

UK NEQAS FOR H&I SCHEME 2B - CROSSMATCHING BY FLOW CYTOMETRY

T-CELL AND B-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B04/2015 (COMPARED TO LOCAL NEGATIVE CONTROL)

DESPATCHED ON 10TH MARCH 2015

HLA PHENOTYPE OF BLOOD DONOR: HLA-A1, A2; B7, B60; Cw3, Cw7; DR4, DR15; DQ6, DQ8

Summary of Results												
T-cells					B-cells							
Total tested	47	49	44	49	44	45	42	41				
Positive	13	3	17	1	13	31	7	6				
Negative	34	46	27	48	31	14	35	35				
NT/Equivocal	4	2	7	2	4	3	6	7				
% Positive	27.7%	6.1%	38.6%	2.0%	29.5%	68.9%	16.7%	14.6%				
% Negative	72.3%	93.9%	61.4%	98.0%	70.5%	31.1%	83.3%	85.4%				
Consensus	Not Assessed	Negative	Not Assessed	Negative	Not Assessed	Not Assessed	Negative	Negative				
HLA Antibody Specificity (Defined By CDC)	A3	DR1	A11	DR7, DQ2	A3	DR1	A11	DR7, DQ2				
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	
112	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	13-Mar	13-Mar		
114	Positive	Negative	Positive	Negative	Negative	Positive	Negative	Negative	11-Mar	12-Mar		
115	Negative	Negative	Positive	Negative	Negative	Positive	Negative	Negative	11-Mar	12-Mar		
116	Positive	Negative	Positive	Negative	Negative	Positive	Negative	Negative	11-Mar	12-Mar		
117	Negative	Negative	Weak Positive	Negative	Weak Positive	Positive	Positive	Positive	12-Mar	12-Mar		
118	Positive	Positive	Positive	Positive	Negative	Negative	Negative	Negative	11-Mar	11-Mar		
119	Negative	Negative	Positive	Negative	Positive	Positive	Positive	Negative	11-Mar	12-Mar		
120	Negative	Negative	Negative	Negative	Negative	Positive	Negative	Negative	11-Mar	12-Mar		
122	Negative	Negative	Negative	Negative	Negative	Positive	Negative	Negative	11-Mar	16-Mar		
126	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	11-Mar	12-Mar		
130	Weak Positive	Negative	Positive	Negative	Positive	Positive	Positive	Positive	11-Mar	12-Mar		
136	Negative	Negative	Negative	Negative					11-Mar	12-Mar		
138	Negative	Negative	Negative	Negative					11-Mar	11-Mar		
139	Positive	Negative	Positive	Negative	Negative	Negative	Negative	Negative	13-Mar	13-Mar	Not in clinical use	
142	Positive	Negative	Positive	Negative	Negative	Positive	Negative	Negative	11-Mar	12-Mar		
143	Negative	Positive	Negative	Negative					12-Mar	13-Mar		
144	Negative	Negative	Negative	Negative	Negative	Positive	Negative	Negative	11-Mar	12-Mar		
145	Negative	Negative	Negative	Negative	Negative	Positive	Negative	Negative	11-Mar	12-Mar		
147	Negative	Negative	Equivocal	Negative	Positive	Positive	Equivocal	Equivocal	11-Mar	11-Mar		
154	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Weak Positive	12-Mar	13-Mar		
157	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	11-Mar	11-Mar		
159	Negative	Negative	Equivocal	Negative	Positive	Positive	Weak Positive	Equivocal	11-Mar	12-Mar		
160	Negative	Negative	Negative	Negative	Positive	Positive	Negative	Positive	11-Mar	12-Mar		
163	Positive	Negative	Positive	Negative	Negative	Positive	Negative	Negative	11-Mar	16-Mar	Performed on frozen cells	
167	Positive	Negative	Positive	Negative	Positive	Positive	Negative	Negative	12-Mar	13-Mar		
169	Negative	Negative	Negative	Negative	NT	NT	NT	NT	12-Mar	13-Mar	No B cell results submitted	
174	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	14-Mar	14-Mar		
176	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	12-Mar	13-Mar	We are currently having problems with high background staining on B-cells which leads to false negatives. Normally, serum 1 would be reported as pos on B-cells, neg on T-cells	
186	Weak Positive	Negative	Positive	Negative	Negative	Positive	Negative	Negative	11-Mar	11-Mar	High background level on B-cells	
190	Positive	Negative	Positive	Negative	Negative	Positive	Negative	Equivocal	11-Mar	12-Mar		
191	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	12-Mar	12-Mar		
193	Equivocal	Negative	Equivocal	Negative	Negative	Positive	Negative	Negative	11-Mar	11-Mar		
194	Negative	Negative	Negative	Negative	Positive	Positive	Equivocal	Equivocal	11-Mar	12-Mar		
195	Negative	Negative	Negative	Negative	Positive	Positive	Negative	Negative	13-Mar	13-Mar		
201	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	11-Mar	12-Mar		
202	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	11-Mar	11-Mar		
204	Negative	Negative	Positive	Negative	Negative	Negative	Negative	Negative	11-Mar	11-Mar		
209	Positive	Negative	Positive	Negative	Negative	Positive	Negative	Negative	11-Mar	12-Mar		
218	Positive	Positive	Negative	Negative	Positive	Negative	Negative	Negative	11-Mar	24-Mar	Sampels were degenerate	
220	Negative	Negative	Negative	Negative	Negative	Positive	Negative	Negative	11-Mar	12-Mar		
227	NT	NT	NT	NT	NT	NT	NT	NT	11-Mar	12-Mar	Cellular viability less than normal values.	
235	Negative	Negative	Negative	Negative	Negative	Positive	Negative	Negative	11-Mar	11-Mar		
238	Positive	Negative	Equivocal	Negative	Positive	Positive	Positive	Positive	11-Mar	12-Mar		
245	Negative	Negative	Negative	Negative	Negative	Positive	Negative	Negative	11-Mar	12-Mar		
246	Negative	Negative	Negative	Negative	Negative	Positive	Negative	Negative	11-Mar	12-Mar		
252	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	12-Mar	13-Mar		
262	Negative	Negative	Negative	Negative	Positive	Positive	Equivocal	Negative	11-Mar	11-Mar		
268	Negative	Negative	Negative	Negative	Negative	Positive	Negative	Positive	13-Mar	13-Mar		
271	NT	Negative	Positive	Negative	NT	Positive	Positive	Negative	12-Mar	12-Mar	We were unable to interpret the T and B-cell results for Serum 1	
283	Negative	Negative	Negative	Negative	Positive	Positive	Negative	Negative	11-Mar	12-Mar		
284	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	Awaiting testing validation	

