

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

T-CELL AND B-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B03/2016 (COMPARED TO LOCAL NEGATIVE CONTROL)

DISPATCHED ON 15TH MARCH 2016

HLA PHENOTYPE OF BLOOD DONOR: HLA-A2, A3; B7, B35; Cw4, Cw7; DR11, DR15; DQ6, DQ7

Summary of Results												
T-cells					B-cells							
Total tested	46	47	47	40	41	43	38	37				
Positive	3	4	0	32	33	0	11	15				
Negative	43	43	47	8	8	43	27	22				
NT/Equivocal	5	4	4	11	7	5	10	11				
% Positive	6.5%	8.5%	0.0%	80.0%	80.5%	0.0%	28.9%	40.5%				
% Negative	93.5%	91.5%	100.0%	20.0%	19.5%	100.0%	71.1%	59.5%				
Consensus	<b>Negative</b>	<b>Negative</b>	<b>Negative</b>	<b>Positive</b>	<b>Positive</b>	<b>Negative</b>	<b>Not Assessed</b>	<b>Not Assessed</b>				
HLA Antibody Specificity (Defined By CDC)	DR7, DQ2	A30, A31	A1	B15,B57	DR7, DQ2	A30, A31	A1	B15,B57				
Lab No.	T-cells				B-cells				Date Received	Date Tested	Comments	
	Serum 1	Serum 2	Serum 3	Serum 4	Serum 1	Serum 2	Serum 3	Serum 4				
101	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Negative	16-Mar	17-Mar		
112	Negative	Negative	Negative	Equivocal	Positive	Negative	Negative	Equivocal	18-Mar	18-Mar		
114	Negative	Weak Positive	Negative	Positive	Positive	Negative	Negative	Negative	17-Mar	17-Mar		
115	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	17-Mar	17-Mar		
116	Negative	Positive	Negative	Positive	Positive	Negative	Positive	Positive	16-Mar	17-Mar		
117	Equivocal	Negative	Negative	Positive	Equivocal	Negative	Negative	Positive	17-Mar	17-Mar		
118	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Negative	16-Mar	16-Mar		
119	Negative	Negative	Negative	Positive	Positive	Negative	Equivocal	Positive	16-Mar	17-Mar		
120	Negative	Negative	Negative	Positive	Positive	Negative	Negative	Equivocal	16-Mar	17-Mar		
122	Negative	Negative	Negative	Positive	Positive	Negative	Positive	Negative	16-Mar	17-Mar		
126	Negative	Negative	Negative	Positive	Positive	Negative	Positive	Positive	09-Mar	10-Mar		
130	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	16-Mar	17-Mar		
133	Negative	Negative	Negative	Negative	Positive	Equivocal	Equivocal	Positive	17-Mar	18-Mar		
136	Negative	Negative	Negative	Positive					16-Mar	17-Mar		
138	Negative	Negative	Negative	Positive					16-Mar	16-Mar		
139	Negative	Negative	Negative	Negative	Positive	Negative	Negative	Negative	21-Mar	21-Mar		
142	Negative	Negative	Negative	Equivocal	Negative	Negative	Negative	Negative	18-Mar	21-Mar		
143	Negative	Negative	Negative	Equivocal					17-Mar	17-Mar		
144	Negative	Negative	Negative	Positive	Positive	Negative	Negative	Positive	16-Mar	16-Mar		
145	Positive	Negative	Negative	Positive	Positive	Negative	Negative	Negative	16-Mar	17-Mar		
