

AFDT

Proficiency Testing Program Report

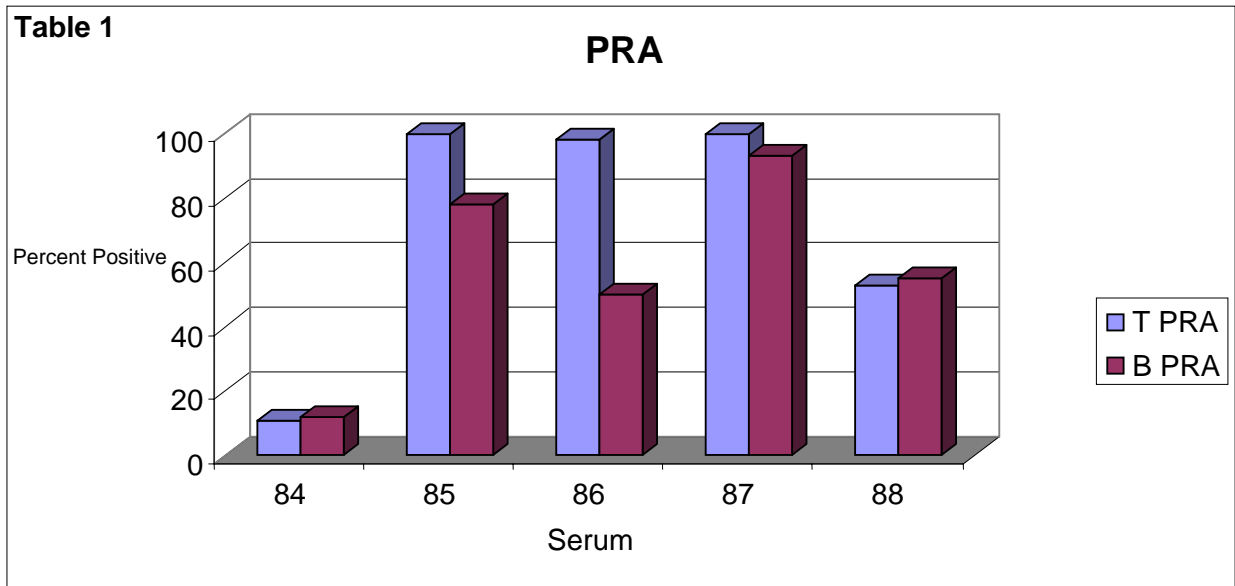
Prepared by Dod Stewart
Reviewed by Jean Heneghan

AFDT Proficiency Testing Results – September 11, 2006

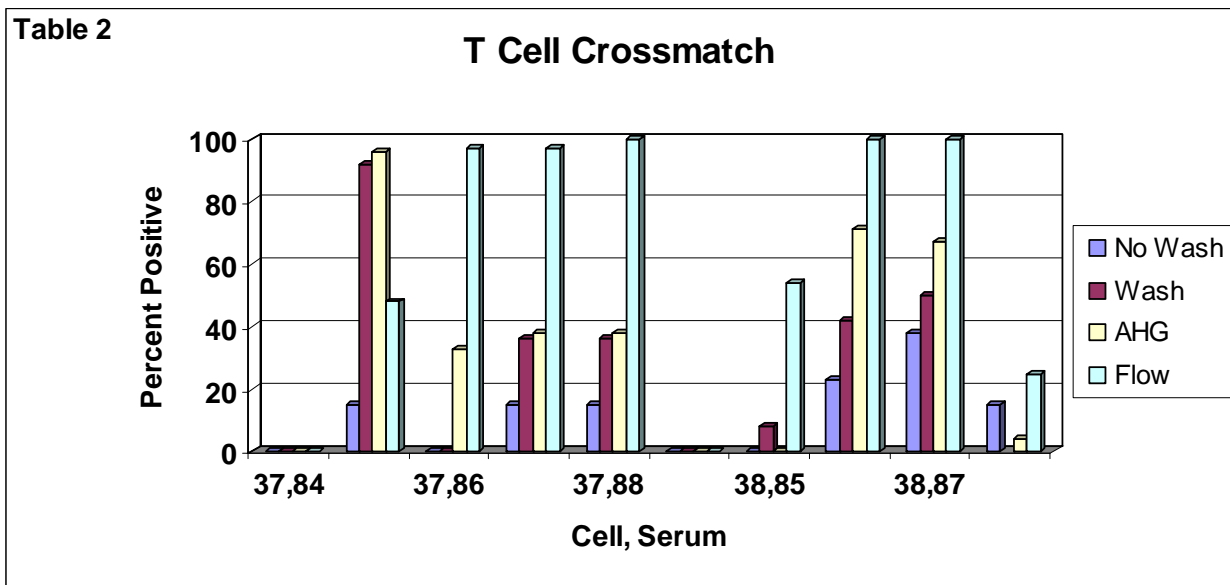
SUMMARY REPORT:

