

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

T-CELL AND B-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B09/2018 PC (COMPARED TO LOCAL NEGATIVE CONTROL)

DISPATCHED ON 11TH DECEMBER 2018

HLA PHENOTYPE OF BLOOD DONOR: HLA-A3, A32; B7, B57; Cw6, Cw7; DR13, DR15; DQ6, DQ-

		Summary of Results										
		T-cells				B-cells						
Total tested		38	38	37	37	35	34	34	34			
Positive		32	0	1	35	32	5	1	28			
Negative		6	37	34	2	3	28	33	5			
Equivocal		0	1	2	0	0	1	0	1			
NT		6	6	7	7	6	7	7	7			
% Positive		84.2%	0.0%	2.7%	94.6%	91.4%	14.7%	2.9%	82.4%			
% Negative		15.8%	97.4%	91.9%	5.4%	8.6%	82.4%	97.1%	14.7%			
% Equivocal		0.0%	2.6%	5.4%	0.0%	0.0%	2.9%	0.0%	2.9%			
Consensus		<b>Positive</b>	<b>Negative</b>	<b>Negative</b>	<b>Positive</b>	<b>Positive</b>	<b>Negative</b>	<b>Negative</b>	<b>Positive</b>			
HLA Antibody Specificity (Defined By CDC)		Cw5 Cw6	A1 B8 DR4+	A10 A28 B8 DR4+	A3 A19 A24 B12+ DR4+	Cw5 Cw6	A1 B8 DR4+	A10 A28 B8 DR4+	A3 A19 A24 B12+ DR4+			
Lab No.	Assessment T-cells B-cells	Serum 1	Serum 2	Serum 3	Serum 4	Serum 1	Serum 2	Serum 3	Serum 4	Date Received	Date Tested	Comments
112	YES YES	NT	NT	NT	NT	NT	NT	NT	NT	18-Dec	18-Dec	Low viability
115	YES YES	Positive	Negative	Positive	Positive	Positive	Negative	Negative	Positive	12-Dec	13-Dec	
117	YES YES	Positive	Negative	Negative	NT	Positive	NT	NT	NT	13-Dec	13-Dec	Serum 4 gave results with bad replication in T & B cells. 2 & 3 very low number of B cells.
118	YES	Positive	Negative	Negative	Positive					12-Dec	12-Dec	Very low cell count, sample had clots.
120	YES YES	Positive	Negative	Negative	Positive	Positive	Negative	Negative	Positive	12-Dec	13-Dec	
122	YES YES	Positive	Negative	Negative	Positive	Positive	Negative	Negative	Positive	12-Dec	13-Dec	Very low number of B cells
130	YES YES	Positive	Negative	Negative	Positive	Positive	Negative	Negative	Positive	12-Dec	13-Dec	Agglutinated cells resulted in very few cells for testing
133	YES YES	Positive	Negative	Negative	Positive	Positive	Negative	Negative	Positive	13-Dec	14-Dec	
138	YES	Positive	Negative	Negative	Negative					12-Dec	12-Dec	
139	YES YES	NT	NT	NT	NT	NT	NT	NT	NT	14-Dec	NT	Technical failure
143	YES	NT	NT	NT	NT					22-Dec	NT	Customs delay/error.
144	YES YES	Positive	Negative	Negative	Positive	Positive	Positive	Negative	Negative	12-Dec	13-Dec	Cells were in bad condition. A lot of clots.
145	YES YES	Positive	Negative	Negative	Positive	Positive	Negative	Negative	Positive	12-Dec		
147	YES YES	NT	NT	NT	NT	NT	NT	NT	NT	12-Dec	12-Dec	Low number of cells (presence of aggregates)
149	YES YES	Positive	Negative	Negative	Positive	Positive	Positive	Negative	Positive	12-Dec	13-Dec	
154	YES YES	Positive	Negative	Negative	Positive	Positive	Equivocal	Negative	Positive	13-Dec	13-Dec	Serum 2 was equivocal because having exactly a median MFI of 250% of the NC
157	YES YES	Positive	Negative	Negative	Positive	Positive	Negative	Negative	Positive	12-Dec	12-Dec	
