

Educational Crossmatching Scheme

Dispatched on the 21st July 2020

Summary of Results

A total of 36 reports were received, but not all labs reported results for all tests.

Consensus HLA Type of whole blood donor sample EDXM 01/2020:

	A*	B*	C*	DRB1*	DRB4*	DRB5*	DQA1*	DQB1*	DPA1*	DPB1*
	29	40(60)	03(10)	07	01	01	01	03 (9)	01	02:01
	31	44	16	15	-	-	02	06	-	20:01/130:01
Number of reports	35	35	35	35	21	21	21	35	22	28
% Labs in consensus	100%	100%	100%	100%	100%	100%	95%	100%	100%	N/A

Note that a consensus type was not achieved for DPB1. 100% of the 28 respondents reported DPB1*02:01. However, for the second allele 11 of 28 respondents (39%) reported DPB1*130:01 whilst 17 out of 28 (61%) reported DPB1*20:01.

EDXM 01 Serum 1/2020 Results

HLA Antibody Detection and Definition

(Based on 75% Consensus)

		HLA Class I	No of labs	% consensus	HLA Class II	No of labs	% consensus
Detection	IgG	Positive	34	97%	Positive	35	100%
	IgM	Not Assessed	2	50%	Positive	1	100%
Definition ¹	Total Number of Specificities Reported (by ≥ 1 lab)	83			45		
	Number of Specificities Absent (reported by < 5% labs)	5			1		
	Number of Specificities Present (reported by ≥ 75% labs)	2			16		
	MFI >10000	A31	36	97%	DR4 DR7 DR9 DR10 DR53 DQ7 DQ8 DQ9	36	100%
	MFI 5001 - 9999	A30		97%	DR14 DQ2 DQ4		94-100%
MFI 2001 - 5000	N/A	N/A		DPB1*03:01 DPB1*06:01 DPB1*09:01 DPB1*14:01 DPB1*17:01	86-94%		
MFI <2000	N/A	N/A		N/A	N/A		

¹ 75% consensus 'present' specificities are displayed within the MFI value range reported by the **majority** of participants

Crossmatching
(Based on 75% Consensus)

	CDC						Flow Cytometry	
	PBL		T Cells		B Cells		T Cells	B Cells
	Without DTT	With DTT	Without DTT	With DTT	Without DTT	With DTT		
	Not Assessed	Not Assessed	Negative	Negative	Positive	Positive	Positive	Positive
Number of reports	3/6 Neg	4/7 Neg	16/18	16/17	17/17	16/16	26/26	24/24
% Labs in consensus	50%	57%	89%	94%	100%	100%	100%	100%

Interpretation

Identification of Donor Specific Antibodies:

Specificity	No of Participants (n=35)	MFI Range Reported
A29	1 (3%)	1249
A31	35 (100%)	2654-14609
B60	4 (11%)	876-1215
B44	2 (6%)	995-1202
Cw9 [▲]	1 (3%)	1243
Cw10	1 (3%)	1090
Cw16	1 (3%)	1238
DR7	35 (100%)	10097-19704
DR53	30 (86%)	15284-24752
DQ9	35 (100%)	6142-16000
DQ7 [▲]	2 (6%)	5619-13423
DQ8 [▲]	2 (6%)	5670-12580
DQA1*01	1 (3%)	775
DQA1*02	6 (17%)	3814-13763
DPB1*02:01	20 (57%)	996-3255
DPB1*20:01	11 (31%)	1709-3802
DPA1*01:01	1 (3%)	1293

▲Not donor specific

Crossmatch interpretation:

	<i>The most common responses included:</i>
Interpretation based on results	<ul style="list-style-type: none"> CDC crossmatch Positive Flow crossmatch Positive Patient has multiple donor specific antibodies
Assigned risk	Medium n = 1 (3%) High n = 7 (20%) Contraindication n = 27 (77%)
Immunological advice	<ul style="list-style-type: none"> Not suitable for transplantation Seek alternative donor Perform additional testing e.g. C3d or C1q binding
If advice is not to transplant, recommendations for future	<ul style="list-style-type: none"> Possible plasma exchange / antibody removal pre-

transplants

transplant

- Investigate alternative donor options e.g. entering patient in a paired kidney exchange programme

EDXM 01 Serum 2/2020 Results

HLA Antibody Detection and Definition

(Based on 75% Consensus)

		HLA Class I	No of labs	% consensus	HLA Class II	No of labs	% consensus
Detection	IgG	Positive	35	100%	Not Assessed	23	66% neg
	IgM	Not Assessed	2	50%	Negative	1	100%
Definition ¹	Total Number of Specificities Reported (by ≥ 1 lab)	83			44		
	Number of Specificities Absent (reported by < 5% labs)	6			2		
	Number of Specificities Present (reported by ≥ 75% labs)	46			0		
	MFI >10000	B51 B13 B63 B49 B53 B59 B73	36	98-100%	N/A	36	N/A
	MFI 5001 - 9999	A30 A31 B52 B44 B62 B75 B77 B38 B57 B58 B50 B54 B55 B56 B35 B37 B67 Cw2 Cw5 Cw6 Cw15 Cw18		78-100%	N/A		N/A
	MFI 2001-5000	A66 A31 B45 B76 B39 B18 B27 B46 B47 B71 B72 B78 Cw17		78-100%	N/A		N/A
	MFI <2000	A33 A68 B64 B82 Cw4		78-89%	N/A		N/A