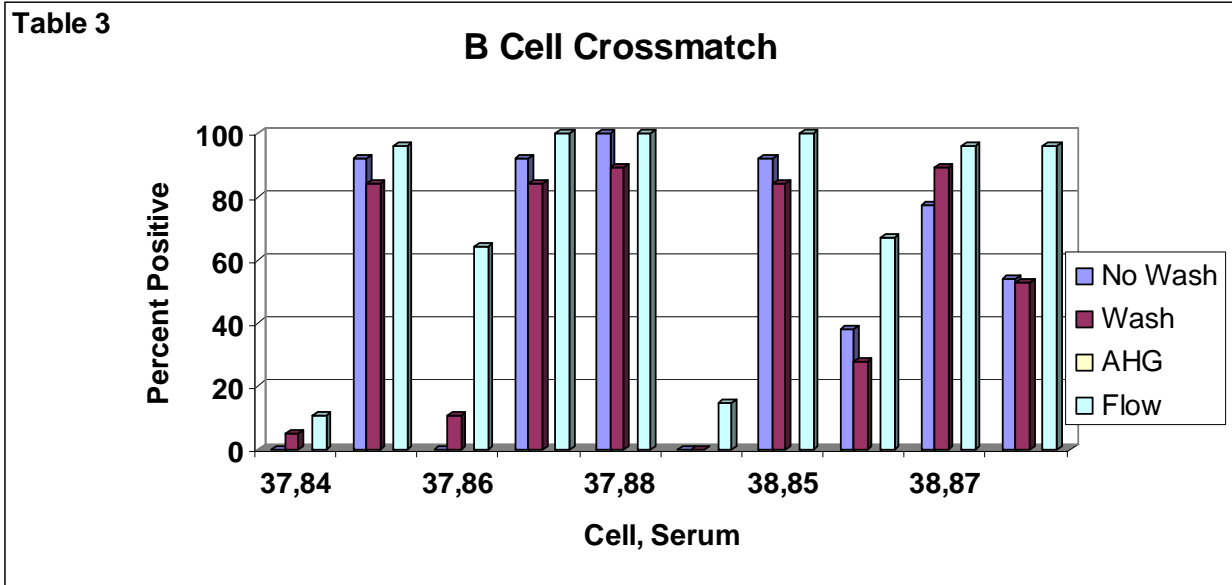
The September 11, 2006 Crossmatch / PRA exchange is the last crossmatch send-out for 2006. The mission and goals of AFDT Proficiency Testing is to provide cells and sera that approximate, as closely as possible, those clinical samples that are tested on a routine basis in most labs. This more accurately predicts how a lab functions clinically on a day-to-day basis. We feel that these AFDT Proficiency Testing Samples are more relevant and indicative of actual clinical situations and therefore more appropriate to meet the intent of CLIA, UNOS, CAP and ASHI guidelines and standards. The September 2006 send-out included four sera with complicated specificities. The fifth serum was a “negative control” serum. Some of these specificities were undetectable by standard CDC serological testing methods, and therefore significantly more difficult to detect by using serology alone. The results reported by most labs using techniques other than the standard CDC indicate that these sera do indeed contain Class I and Class 2 antibodies. Consensus has been changed from 85% to 80% this year. At the request of participants, for the second time Luminex results have been separated and analyzed separately from flow results. As we have seen in the previous surveys, the results from this survey were most interesting and informative.

A summary of PRA'S can be seen in Table 1.



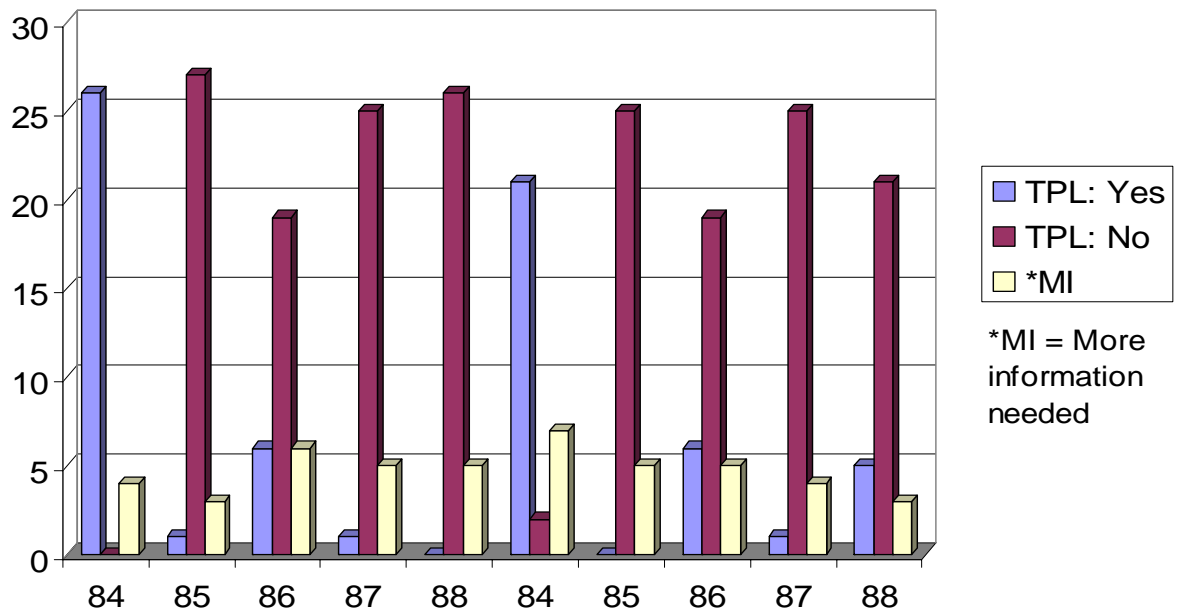
Crossmatching was performed and analyzed by the cell type and the various methods and techniques reported. (See Tables 2 and 3).