159	YES YES	Positive	Negative	Negative	Positive	Positive	Positive	Negative	Positive	13-Dec	13-Dec	Highly cells floccule in the primary sample
160	YES YES	Positive	Negative	Negative	Positive	Positive	Negative	Negative	Equivocal	12-Dec	13-Dec	Shipped cell suspension included a clot. Very low number of B cells.
163	YES YES	NT	NT	NT	NT	NT	NT	NT	NT	12-Dec	13-Dec	Controls failure. The NC were pos as a value 10x higher than normal - impossible to interpret.
167	YES YES	Positive	Negative	Equivocal	Positive	Positive	Negative	Negative	Positive	12-Dec	13-Dec	
169	YES YES	Negative	Negative	Negative	Positive	Negative	Positive	Negative	Negative	11-Dec	12-Dec	
189	YES YES	Negative	Negative	Negative	Negative	Negative	Positive	Negative	Negative	12-Dec	13-Dec	
190	YES YES	Positive	Negative	Negative	Positive	Positive	Negative	Negative	Positive	12-Dec	13-Dec	
191	YES YES	Positive	Negative	Negative	Positive	Positive	Negative	Negative	Positive	12-Dec	13-Dec	
193	YES YES	Positive	Negative	Negative	Positive	Positive	Negative	Negative	Positive	12-Dec	12-Dec	Not tested in duplicate since the number of cells was very low (presence of aggregates)
194	YES YES	Positive	Negative	Negative	Positive	Positive	Negative	Negative	Positive	12-Dec	12-Dec	Low number of B cells
195	YES YES	Positive	Negative	Negative	Positive	Positive	Negative	Negative	Negative	14-Dec	14-Dec	Aggregated cells.
201	YES YES	Positive	Negative	Negative	Positive	NT	NT	NT	NT	12-Dec	13-Dec	The cells were clotted. We received samples with aggregated cells.
209	YES YES	Positive	Negative	NT	Positive	Positive	Negative	Negative	Positive	12-Dec	13-Dec	
218	YES YES	Positive	Equivocal	Equivocal	Positive	Positive	Negative	Negative	Negative	18-Dec	18-Dec	Very poor lymphocyte viability
220	YES YES	Positive	Negative	Negative	Positive	Positive	Negative	Negative	Positive	12-Dec	13-Dec	
235	YES YES	Negative	Negative	Negative	Positive	Positive	Negative	Negative	Positive	12-Dec	12-Dec	
238	YES YES	Negative	Negative	Negative	Positive	Positive	Negative	Negative	Positive	12-Dec	13-Dec	
240	YES YES	Positive	Negative	Negative	Positive	Positive	Negative	Positive	Positive	13-Dec	13-Dec	
246	YES YES	Positive	Negative	Negative	Positive	Positive	Negative	Negative	Positive	12-Dec	12-Dec	
252	YES YES	Negative	Negative	Negative	Positive	Positive	Negative	Negative	Positive	14-Dec	14-Dec	
260	YES YES	Positive	Negative	Negative	Positive	Positive	Negative	Negative	Positive	13-Dec	13-Dec	
262	YES YES	Positive	Negative	Negative	Positive	Positive	Negative	Negative	Positive	12-Dec	12-Dec	Poor quality cells
271	YES YES	NT	NT	NT	NT	NT	NT	NT	NT	16-Dec	17-Dec	The cells are clumped
276	YES YES	Positive	Negative	Negative	Positive	Positive	Negative	Negative	Positive	12-Dec	14-Dec	
293	YES YES	Positive	Negative	Negative	Positive	Positive	Positive	Negative	Positive	13-Dec	13-Dec	
297	YES YES	Positive	Negative	Negative	Positive	Positive	Negative	Negative	Positive	12-Dec	13-Dec	
351	YES YES	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	15-Dec	15-Dec	
392	YES YES											No results returned

