	7653	10023	3531	10323	3221	9397									
Ramon, Daniel	19194	8907	12416	2808	4653	3421	9957	8514	11132	4780	12508	3991	11495	2299	2472	2630	2550		2457	DR12,DP15>		One Lambda
Reed, Elaine F.	17944	9924	11333	3473	4255	2891	10230	8277	10934	4099	11424	3736	10439	1855	2458	2743	3234	2434	1722			One Lambda
Rees, Tracey	12588	7221	7630	2490	2554	2017	5497	4365	5967	2528	6321	2231	6081	1363	1466	1622	2695	1466	1625			One Lambda
Reinsmoen, Nar	16300	8625	11000	4750	4850	3450	10950	9050	11850	4825	12000	4325	10850	2550	2875	3100	3200	2750	3050			One Lambda
Rosen-Bronson,	14893	9713	8153	2577	3189	2200	7004	5736	7726	3228	9226	2906	8094									One Lambda
Avg	17045	8825	11037	3823	4701	3437	10381	8366	11137	4643	11987	4189	11067	2129	2584	2745	2977	2668	2496			
Std Dev	3374	2684	3295	1518	2075	1663	4081	3114	4155	2125	4214	2012	4195	841.5	1028	1074	1123	1345	993			
MFI %CV	20%	30%	30%	40%	44%	48%	39%	37%	37%	46%	35%	48%	38%	40%	40%	39%	38%	50%	40%			

Table 18b. Individual laboratory results for Serum #003 - class II by Flow PRA

Investigator	DR15	DR16	DR51	DR9	DP11	DP13	DP14	DP17	DP9	DPW1	DPW3	DPW5	DPW6	DQ5	DR1	DR103	DR7	DP10	DQ6	Other	Comments	
Nishimura, Kenji	316		2153											3148						997	DR12	MESF

Table 19a. Individual laboratory results for Serum #004 - class II by Luminex

Investigator	DPW1	DQ5	DQ6	DQ7	DR12	DR15	DR51													Other	Comments	
Gandhi, Manish	373																					MFI

Table 19b. Individual laboratory results for Serum #004 - class II by Flow PRA

Investigator	DPW1	DQ5	DQ6	DQ7	DR12	DR15	DR51													Other	Comments	
Nishimura, Kenji		229	229	242	227	233	193															MESF

Table 20a. Individual laboratory results for Serum #005 - class II by Luminex

Investigator	DQ2	DQ4	DQ5	DQ6	DR1	DR10	DR103	DR11	DR12	DR13	DR14	DR15	DR16	DR17	DR4	DR52	DR8	DR18	DR51	DQ7	Other	Vendor	
MFI																							
Chen, Dong-Fe	8583	18058	21445	20544	10644	18507	9601	17011	18642	20525	21026	14812	12322	21189	13509	19750	18382	20137	6662				One Lambda
Gandhi, Manis	6456	14769	18995	18871	10759	16746	9610	16190	16418	18541	19326	12952	10601	18937	12470	17872	16483	18168	7193	677	DR9,DR7	One Lambda	
Gebel, Bray	13046	27007	27928	28029	16896	25075	14405	26981	27106	27992	27602	24404	19878	28068	20619	27148	27007		11038				
Kamoun, Male	8200	19200	22400	22100	12200	20000	11200	19800	20300	21800	22800	15700	12900	22200	14800	21600	20000	21500	8400				One Lambda
Mah, Helen	2789	11357	15881	15689	9029	14646	8983	14903	14784	16386	16516	11400	10613	16876	10119	14019	12194	16877					One Lambda
McAlack-Hana	10443	14644	20882	19167	11653	20329	10900	20045	19930	21874	21378	15331	14135	22541	13583	18443	20803	21726	8332				
Phelan, Donna	8118	13736	21094	19723	11961	21064	11526	20955	20808	22925	22082	15264	13907	23123	13453	18951	21117	22666	8848				
Ramon, Daniel	7410	18415	22877	22739	12481	20762	11442	20019	20621	22948	23529	15912	13530	23116	15398	21845	20632	21810	8049	764			One Lambda
Reed, Elaine F	4127	11917	19956	17934	10948	19266	10351	19303	19292	21830	21016	13357	12432	22522	12025	17868	19882	21555	7813				One Lambda
Rees, Tracey	5947	11657	16041	16072	8309	12802	7921	13362	13781	15064	15924	9733	9282	14942	9916	15408	14181	15019	6260	953			One Lambda
Reinsmoen, Na	9500	13400	19675	18250	12175	19100	11600	18650	17850	20825	18700	14000	12750	21450	12650	17030	18900	20550	8750				One Lambda
Rosen-Bronso	8701	18067	21735	22130	12254	19463	11290	19137	19625	21984	22908	14931	11731	22456	14173	20958	19190	21305	8191				One Lambda
Avg	7776.7	16019	20742	20104	11609	18980	10736	18863	19096	21058	21067	14816	12840	21452	13560	19241	19064	20119	8140	798			
Std Dev	2631	4263	3043	3221	2032	3028	1570	3301	3262	3192	3056	3393	2535	3201	2656	3284	3565	2293	1210	115			
MFI %CV	34%	27%	15%	16%	18%	16%	15%	17%	17%	15%	15%	23%	20%	15%	20%	17%	19%	11%	15%	14%			