As a final question, each lab was also asked to indicate either whether a particular crossmatch pair would be transplanted or not at their respective centers, or if more information is needed. The results are summarized after each analysis in table 4. (Several laboratory directors commented that this question should always be answered “more information needed”, and is no longer pertinent since many centers now use desensitization and rescue protocols.)

Table 4

Transplant: Yes/No**September 2006 Crossmatch/PRA**

Cells: Race: Phenotype:

**CC37: Cauc: HLA: A*02,*24; B*44,*55; Bw4, Bw6; Cw*05, *0301
DRB1*11,*13; DRB*3; DQB1*06, *0301**

**CC38: Cauc: HLA: A*02,*25; B*18, *1402; Bw6; Cw*08, *1203
DRB1*04, *15; DRB*3,*5; DQB1*06,*0301**

Sera / Reported Specificities:

Bolded specificities without () indicates 80% or more labs reported this result, therefore consensus was reached. Specificities with () indicate that the majority (50% or more labs) reported this result. Luminex results are written in *italics*

and ***bolded italics*** indicate 80% or more labs reported these results and 50% of the labs reported those in *italics and parentheses*.

CS84 - Anti - Class 1: Negative
Class 2: Negative

CS85 - Anti - Class 1: **A3, A3** (A11, A19, A31) (*A11, A19, A30, A31*)
Class 2: **DR1, DR103, DQ1** (DR9, DR10), **DR1, DR103, DR9, DR10, DQ1**
(*DR51, DQ4, DQ5, DQ6*)

CS86 - Anti - Class 1: (B12), (*B12, B46, B73*)
Class 2: Undetermined (*None*)

CS87 - Anti - Class 1: B5, (B7,B8,B16,B18,B21,B35, B40, B49, B51, B52),
B5,B17,B18,B35,B41,B42,B53, (*A10, A19, A25*) (*B5,B7,B8,B13,B15,B16 ,B21,B40, B40 , B51, B52*)

Class 2: **DR7**, (DR5, DR9, DR11, DR12, DQ3), **DR7, DR5, DR9, DQ3**
(*DR11, DR12, DQ7*),

CS88 - Anti - Class 1:**A19** (A10, A29, A30, A31, A32, A33, A74), **A19** (A10, A29, A30, A31,A32, A33, A74)

Class 2: **DR8, DR52**, (DR3 , DR5 , DR6, DR7,DR9,DR11, DR12,DR13,DR14, DR17,DR18,DQ3 ,DQ7),
DR8, DR52, DR3, DR5, DR6, DR7, DR9, (*DR11, DR12, DR13, DR14, DR17, DR18, DQ3, DQ4, DQ7*)

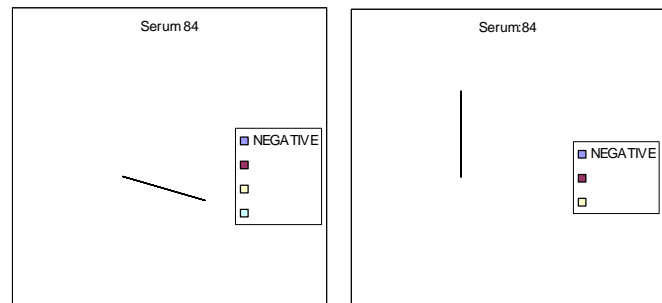
RESULTS: SERUM CS84

Antibody Analysis

CS84

Class 1: Negative

Class 2: Negative



PRA Results

CS84 is a Negative Control serum. Two labs reported some Class 1 reactivity using flow cytometry, but the consensus for this serum was negative by all other methods. The range for T-cell/ Class 1 PRA was 0 -65%.The table below has the complete breakdown by methods. As expected solid phase assays (Flow, Luminex and ELISA) gave the most sensitive results, perhaps too sensitive, as evidenced by what are probably “false positives” by ELISA and Flow. At the request of several participants, Flow and Luminex results are separated (for the second time), in this exchange.