147	Negative	Negative	Negative	Equivocal	Positive	Negative	Equivocal	Equivocal	17-Mar	17-Mar		
154	Negative	Positive	Negative	Positive	Positive	Negative	Negative	Positive	16-Mar	17-Mar		
157	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Equivocal	16-Mar	17-Mar		
159	Negative	Negative	Negative	Positive	Positive	Negative	Positive	Equivocal	16-Mar	17-Mar		
160	Negative	Negative	Negative	Positive	Positive	Negative	Equivocal	Negative	16-Mar	17-Mar		
163	Negative	Positive	Negative	Positive	Positive	Negative	Positive	Positive	16-Mar	22-Mar		
167	Negative	Negative	Negative	Positive	Equivocal	Negative	Negative	Negative	16-Mar	17-Mar		
169	NT	NT	NT	NT	NT	NT	NT	NT	17-Mar		Technical problem	
176	Negative	Negative	Negative	Positive	Positive	Negative	Positive	Equivocal	17-Mar	17-Mar		
186	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Negative	16-Mar	16-Mar		
190	Negative	Negative	Negative	Equivocal	Positive	Negative	Negative	Negative	16-Mar	17-Mar		
191	Positive	Negative	Negative	Positive	Positive	Negative	Negative	Positive	16-Mar	17-Mar		
193	Negative	Negative	Negative	Positive	Positive	Negative	Equivocal	Positive	16-Mar	16-Mar		
194	Negative	Negative	Negative	Positive	Positive	Negative	Positive	Positive	16-Mar	16-Mar		
201	Negative	Negative	Negative	Positive	Positive	Negative	Positive	Negative	16-Mar	17-Mar		
202	Positive	Negative	Negative	Negative	Positive	Negative	Negative	Negative	16-Mar	16-Mar		
204	Negative	Negative	Negative	Positive	Positive	Negative	Positive	Negative	16-Mar	16-Mar		
209	Negative	Negative	Negative	Positive	Positive	Negative	Positive	Positive	15-Mar	17-Mar		
218	Negative	Negative	Negative	Negative	Positive	Negative	Positive	Negative	22-Mar	23-Mar		
220	Negative	Negative	Negative	Positive	Positive	Negative	Negative	Positive	16-Mar	17-Mar		
227	NT	NT	NT	NT	NT	NT	NT	NT	16-Mar		Technical failure	
235	Negative	Negative	Negative	Negative	Positive	Negative	Negative	Negative	16-Mar	16-Mar		
238	Negative	Negative	Negative	Negative	Equivocal	Negative	Negative	Negative	16-Mar	17-Mar		
245	Negative	Negative	Negative	Equivocal	Negative	Negative	Negative	Equivocal	16-Mar	17-Mar		
246	Negative	Negative	Negative	Positive	Positive	Negative	Negative	Positive	16-Mar	17-Mar		
252	Negative	Negative	Negative	Positive	Positive	Negative	Negative	Negative	17-Mar	17-Mar		
262	Negative	Negative	Negative	Negative	Positive	Negative	Equivocal	Negative	16-Mar	16-Mar		
271	NT	NT	NT	NT	NT	NT	NT	NT	31-Mar	31-Mar	Poor cell viability	
284	Negative	Negative	Negative	Equivocal	Positive	Negative	Negative	Negative	16-Mar	16-Mar		
297	NT	NT	NT	NT	NT	NT	NT	NT			Poor cellularity	
341	Negative	Negative	Negative	Positive	Positive	Negative	Negative	Negative	16-Mar	17-Mar		