Table 20b. Individual laboratory results for Serum #005 - class II by Flow PRA

Investigator	DQ2	DQ4	DQ5	DQ6	DR1	DR10	DR103	DR11	DR12	DR13	DR14	DR15	DR16	DR17	DR4	DR52	DR8	DR18	DR51	DQ7	Other	Comments
Nishimura, Ker	45006	14952	7333	35492												2194				196		MESF

Table 21a. Individual laboratory results for Serum #006 - class II by Luminex

Investigator	DR12	DR52	DR53	DR7	DP10	DP11	DP13	DP14	DP15	DP17	DP9	DPW1	DPW3	DPW5	DPW6	DR9	DP18	DPW4	DR10	DR14	Other	Vendor	
Luminex/MFI																							
Chen, Dong-Fe	9463	9384	19137	20378	15897	8825	18578	17863	14108	17246	20139	19349	18967	19905	20982		20306	3904	1837	1235		One Lambda	
Gandhi, Manish	9706	7547	16495	18494	13302	8110	15658	15671	12263	14186	17680	16990	16999	18659	17951	13563	18686	2977	1379	512	DQ7,DQ8>	One Lambda	
Gebel, Bray	24906	18444	27082	26612	26419	19891	27736	27513	25902	27273	27296	25474	27343	28587	26843	26870	28431	7152		2356			
Kamoun, Malek	12200	9300	20400	22800	17200	10100	20500	19900	16400	18300	21600	21200	21200	22000	21700	17600	21800	3600	1700	1100		One Lambda	
Mah, Helen	7242	6953	12685	15153	11190	7544	11623	13494	11745	12897	13976	11058	8988	13618	10495	11559			1350			One Lambda	
McAlack-Hanau	11814	10273	19454	21596												17419							
Phelan, Donna	10696	9601	19438	21755	17701	9479	16344	20452	16422	18818	21987	16296	13297	21750	14027	17228	9589	4421	2477				
Ramon, Daniel	12340	9599	20328	22374	17359	10848	20568	19815	15849	18952	22229	21163	21485	22415	21815	17088	22592	4375	2376	1179	DQ7,DQ8>	One Lambda	
Reed, Elaine F.	9512	8346	19778	22501	17409	8624	15779	20290	16024	18098	21786	15220	12050	21479	13530	16881	8996	3759	2115			One Lambda	
Rees, Tracey	6972	6186	11764	12023	10494	5115	11931	11215	9469	10901	12240	11987	11498	12672	12393	9235	12922	1994	971		DQ7,DQ8>	One Lambda	
Reinsmoen, Na	11475	10350	18575	20550	17000	10125	18700	19300	15500	17350	20900	15675	12850	20325	20850	16300	9060	4900	2850			One Lambda	
Rosen-Bronson	12400	9858	20367	22924	17669	10522	20723	20555	16219	18984	22730	21403	21291	23003	22670	16746	22838	4142				One Lambda	
Avg	11561	9653	18792	20597	16513	9926	18013	18733	15446	17546	20233	17801	16906	20401	18478	16408	17522	4122	1895	1276			
Std Dev	4401	2942	3765	3688	4027	3514	4333	4076	3973	4026	4017	4161	5367	4182	4920	4226	6548	1274	576	599			
MFI %CV	38%	30%	20%	18%	24%	35%	24%	22%	26%	23%	20%	23%	32%	21%	27%	26%	37%	31%	30%	47%			

Table 21b. Individual laboratory results for Serum #006 - class II by Flow PRA

Investigator	DR12	DR52	DR53	DR7	DP10	DP11	DP13	DP14	DP15	DP17	DP9	DPW1	DPW3	DPW5	DPW6	DR9	DP18	DPW4	DR10	DR14	Other	Comments	
Nishimura, Ken	424																					DQ7,DQ5>	MESF