Methods CS84	No Labs	Consensus	% PRA Range	Median PRA	Specificity
No-wash T	4	Negative	0 -2	1	None
Wash-T	6	Negative	0 -9	5	None
AHG-T	16	Negative	0 -5	3	None
Flow Class I	28	Negative	0 -3	17	None
ELISA Class 1	13	Negative	0 - 65	33	None
Luminex 1	12	Negative	0	0	None

B-cell / Class 2 screening PRA values ranged from 0 to 27% with consensus negative being reached by all methods. The complete breakdown is as follows:

Methods CS84	No Labs	Consensus	% PRA Range	Median PRA	Specificity
No-wash B	2	Negative	0 -11	6	None
Wash-B	8	Negative	0 -27	14	None
AHG-B	0	NT			NT
Flow Class 2	26	Negative	0 - 7	4	None
ELISA Class 2	11	Negative	0 - 2	1	None
Luminex 2	12	Negative	0	0	None

Crossmatching Results: CS84 vs. CC37 This cell-serum combination should have produced negative crossmatches since this is a negative control serum. All methods did reach negative consensus. Three labs (11%) performing flow B-cell crossmatches did report positive crossmatches, but 89% did report negative results which reached negative consensus. One lab (5%) also reported a positive B cell crossmatch, with 95% reporting negative results.

Note: The inconsistencies in the total number of labs for T-cell and B-cell results are because not all labs reported all methods each time. The actual number of lab responses is in the column "No Labs Total".

Crossmatch Consensus Results – CS84/CC37

Methods	No Labs Total	T-cell			Result	B-cell			Result
		#	#	%T-cell		#	#	%B-cell	
	T/B	Pos	Neg	Cons		Pos	Neg	Cons	
No-wash	13	0	13	100	Negative	0	13	100	Negative
Wash	12	0	12	100	Negative	1	18	95	Negative
AHG	24	0	24	100	Negative	NT			Not Tested
Flow	29	0	29	100	Negative	3	25	89	Negative
ELISA	NT				Insufficient	NT			Insufficient

Transplant? Yes: 26 No: 0 More information needed: 4

CS84 Vs. CC38

Crossmatch Consensus Results – CS84/CC38

CS84 and CC38 were predicted to be both T-cell and B-cell negative because of this negative control serum. As seen in the previous cell-serum combination some labs reported positive B-cell crossmatches: flow (15%) and wash (11%) crossmatches. However all methods reached negative consensus

Methods	No Labs Total	T-cell			Result	B-cell			Result
		#	#	%T-cell		#	#	%B-cell	
	T/B	Pos	Neg	Cons		Pos	Neg	Cons	
No-wash	13	0	13	100	Negative	0	13	100	Negative
Wash	12	0	12	100	Negative	2	17	89	Negative
AHG	24	0	24	100	Negative				NT
Flow	28	0	28	100	Negative	4	23	85	Negative
ELISA	0				NT				NT

Transplant? Yes: 21 No: 2 More information needed: 7

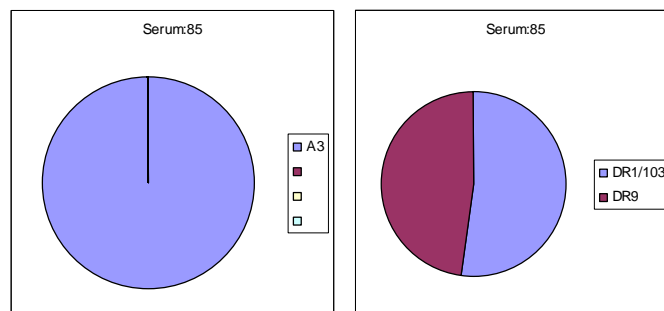
SERUM CS85

Antibody Analysis:

Anti -Class 1:

A3, A3 (A11, A19, A31)

(A11, A19, A30, A31)



Class 2: **DR1, DR103, DQ1** (DR9, DR10), **DR1, DR103, DR9, DR10, DQ1**
(DR51, DQ4, DQ5, DQ6)

PRA Results

Not all labs assigned a T-cell / Class1 PRA to CS85. The range was 0 - 94%. A3 was the only specificity that reached consensus, and that was only by the more sensitive methods. Additional A locus antibodies. A11 (50%), A19 (58%), A30 (50%), A31 (58%), were also reported by labs using solid phase assays. The complete results are below

Methods CS85	No Labs	Consensus	% PRA Range	Median PRA	Specificity
No-wash T	4	Negative	0	0	None
Wash-T	6	Negative	0 -7	4	None
AHG-T	16	Positive	0 -51	26	A3 , (A11, A19, A31)
Flow Class I	28	Positive	11- 94	51	A3 , (A11, A19, A31)
ELISA Class 1	13	Positive	1 -70	35	A3 , (A11, A19, A31)
Luminex 1	12	Positive			A3 , (A11, A19, A30, A31)

All labs reported Class 2 reactivity by all methods, reaching consensus positive for this serum. The specificities most often reported were DR1 (92%) and DR9 (83%), DR10 (92%), DR103 (92%), DR51 (67%), DQ1 (94%),DQ4 (58%), DQ5 (67%),DQ6 (61%). The B- cell/ Class 2 PRA's ranged from 1-100%. The PRA reached consensus positive by all methods. The complete results are below.