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

T-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B03/2016 (COMPARED TO LOCAL NEGATIVE CONTROL)

DISPATCHED ON 15TH MARCH 2016

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 (%)
101	1	1	1	2						Ratio fluorescence mean sample/negative control	
112	0.417	0.377	0.315		0.378	1.52			ratio >1.5	Median log channel	100
114	246	296	234	404	232	359			282 (50 linear channel shift)	Median linear channel	
115	191	208	196	223	229	359			>40	Median linear channel shift	
116	0.23	0.39	0.22	1.07	0.19	33.75			ratio >1.7	Median log channel	
117		4.03	4.23	11.73	4.1	131				Median log channel	90
118	183	190	171	267	163	809			229 (163+66)	Median linear channel MCI	90
119	0.28	0.396	0.259	0.97	0.223	12.1			ratio: pos>1.289, B-line(1.289-1.45)	MnIX	96
120	1.06	1.05	0.99	1.69	88	5471			ratio >1.6	Median	100
122	10.5	14	9.5	36.5	9.5		125	38	3SD	Geomean linear values	98
126	207	209	187	303	190.5	746			>81 median channel shift	Median	90
130	167	195	168	284	160	280			>40	Mean channel shift	98
133	48	48	37	28	37	230			>x1.5 of NC	Median	99
136	3.7	3.8	2.5	11.9	2.7	64			NR >200	Mean channel	99
138	0.03	0.03	0.05	0.22	0	0.95			>0.20	D value kolmogorov-smirnov statistic	
139	4.19	2.74	4.45	4.01	4.435	7.9			>1.5 of neg mean log channel	Mean log channel	30
142	90	181	87	207	112	7421			121 (112+3SD)	Median log channel	90
143	17	15	22		34	829			>40 linear channel shift	Geomean channel shift	90
144	1.39	1.53	1.2	2.69	1292/1	7.18			1.7	Median/Ratio	
145	0.526	0.388	0.357	0.734	0.333	54.1			2SD of the ratio	Median log channel	95
147	117	125	111	151	113	314			>40 linear channel shift	Linear channel	100
154	50	66	46	196	40	1095			Median >150% control and shape of the curve	MFI	
157	119	116	114	149	112	575			127	Median linear channel	96
159	171	185	159	273	161	497			40 linear channel shift	MLC	100
160	13.1	15.1	13.4	45.4	12.1	541			>22.3 (neg+2SD)	Mean linear	
163	1.3	2.4	1.1	6.9	1	11.1			2.3 (ratio above)	Geomean linear channel	94
167	259	262	239	543	211	24612			2SD	Median log channel	97
169	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
176	0.13	0.31	0.17	0.63	0.00	1.46			0.5	MFI shift	
186	0.501	0.476	0.429	0.734	0.454	8.16			1.5 fold the local negative control	MFI log channel	99
190	56.4	52.5	60.2	67.4	54.6	167			ratio sample/neg >1.5	Median log channel	80
191	31	2.5	-2.4	63	0	160			>20	MFI	100
193	3.27	4.91	2.81	25.13	2.63	216.5			Neg control mean x2.5	Geometric mean linear channel	
194	0.2	0.6	0.2	4	<0.7	18			>0.7 (mean log)	X-median	99
195											
201	0.377	0.361	0.358	0.768	0.332	32.7			ratio (s/nc) ≥2.0	X-mean	95
202	5.6	3.3	1.5	3.2	0.5	99.9			5% above the local neg control	Linear scale	
204	0.38	0.47	0.39	1.13	0.39	56.1			0.58 = 1.5x loc neg control	Mean log channel	
209	1.5	1.6	1.3	3.4	236	851 (3.61)			1.6	Geometric mean log channel (ratio)	
218	124	108	121	98.3	106	2100			106 x1.2 = 127.2	Geometric mean fluorescence intensity	
220	6975	6209.5	4177.5	14878.5	4970	176203			6000 above the neg control	Linear acquisition, Linea values	96
227	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
235	3.43	1.46	1.83	5.28	1.24	303.51			>2 of neg median log channel	Median log channel	85
238	1006	1018	1080	1323	1092	32514			MESF serum/MESF neg control	MESF	
245	0	2	0.5	6	3.5	8.5			7 linear channel shift	Linear channel shift	100
246	1.4%	0.8%	0.8%	34.4%	1.1%	40.4%			30%	%	95
252	0.95	1	0.93	1.14	49	56			Median ratio +2SD		70
262	1749	1104	1106	1907	1672	23883			ratio sample/neg >2, cell lysis >12%	Median channel log	82
271	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	1
284	498	521	491	588	525		2978	586	Sample serum/neg control: ratio >1.2	Median log channel	
297	NT	NT	NT	NT	NT	NT	NT	NT	1.5x Tneg	MFI	NT
341	4.33	4.64	4.36	7.93	4.52	30.18			3SD	Geomean linear values	97

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

B-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B03/2016 (COMPARED TO LOCAL NEGATIVE CONTROL)