¹ 75% consensus 'present' specificities are displayed within the MFI value range reported by the **majority** of participants

Crossmatching Results

(Based on 75% Consensus)

	CDC						Flow Cytometry	
	PBL		T Cells		B Cells		T Cells	B Cells
	Without DTT	With DTT	Without DTT	With DTT	Without DTT	With DTT		
	Negative	Not Assessed	Negative	Negative	Negative	Negative	Positive	Positive
Number of reports	5/6	4/7 Neg	18/18	17/17	14/17	16/17	23/26	19/24
% Labs in consensus	83%	57%	100%	100%	82%	94%	96%	79%

Interpretation

Identification of Donor Specific Antibodies:

Specificity	No of Participants (n=35)	MFI Range Reported
A29	22 (63%)	621-2500
A31	34 (97%)	1477-14481
B44	35 (100%)	611-10576
A30	1 (3%)	6664
B60	1 (3%)	1100
DR51	1 (3%)	1153
DR53	1 (3%)	1832
DQ6	1 (3%)	1374

Crossmatch interpretation:

	<i>The most common responses included:</i>								
Interpretation based on results	<ul style="list-style-type: none"> • CDC crossmatch Negative • Positive B cell FC crossmatch • Class I DSA 								
Assigned risk	<table> <tbody> <tr> <td>Low</td> <td>n = 1 (3%)</td> </tr> <tr> <td>Medium</td> <td>n = 10 (29%)</td> </tr> <tr> <td>High</td> <td>n = 13 (37%)</td> </tr> <tr> <td>Contraindication</td> <td>n = 11 (31%)</td> </tr> </tbody> </table>	Low	n = 1 (3%)	Medium	n = 10 (29%)	High	n = 13 (37%)	Contraindication	n = 11 (31%)
Low	n = 1 (3%)								
Medium	n = 10 (29%)								
High	n = 13 (37%)								
Contraindication	n = 11 (31%)								
Immunological advice	<ul style="list-style-type: none"> • Perform antibody removal prior to transplant • Do not proceed to transplant • Regular post-transplant monitoring with increased immunosuppression • High risk of early rejection 								
If advice is not to transplant, recommendations for future transplants	<ul style="list-style-type: none"> • Seek alternative donor: live, deceased or via a kidney sharing scheme. • HLAi use appropriate desensitisation and increased post-transplant monitoring. • Use assays to determine if antibodies are complement fixing. 								

EDXM 01 Serum 3/2020 Results

HLA Antibody Detection and Definition

(Based on 75% Consensus)

		HLA Class I	No of labs	% consensus	HLA Class II	No of labs	% consensus
Detection	IgG	Negative	33	94%	Not Assessed	26	74% neg
	IgM	Not Assessed	2	50%	Positive	1	100%
Definition ¹	Total Number of Specificities Reported (by ≥ 1 lab)	85			44		
	Number of Specificities Absent (reported by < 5% labs)	4			2		
	Number of Specificities Present (reported by ≥ 75% labs)	0			0		
	MFI >10000	N/A	36	N/A	N/A	36	N/A
	MFI 5001 - 9999	N/A		N/A	N/A		N/A
	MFI 2001-5000	N/A		N/A	N/A		N/A
	MFI <2000	N/A		N/A	N/A		N/A

¹ 75% consensus 'present' specificities are displayed within the MFI value range reported by the **majority** of participants

Crossmatching

(Based on 75% Consensus)

	CDC						Flow Cytometry	
	PBL		T Cells		B Cells		T Cells	B Cells
	Without DTT	With DTT	Without DTT	With DTT	Without DTT	With DTT		
	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative

Number of reports	6/6	7/7	18/18	18/18	17/17	17/17	25/26	22/24
% Labs in consensus	100%	100%	100%	100%	100%	100%	96%	92%

Interpretation

No Donor Specific Antibodies detected.

Crossmatch interpretation:

	<i>The most common responses included:</i>	
Interpretation based on results	<ul style="list-style-type: none"> Negative CDC crossmatch Negative Flow Cytometry crossmatch No DSAs detected Suitable for transplant 	
Assigned risk	Low	n = 34 (97%)
	Medium	n=1 (3%)
Immunological advice	<ul style="list-style-type: none"> Low/standard risk transplant Standard immunosuppressive treatment No additional interventions or monitoring required Standard post-transplant monitoring 	
If advice is not to transplant, recommendations for future transplants	N/A – proceed to transplant	