Methods CS85	No Labs	Consensus	% PRA Range	Median PRA	Specificity
No-wash B	2	Positive	37- 55	46	DQ1
Wash-B	8	Positive	4 - 50	27	DQ1 , (DR1)
AHG-B	0	NT			NT

Flow Class 2	26	Positive	10-99	55	DR1, DR103, DQ1 (DR9, DR10)
ELISA Class 2	11	Positive	1 -88	44	DR1, DR103, DQ1 (DR9, DR10)
Luminex 2	12	Positive			DR1, DR103, DR9, DR10, DQ1 (DR51, DQ4,DQ5,DQ6)

Crossmatching Results: CS85 Vs. CC37

Crossmatch Consensus Results – CS85/CC37

Some inconsistent patterns were observed in this combination. There appears to be Class 1 antibodies, detectable by enhanced and solid phase assays only. This explains the positive consensus reached by these crossmatch methods below. Serological methods were clearly less sensitive and produced the inconclusive patterns below seen in T cell subsets below. The strong DQ1 antibody and the presence of DQ1 on this cell phenotype resulted in much more consistent B-cell/ Class 2 reaction patterns reported by all labs by all methods.

Methods	No Labs Total	T-cell #	T-cell #	%T-cell Cons	Result	B-cell #	B-cell #	%B-cell Cons	Result
	T/B	Pos	Neg			Pos	Neg		
No-wash	13	2	11	84	Negative	12	5	92	Positive
Wash	13	1	11	92	Negative	16	3	84	Positive
AHG	24	1	23	96	Negative	NT			NT
Flow	29	14	15	48	Inconclusive	27	1	96	Positive
ELISA	0				Insufficient				Insufficient

Transplant: Yes:1 No: 27 More Information needed: 3

Crossmatch Consensus Results – CS85/CC38

More consistent patterns were observed in this combination (CS85/CC38) than were seen in the previous ones (CS85/CC37). There appears to be no Class 1 antibodies directed against this cell, but the phenotype does include DQ1 which resulted in the positive B-Cell/ Class 2 reactions seen below. Serological methods were sensitive enough to detect these positive reactions reported by all labs. T and B cell subsets are below:

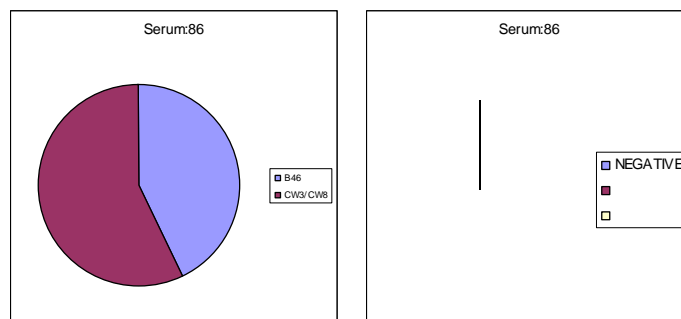
Methods	No Labs Total T/B	T-cell #		%T-cell	Result	B-cell #		%B-cell	Result
		Pos	Neg	Cons		Pos	Neg	Cons	
No-wash	13	0	13	92	Negative	12	1	92	Positive
Wash	11	1	11	92	Negative	16	3	84	Positive
AHG	24	0	24	100	Negative	NT			NT
Flow	27	15	13	54	Inconclusive	23	2	92	Positive
ELISA	NT				Insufficient				Insufficient

Transplant? Yes: 0 No: 25 More information needed: 5

SERUM CS86

Antibody Analysis:

Anti - Class 1 : (B12 Broad),
(B12, B46, B73)
Class 2: Undetermined (None)



PRA Results:

Many of the labs were unable to determine whether there was Class 1 reactivity or not with this relatively unusual serum. Some labs reported antibodies to Cw3 (50%) and Cw8 (67%). B12 was reported by 58% of the labs. B46 was also reported by 67% of the labs,. B73 was also reported by 58% of the labs. The Class 1/ T-cell PRA range was 0 - 97%. Class 1 PRA did not reach positive consensus by any methods. The results are seen below.