DISPATCHED ON 15TH MARCH 2016

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 (%)
101	0.5	0.5	0.5	0.5						Ratio fluorescence mean sample/negative control	
112	1.4	0.357	0.472		0.386	31.8			ratio >2	Median log channel	100
114	532	430	475	469	428	599			488 (60 linear channel shift)	Median linear channel	
115	253	240	283	240	353	724			>60	Median linear channel shift	
116	3.78	0.86	1.7	1.4	0.81	59.1			ratio >1.7	Median log channel	
117		7.67	10.31	18	11.45	27.9			ratio (RMF) >1.5	Median log channel	90
118	97.75	92	95.5	97.75	89.5	439			115 (89.5+25.5)	Median linear channel MCI	90
119	18.6	4.6	6.05	4.38	2.02	8.76			ratio: pos>1.7, B-line(1.5-1.7)	MnIX	96
120	2.21	1.03	1.46		315.5	7835.7			ratio >2	Median	100
122	247	47	96.5	76	41.5		299	94	3SD	Geomean linear values	98
126	585	403	553	549	326.5	830			>110 median channel shift	Median	90
130	327	323	314	350	258	475			>80	Mean channel shift	98
133					30	509			>x2 of NC	Median	99
139	21.5	5.51	10.8	8.31	7.8	68.6			>2 of neg mean log channel	Mean log channel	30
142	624	778	933	902	687	18905			1124 (687+3SD)	Median log channel	90
144	4.69	1.53	2.23	2.79	2615/1	8.46			2.5	Median/Ratio	
145	3.77	0.555	0.715	0.728	0.796	54.1			2SD of the ratio	Median log channel	95
147	271	141	257	194	139	602			>60 linear channel shift	Linear channel	100
154	1030	241	386	466	251	6656			Median >200% control and shape of the curve	MFI	
157	229	118	149		265	626			300	Median linear channel	96
159	495	266	364	363	271	676			100 linear channel shift	MLC	100
160	493	52	193	136	104	1061			>214 (neg+2SD)	Mean linear	
163	2.2	1.1	1.8	1.7	1	2.7			1.7 (ratio above)	Geomean linear channel	94
167	228	1157	1558	1614	1148	54806			2SD	Median log channel	97
169	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
176	0.7	-0.2	0.32	0.18	0	1.25			0.22	MFI shift	
186	1.23	0.747	1.08	1.18	0.902	17.7			2 fold the local negative control	MFI log channel	99
190	207.7	63.8	100.6	94.4	76.9	695			ratio sample/neg >2.5	Median log channel	80
191	118	-47	22	81	0	377			>70	MFI	100
193	136.2	37.89	74.37	83.14	31.55	460.13			Neg control mean x2.5	Geometric mean linear channel	
194	6	0.01	2	2	<1	26			>1 (mean log)	X-median	99
195											
201	8.21	0.802	3.18	2.36	1.73	65.3			ratio (s/nc) ≥2.5	X-mean	95
202	16.8	3.8	0.6	2.2	1.5	100			8% above the local neg control	Linear scale	
204	6.53	0.92	3.61	1.49	1.06	77.5			2.11 = 2x loc neg control	Mean log channel	
209	5.5	1.6	2.03	2.2	658	1908 (2.9)			1.9	Geometric mean log channel (ratio)	
218	4555	582	1424	688	643	2100			643 x1.7 = 1093.1	Geometric mean fluorescence intensity	
220	19382.5	4959.5	6796.5	12915.5	4826.25	262143			6000 above the neg control	Linear acquisition, Linea values	96
227	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
235	26.3	7.84	8.66	7.84	5.94	1394.86			>18 of neg median log channel	Median log channel	85
238	7790	1431	3637	2258	3300	40219			MESF serum/MESF neg control	MESF	
245	10.5	1	8	7	7	17.5			15 linear channel shift	Linear channel shift	100
246	57%	22.2%	22.2%	37.8%	12.9%	96.9%			30%	%	95
252	2.11	0.88	1.26	1.5	42	72			Median ratio +2SD		70
262	9458	1861	3398		3246	2800	53280		ratio sample/neg >2, cell lysis >12%	Median channel log	82
	Ratio 3										
	Lysis 38%										
271	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	1
284	954	498	538	514	491	9609	579		Sample serum/neg control: ratio >1.2	Median log channel	
297	NT	NT	NT	NT	NT	NT	NT		2x Tneg	MFI	NT
341	43.92	8.34	13.15	12.15	8.63	137			3SD	Geomean linear values	97