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T-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B09/2018 (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	Viability (%)
112	NT	NT	NT	NT	NT	NT	NT	NT	NT	Median Log Channel	0
115	588	416	458	637	405	530			>40	Median linear channel shift	
117	15.6	5.52	4.63	NT	5.38	159.64			Ratio RMF >1.3	Median Log Channel	95
118	401	105	191	417	125	847			191 (125+66)	median linear channel	80
120	3.94	1.14	1.1	9.18	88	14320.5			ratio > 1.6	Median	100
122	110	9.5	11	181.5	10	-	189	53	3SD	Geomean liner value	75
130	325	133	155	414	140	332			40	Mean channel shift	95
133	1.8	0.2	0.2	8.8	0,1	90,4			2SD	MFI	99
138	0.36	0.03	0.03	0.04	0	0.66			0.2	-	-
139	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
143	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
144	3.79	1.38	1.58	6.82	1325	12.15			1.6	Mean→Ratio	
145	0.944	0.296	0.357	1.63	0.396	49.4			2 SD of the ratio	Median Log Channel	97
147	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
149	2.9	0.51	0.51	6.38	0.465	173			2SD	Median Log Channel	82
154	682	90	98	1614	62	4594			median>200% negative control	MFI	-
157	194	120	141	198	144	3410			172 (neg+2SD)	Median log channel	96
159	386	201	195	482	167	526			207 (40 mean linear channel shift)	Channel	-
160	85.6	10.2	14.6	82.5	13.6	555			>25 (Negative +2SD)	Mean Linear Channel	-
163	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
167	1488	240	554	2338	293	25664			2SD	Median Log Channel	94
169	251	207	205	403	264	478			≥50 channel	Median channel	97
189	0.58	0.49	0.53	0.39	0.29	95.7			>5%	%	90
190	188	42	55	264	42	195			ratio >1.5	MFI X median	86
191	125	-24	-22	178	0	248			>30	MFI	90
193	75.08	9.22	20.6	152.27	23.16	366.67			2.4x local negative control	Geometric mean linear channel	NT
194	3.5	0.77	1.1	7.7	0.75	25.6			ratio>2	Median of MFI	-
195	774	525	513	805	527	2360			Test/Negative Control ≥ 1.30	Median Log Channel	95
201	1,13	0,50	0,52	1,33	0,51	6,39			S/NK ≥ 2,0	X-MEAN	85
209	3000 (6.4)	384 (0.8)	NT	5804 (12.3)	472	2921 (6.2)			Ratio >1.6	Geometric Mean Log Channel (Ratio)	90
218	119	85.6	93.3	194	65	2523			80	MFI	12
220	14967	1719	3209,5	97772	3172,25	261693			6000 above the mean of the NC	Linear acquisition, linear scale	92
235	4,73	3,49	3,72	9,56	3,79	41,05			2 median log channel value above the NC indicates pos	Median log channel	85
238	4665.69	3082.38	3148	6886.96	3609.97	4955.66			ratio positive/negative above 2	MESF	-
240	20	128	20	20	251	997			1.2x NC	MFI	60
246	9.4	0.9	1	1.8		8.9			1.75	MFI	88
252	1.42	0.33	1.51	14.45	36	763			Median ratio ±2SD	-	65
260	89.57	8	5.9	94.74	4.2	99.72			>25% Shift	% Shift	-
262	2744	1145	910	4011	1037	17099			> 2SD	Median channel shift	80
271	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
276	1204	133	359	1483	523	9858			>1.5x NC	Median Fluorescence Intensity	98
293	24.8	6.49	7.43	24.8	6.38	236.7			10 channel Shift	Channel Shift	80
297	762	143	166	1725	183	486			1.8 x Tneg	MFI	-
351	245.5	195	200	360.5	190	703			2SD. Above 87 channel shift	MCS	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	Viability (%)
112	NT	NT	NT	NT	NT	NT			NT	Median Log Channel	0
115	761	615	571	727	581	804			>60	Median linear channel shift	-
117	62.2	-	-	-	-	-	10.1	493.98	Ratio (RMF) >1.5	Median log channel	95
120	3.98	1.38	0.93	3.28	635	27465.5			ratio > 2	Median	100
122	669.2	210.5	93	529	104		571	209	3SD	Geomean liner value	75
130	416	284	264	462	225	519			80-100	Mean channel shift	95
133	16,0	3,7	3,0	23,1	2,5	294,6			2SD	MFI	99
139	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
144	6.52	4.26	1.48	1.81	852	4.37			2.6	Mean→Ratio	-
145	3.95	1.45	0.761	1.63	0.97	4.81			2SD of the ratio	Median log channel	97
147	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
149	23.5	8.39	2.425	11.95	2.8	104			2SD	Median log channel	82
154	3857	1220	572	3801	487	8910			median>250% of negative control	MFI	-
157	341	128	191	302	209	7605			245 (neg+2SD)	Median log channel	96
159	608	476	382	595	286	677			386 (100 mean linear channel shift)	Channel	-
160	574	108	51.5	146	49.2	713			>147 (Neg +2SD)	Median linear channel	-
163	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
167	8099	2737	3091	6591	2220	65190			2SD	Median log channel	94
169	406	465	184	373	370	806			≥80 channel	Median channel	97
189	3.10	3.12	0.01	0.74	4.88	99.9			>5%	%	90
190	712	148	96	674	75	930			ratio>2.5	MFI X median	86
191	122	-12	-44	111	0	429			>100	MFI	90
193	497.36	186.29	120.43	378.11	163.98	734.47			2.3x local negative control	Geometric mean linear channel	NT
194	16.4	6.9	7.4	17.6	5	104			ratio>3	Median of MFI	-
195	1531	697	585	918	767	5178			Test/NC ≥ 1.6	Median log channel	95
201	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
209	20222 (4.9)	5968 (1.4)	4261 (1.0)	16249 (3.9)	4118	10568 (2.6)			Ratio >1.7	Geometric Mean Log Channel (Ratio)	90
218	1472	936	943	1027	777	6132			1320	MFI	12
220	43616	11906	7455	89943	7631	261650			6000 above the mean of the NC	Linear acquisition, linear scale	92
235	9,65	4,03	3,84	15,68	3,16	70,41			6 median log channel value above the NC indicates pos	Median log channel	85
238	17654.63	8243.71	6122.51	17619.45	8204.99	26390.55			ratio positive/negative above 2	MESF	-
240	1380	1100	1310	1800	906	2100			1.4x NC	MFI	60
246	9.2	1.7	1.5	3.5	1.5	17.5			2.5	MFI	88.3
252	28.131	0.65	1.2	14.2	66	2371			Median ratio ±2SD	-	65
260	80	24.39	3.3	39.19	13.9	95.78			>25% shift	% shift	-
262	10137	3952	2415	7708	2789	44560			> 2SD	Median channel shift	80
271	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
276	7242	1585	983	4155	2672	21161			>1.5x neg ctrl	MFI	98
293	229.7	68.5	23.5	77.3	28.1	239.2			20 Channel Shift	Channel Shift	80
297	3018	745	311	2208	500	834			2.1x Tneg	MFI	-
351	446	394	353.5	477.5	357	758			2SD. Above 119 channel shift	MCS	99
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