Methods CS86	No Labs	Consensus	% PRA Range	Median PRA	Specificity
No-wash T	4	Negative	0 - 25	13	None
Wash-T	6	Positive	0 - 51	26	Undetermined
AHG-T	16	Positive	0 - 92	46	(B12)

Flow Class I	28	Positive	0 - 97	49	(B12, B46, B73, Cw3,Cw8)
ELISA Class 1	13	Positive	0 - 89	45	(B12, B46, B73, Cw3, Cw8)
Luminex 1	12	Positive			(B12, B46, B73, Cw3, Cw8)

B-cell/ Class 2 PRA results did not reach consensus by any methods reported, except by ELISA and Luminex which were consensus negative. The range was 0 - 52%. The breakdown by methods is as follows:

Methods CS86	No Labs	Consensus	% PRA Range	Median PRA	Specificity
No-wash B	3	Inconclusive	26-52	39	Inconclusive
Wash-B	10	Inconclusive	0 - 30	15	Inconclusive
AHG-B	0	NT			
Flow Class 2	26	Inconclusive	0 - 2	3	Inconclusive
ELISA Class 2	11	Negative	0	0	None
Luminex 2	12	Negative			None

Crossmatching Results: CS86 Vs. CC37

Crossmatch Consensus Results – CS86/CC37

T-cell crossmatches also were very discordant. Only Flow crossmatches reached positive consensus. Serological methods, curiously reached negative consensus. CS86 has very weak antibodies directed against B12 which is present on the phenotype of CC37. B-cell crossmatches, exhibited similar patterns, by all methods, with this combination.

Method	No Labs Total T/B	T-cell # Pos	T-cell # Neg	%T-cell Cons	Result	B-cell # Pos	B-cell # Neg	%B-cell Cons	Result
No-wash	11	0	11	100	Negative	0	12	100	Negative
Wash	13	12	1	92	Negative	2	17	100	Negative
AHG	24	8	16	33	Inconclusive	NT			Insufficient
Flow	29	28	1	100	Positive	18	10	80	Inconclusive
ELISA	0				Insufficient				Insufficient

Transplant? Yes: 0 No: 30 More information needed: 3

CS86 Vs. CC38

Crossmatch Consensus Results – CS86/CC38

T-cell/ Class 1 and B-cell/ Class 2 crossmatches were again quite inconsistent consensus negative by most methods, except by Flow, which was consensus positive.

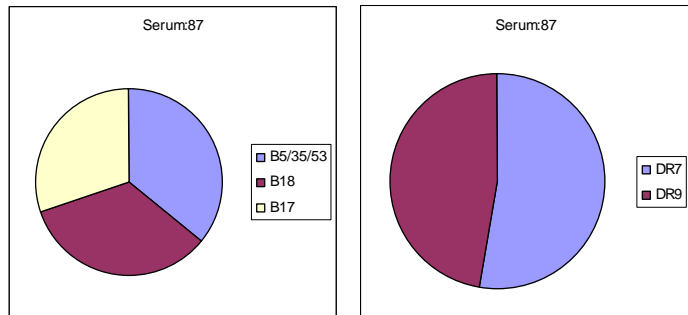
Method	No Labs Total	T-cell #	T-cell #	%T-cell	Result	B-cell #	B-cell #	%B-cell	Result
	T/B	Pos	Neg	Cons		Pos	Neg	Cons	
No-wash	13	3	10	23	Inconclusive	5	8	38	Inconclusive
Wash	11	5	7	42	Inconclusive	5	13	28	Inconclusive
AHG	24	17	7	71	Inconclusive	NT			NT
Flow	28	28	0	100	Positive	26	1	96	Positive
ELISA	0				Insufficient				Insufficient

Transplant? Yes: 6 No: 19 More information needed: 5

SERUM CS87

Antibody Analysis:

Anti - Class 1: **B5**, (B7,B8,B16, B18,B21,B35,B40, B49, B51, B52), **B5,B17,B18, B35,B41,B42,B53**, (A10, A19, A25) (B5,B7, B8,B13,B15,B16,B21,B40, B40, B51, B52)



Class 2: **DR7**, (DR5, DR9, DR11, DR12, DQ3), **DR7, DR5, DR9, DQ3** (DR11, DR12, DQ7),

PRA Result:

T-cell/ Class 1 PRA's ranged from 0 - 98%. A locus antibodies were reported by most methods, but none reached consensus, except A3 by Luminex. Other specificities reported were: A3 (78%), A19 (61%) A29 (53%), A31 (53%). Many of the labs using AHG reported B35 and B53. Labs using Luminex also reported A28 antibodies. The labs reported the following results:

Methods CS87	No Labs	Consensus	% PRA Range	Median PRA	Specificity
No-wash T	4	Positive	16 -36	26	B5 , (B35, B51, B52)
Wash-T	6	Positive	3 - 59	31	B5 , (B35, B51, B52),
AHG-T	16	Positive	1-100	50	B5 , (B7,B8,B16,B18,B21,B35, B40, B49, B51, B52),
Flow Class I	28	Positive	38-99	69	B5 , (B7,B8,B16,B18,B21,B35, B40, B49, B51, B52),
ELISA Class 1	17	Positive	1-100	50	B5 , (B7,B8,B16,B18,B21,B35, B40, B49, B51, B52),
Luminex 1	12	Positive			B5,B17,B18,B35,B41,B42,B53 , (A10,A19, A25) (B5,B7,B8,B13,B15,B16, B21,B40, B40,B51, B52)

