

UK NEQAS for H&I Scheme 2B - Crossmatching by Flow Cytometry

T-CELL AND B-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B05/2015 (COMPARED TO LOCAL NEGATIVE CONTROL)

DISPATCHED ON 12TH MAY 2015

HLA PHENOTYPE OF BLOOD DONOR: HLA-A1, A3; B7, B8; Cw7, -; DR15, DR17; DQ2, DQ6

Summary of Results												
T-cells					B-cells							
Total tested	23	23	21	23	20	20	20	20				
Positive	2	10	21	21	2	2	20	5				
Negative	21	13	0	2	18	18	0	15				
NT/Equivocal	0	0	2	0	0	0	0	0				
% Positive	8.7%	43.5%	100.0%	91.3%	10.0%	10.0%	100.0%	25.0%				
% Negative	91.3%	56.5%	0.0%	8.7%	90.0%	90.0%	0.0%	75.0%				
Consensus	Negative	Not Assessed	Positive	Positive	Negative	Negative	Positive	Negative				
HLA Antibody Specificity (Defined By CDC)	Cw5, DR4	Cw3	DR3	A11	Cw5, DR4	Cw3	DR3	A11				
T-cells					B-cells							
Lab No.	Serum 1	Serum 2	Serum 3	Serum 4	Serum 1	Serum 2	Serum 3	Serum 4	Date Received	Date Tested	Comments	
9	Negative	Negative	Positive	Positive					13-May	13-May		
11	Negative	Positive	Positive	Positive	Negative	Negative	Positive	Negative	13-May	14-May		
12	Negative	Negative	Positive	Positive	Negative	Negative	Positive	Positive	14-May	14-May		
14	Negative	Negative	Positive	Positive	Negative	Negative	Positive	Negative	13-May	13-May		
15	Negative	Positive	Positive	Positive	Negative	Negative	Positive	Negative	13-May	13-May		
19	Negative	Negative	Positive	Positive	Negative	Negative	Positive	Negative	13-May	13-May		
20	Negative	Positive	Positive	Positive	Positive	Negative	Positive	Negative	13-May	14-May		
23	Negative	Weak Positive	Positive	Positive	Negative	Negative	Positive	Positive	13-May	13-May		
24	Negative	Positive	Positive	Positive	Negative	Positive	Positive	Negative	13-May	14-May	Lots of granulocytes in preparation. Serum 3 borderline positive with T cells. This results would be interpreted in the context of HLA mismatch, history of sensitisation and patient antibody screening profile.	
25	Negative	Negative	Positive	Positive	Negative	Negative	Positive	Negative	13-May	13-May		
28	Weak Positive	Weak Positive	Weak Positive	Weak Positive	Negative	Negative	Weak Positive	Negative	13-May	13-May		
34	Negative	Negative	Equivocal	Negative	Negative	Negative	Positive	Negative	13-May	13-May		
35	Negative	Negative	Positive	Positive					13-May	14-May		
38	Negative	Positive	Positive	Positive	Negative	Negative	Positive	Negative	13-May	14-May		
39	Negative	Negative	Positive	Positive	Negative	Negative	Positive	Positive	13-May	14-May	On this occasion cell viability was not tested.	
41	Positive	Positive	Positive	Positive	Negative	Negative	Positive	Negative	13-May	13-May		
42	Negative	Negative	Positive	Positive	Negative	Negative	Positive	Negative	13-May	14-May		
45	Negative	Positive	Positive	Positive					13-May	13-May		
48	Negative	Negative	Positive	Positive	Negative	Positive	Positive	Positive	13-May	13-May		
51	Negative	Negative	Positive	Positive	Positive	Negative	Positive	Positive	13-May	14-May	Very few B cells - would want to repeat this preferably with fresh sample.	
54	Negative	Weak Positive	Positive	Positive	Negative	Negative	Positive	Negative	13-May	14-May		
58	Negative	Negative	Equivocal	Negative	Negative	Negative	Positive	Negative	13-May	13-May		
62	Negative	Negative	Positive	Positive	Negative	Negative	Positive	Negative	13-May	13-May		

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T-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B05/2015 (COMPARED TO LOCAL NEGATIVE CONTROL)