B-cell screening PRA values ranged from 0 to 75% depending on the technique used. Almost all labs reported positive B cell/ Class 2 antibodies, except labs using the less sensitive “No Wash” cytotoxicity methods. The only specificity to reach consensus was DR1 (83%) and DR1 and DR10 by Luminex. Other specificities reported were DR10 (78%) and DR103 (64%).The breakdown by technique is as follows:

Methods CS87	No Labs	Consensus	% PRA Range	Median PRA	Specificity
No-wash B	3	Negative	0	0	(DR52)
Wash-B	8	Positive	0 -28	14	DR7 , (DR5, DR9, DR11, DR12, DQ3)
AHG-B	0	NT			DR7 , (DR5, DR9, DR11, DR12, DQ3)
Flow Class 2	26	Positive	9 - 43	26	DR7 , (DR5, DR9, DR11, DR12, DQ3)
ELISA Class 2	11	Positive	13 -75	44	DR7 , (DR5, DR9, DR11, DR12, DQ3),

Luminex 2	12	Positive			<i>DR7, DR5, DR9, DQ3 (DR11, DR12, DQ7),</i>
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Crossmatching Results: CS87 Vs CC37

Crossmatch Consensus Results – CS87/CC37

T-cell cross matches trended to be positive, but no consensus was reached, except by flow which was consensus positive. CS82 has an antibody to A29 which is on cell CC35. B-cell crossmatches were all inconsistent as well, indicating that the majority of labs found the test to be positive by most methods reported

Methods	No Labs Total T/B	T-cell			Result	B-cell			Result
		#	#	%T-cell		#	#	%B-cell	
		Pos	Neg	Cons		Pos	Neg	Cons	
No-wash	13	2	11	85	Negative	12	1	92	Positive
Wash	11	4	7	36	Inconclusive	16	3	84	Positive
AHG	25	15	9	38	Inconclusive	NT			NT
Flow	28	27	1	96	Positive	27	0	100	Positive
ELISA	0				Insufficient				

Transplant? Yes: 1 No: 25 More Information needed: 5

CS87 Vs. CC38

Crossmatch Consensus Results – CS87/CC38

T-cell crossmatches were all consensus negative by serological methods. Flow labs reported positive results which did reach consensus, and conformed with the presence of an antibody to A3 which is present on cell CC36 and detectable by flow. B-cell crossmatches were consensus negative by serological methods, but inconclusive by flow crossmatches with only 28% of the labs reporting positive results.

Methods	No Labs Total T/B	T-cell			Result	B-cell			Result
		#	#	%T-cell		#	#	%B-cell	
		Pos	Neg	Cons		Pos	Neg	Cons	
No-wash	13	5	8	38	Inconclusive	10	3	77	Inconclusive
Wash	12	6	6	50	Inconclusive	17	2	89	Positive

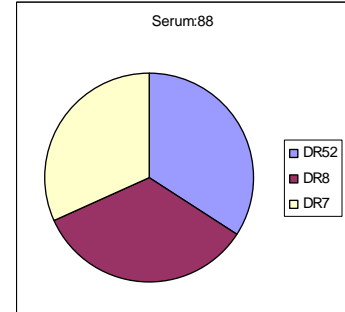
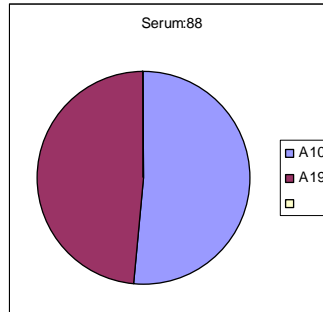
AHG	24	16	8	67	Inconclusive	NT			NT
Flow	27	28	0	100	Positive	26	1	28	Positive
ELISA	0				Insufficient				Insufficient

Transplant? Yes: 1 No: 25 More information needed: 4

SERUM CS88

Antibody Analysis

Anti - Class 1: **A19** (A10, A29, A30, A31,A32,A33,A74),
A19, A10,(A25,A26,A29, A30, A31,A32,A33,A66,A74)



Class 2: **DR8, DR52**, (DR3 , DR5 , DR6, DR7,DR9,DR11, DR12,DR13,DR14, DR17,DR18,DQ3 ,DQ7),
DR8, DR52, DR3, DR5,DR6, DR7,DR9, (DR11, DR12,DR13,DR14, DR17,DR18,DQ3 ,DQ4,DQ7)

PRA Results:

T-cell/ Class 1 PRA results ranged from 0 -100%. All methods were consensus positive for this serum. The breakdown for CS88 is: A10 (100%), A19 (100%) A25 (58%), A26 (58%), A29 (67%),A30 (67%), A31 (67%), A32 (67%), A33 (67%),A34 (67%),A66 (67%), A74 (58%). Consensus positive was reached by all methods. The labs reported the following results:

Methods CS88	No Labs	Consensus	% PRA Range	Media n PRA	Specificity
No-wash T	4	Positive	0 -28	14	A19 (A30, A31,A32,A33,A74)
Wash-T	6	Positive	0 -32	16	A19
AHG-T	17	Positive	1 - 100	40	A19, A30, A31
Flow Class I	33	Positive	38 – 100	69	A19 (A10, A29, A30, A31,A32,A33,A74)
ELISA Class 1	16	Positive	0 -75	38	A19 (A10, A29, A30,

					A31,A32,A33,A74
Luminex 1	9	Positive			A19 (A10, A29, A30, A31,A32,A33,A74)

B-cell / Class 2 screening PRA values ranged from 1 to 100% depending on the techniques used. Positive consensus was observed in all methods. The Class 2 results were; DR52 (100%), DR7 (100%) DR8 (100%), DR9 (92%),DR3 (83%), DR5 (83%), DR6 (83%), DR11 (67%),DR12 (58%),DR13 (67%),DR14 (67%),DR17 (67%), DR18(67%), DQ3 (67%), DQ4 (67%), DQ7 (58%).The breakdown, by technique is as follows:

Methods CS88	No Labs	Consensus	% PRA Range	Median PRA	Specificity
No-wash B	3	Positive	74- 81	78	DR52 , (DR3, DR8,DR5, DR6, DR7,DR9,DR11,DR12,DR13,DR14, DR17,DR18,DQ3 ,DQ7)
Wash-B	10	Positive	37- 85	61	DR8, DR52 , (DR3 , DR5 , DR6, DR7,DR9,DR11, DR12,DR13,DR14 DR17,DR18,DQ3 ,DQ7
AHG-B	0	NT			NT
Flow Class 2	32	Positive	50- 100	75	DR8, DR52 , (DR3 , DR5 , DR6, DR7,DR9,DR11, DR12,DR13,DR14, DR17,DR18,DQ3 ,DQ7
ELISA Class 2	15	Positive	1-100	50	DR8, DR52 , (DR3 , DR5 , DR6, DR7,DR9,DR11, DR12,DR13,DR14, DR17,DR18,DQ3 ,DQ7
Luminex 2	9	Positive			DR8, DR52, DR3 , DR5,DR6, DR7,DR9 , (DR11, DR12,DR13,DR14, DR17,DR18,DQ3 ,DQ4,DQ7)

Crossmatching Results: CS88 Vs. CC37

T-cell crossmatches were consensus negative by all methods. The majority of B cell crossmatches were positive by all methods, due to the cell phenotypes and the reported antibodies.

Crossmatch Consensus Results – CS88/CC37

Methods	No Labs Total	T-cell	T-cell	%T-cell	Result	B-cell	B-cell	%B-cell	Result
		#	#	cell		#	#	cell	
	T/B	Pos	Neg	Cons		Pos	Neg	Cons	
No-wash	10	0	10	100	Negative	13	0	100	Positive
Wash	12	1	11	92	Negative	17	21	89	Positive
AHG	24	0	24	100	Negative	NT			NT
Flow	29	5	24	83	Negative	28	0	100	Positive
ELISA	0				Insufficient				Insufficient

Transplant? Yes: 0 No: 26 More information needed: 5

CS88 Vs. CC38

Crossmatch Consensus Results – CS88/CC38

T-cell crossmatches were predicted to be negative, but 25% of the labs reported positive results by flow. B-cell crossmatches were also not as predicted. No was, which they were by all methods, because of the very strong antibody to B7 in CS83 and the B7 on cell CC36. The breakdown is below:

Methods	No Labs Total	T-cell	T-cell	%T-cell	Result	B-cell	B-cell	%B-cell	Result
		#	#	cell		#	#	cell	
	T/B	Pos	Neg	Cons		Pos	Neg	Cons	
No-wash	10	2	11	85	Negative	7	6	54	Inconclusive
Wash	12	0	12	100	Negative	10	9	53	Inconclusive
AHG	24	1	23	96	Negative	NT			NT
Flow	27	7	21	25	Inconclusive	26	1	96	Positive
ELISA	0				Insufficient				

CS83 vs. CC36**Transplant? Yes: 5 No: 21 More information needed: 3****Conclusions:**

As in the past, labs using enhanced serological methods (AHG) and those labs using solid phase assays (Flow, Luminex and ELISA) reported significantly more antibody specificities than labs using less sensitive serological methods. Luminex and Flow results were separated again this time, for the second time for the analysis. With regard to antibody analysis, Luminex technology appears to be quite sensitive and possibly somewhat more sensitive than flow cytometry. Currently there are neither ELISA nor Luminex crossmatch techniques available, and no results reported to correctly compare crossmatch results with their respective antibody specificities reported. We encourage any labs using Luminex techniques to submit the results separately from their other solid phase methods. All solid phase methods are more sensitive than CDC, with the exception of AHG enhanced CDC. The next cell serum send-out will be May 14, 2007.