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Lab No.	Serum 1 cytometer reading	Serum 2 cytometer reading	Serum 3 cytometer reading	Serum 4 cytometer reading	Negative control (local)	Positive control (local)	Strong positive (local)	Weak positive (local)	Positive result value	Cytometer reading units	FCXM NIBSC negative control used?	Viability (%)
9	0.29	0.78	2.6	3.26	1.38	59.38			> 1.5 x trimmed mean	Median x (log)	Yes	90
11	37	52	88	68	39.75	80.00			2SD (>43.59)		No	95
12	85	131	185	236	86	121			Average MCF of Neg. con. + 1SD	Median Channel Fluorescence	No	
14	448	619	883	955	431	6213			1.5 x negative	Median Channel Fluorescence	Yes	
15	159	257	422	526	166	20259.5			RMF > 1.5	Median		
	0.99	1.55	2.54	3.17						RMF	No	95
19	0.162	0.232	0.428	0.393	0.229	5.032				Log Median x	No	
20	0.328	0.487	1.070	0.826	0.308	1.115			40 linear channel shift	Median Channel Fluorescence	No	90
23	6.73	9.53	9.14	12.78	5.46	18.11			+ 3SD	Median Channel Fluorescence	Yes	
24	135	209	192	206	136		6604	210	> 1.5 RR	MFCN	Yes	90
25	48	73	127	131	55	5170			> 1.3 RMF	Median Log Channel	Yes	
28	107	115	126	161	66	1071			Ratio above 1.5 compared to neg. con.	MFI	No	90
34	7.23	8.24	8.98	7.80	7.27	27.5			Mean + 2SD (8.98)		No	95
35	1.39	1.83	2.79	2.76	1.49	10.74			2.24 3SD	Median Log Channel	Yes	
38	11.7	64.6	129.0	101.5	0.0	511.5			>46 linear channel shift	Linear Channel Shift	Yes	
39	0.15	0.19	0.31	0.24	0.15	7.47			≥ 1.5 RMF	Median Log Fluorescence	No	
41	557	642	657	698	203	8975			RMF ≥ 1.5	Median Log Channel	No	
42	156	202	318	338	165		19252	343	RMF ratio > 1.3	Median Log Channel	No	
45	179	228	257	284	185	613			≥ 225 (≥ 40 channel shift)	Median Channel Value	Yes	
48	0.49	0.56	0.71	0.80	0.44	3.33			≥ 1.3 RMF		Yes	
51	4.1	5.2	9.5	7.56	3.7	121			5.7		No	
54	218/218	297/394	373/371	376/379	233/220/224/204	704			Test neg MESF ratio ≥ 1.2 weak positive	Median Log Channel	No	
					/213				Test neg MESF ratio ≥ 1.5 positive			
58	0.69	0.90	1.20	1.09	0.76	5.98			1.5 x mean = 1.4	Log Median	Yes	
62	0.377	0.46	0.68	0.67	0.38	1.61			RMF > 1.5	Median Log Channel	Yes	99

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Lab No.	Serum 1 cytometer reading	Serum 2 cytometer reading	Serum 3 cytometer reading	Serum 4 cytometer reading	Negative control (local)	Positive control (local)	Strong positive (local)	Weak positive (local)	Positive result value	Cytometer reading units	FCXM NIBSC negative control used?	Viability (%)
11	435	340	1349	380	276	3475			1.6 RMF (>441.60)		No	95
12	1305	1227	2540	1625	1007	1614			Average MCF of neg. con. + 1SD	Median Channel Fluorescence	No	
14	4472	4091	7667	4768	3458	13079			1.5 x negative	Median Channel Fluorescence	Yes	
15	3405	2276	5596	2730	2369.5	30047			RMF > 1.5	Median	No	95
	1.44	0.96	2.36	1.15						RMF		
19	5.718	5.263	10.668	5.204	4.603	46.403				Log Median x	No	
20	6.338	4.350	21.900	5.220	4.203	8.355			40 linear channel shift	Median Channel Fluorescence	No	90
23	34.5	20.59	90.65	39.20	20.74	85.05			+ 2SD	Median Channel Fluorescence	Yes	
24	385	537	820	435	360		17109	383	> 1.55 RR	MFCN	Yes	90
25	594	615	2179	816	899	9895			> 1.3 RMF	Median Log Channel	Yes	
28	406	293	796	403	290	1351			Ratio above 2 compared with neg. con.	MFI	No	50
34	18.20	15.53	47.00	17.80	15.53	91.9			Mean + 2SD (18.86)		No	90
38	10.9	2.8	144.9	-17.6	0.0	267.4			63 linear channel shift	Linear Channel Shift	Yes	
39	1.25	1.08	4.01	2.50	1.16	14.90			≥ 2.0 RMF	Median Log Fluorescence	No	
41	1721	1425	4106	1713	1339	18655			RMF ≥ 1.5	Median Log Channel	No	
42	1200	848	4155	1251	1322		44703	3234	RMF ratio > 1.5	Median Log Channel	No	
48	1.6	2.01	5.32	2.00	1.28	8.07			≥ 1.3 RMF		Yes	
51	36.8	34.2	100	34.6	24.5	142			34.5		No	
54	541/540/543	531/527/532	650/651/640	532/544/550	525/537/549	832			Test neg MESF ratio ≥ 1.2 weak positive Test neg MESF ratio ≥ 1.5 positive	Median Log Channel	No	
58	3.13	2.65	14.5	3.83	3.26	23.6			1.5 x mean = 4.89	Log Median	Yes	
62	3.45	3.01	12.6	3.37	1.73	21.9			RMF > 3	Median Log Channel	Yes	98