UK NEQAS FOR H&I SCHEME 2B - CROSSMATCHING BY FLOW CYTOMETRY

T-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B04/2015 (COMPARED TO LOCAL NEGATIVE CONTROL)

DESPATCHED ON 10TH MARCH 2015

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 (%)
112	0.243	0.236	0.243	0.268	0.271	1.47			Ratio > 1.5	Median log channel	No	95
114	249	185	261	195	180	327			230 (180+50)	Median linear channel		
115	244	198	276	192	221	371			> 40 linear channel shifts	Median linear channel shifts	Yes	
116	0.33	0.19	0.43	0.18	0.19	26.7			Ratio > 1.7	Median log channel	No	
117	4.76	4.26	5.35	3.94	3.93	142.05			Ratio (RMF) > 1.3	Median log channel	Yes	
118	180	168	184	156	126	846			148 (126+22)	Median linear channel (MCI)	Yes	85
119	0.316	0.204	0.352	0.181	0.191	10.6			Ratio > 1.285 (B.line - 1.48)	Mnlx	No	95
120	1.38	0.97	1.25	0.95	87.5	8829.5			Ratio > 1.6	Median (ratio)	No	100
122	10.5	8	11	8	8.5		74	25	3 SD	Geomean linear values	Yes	
126	187	81	158	76	129	661			> 80 linear channel shifts	Median linear channel	No	
130	175	135	182	139	134	300			>40		No	
136	3.7	2.6	4.5	2.5	2.33	34 (NR=1457)			NR > 200	Mean channel	No	98
138	0.06	0.06	0.08	0.03	0	0.98			> 0.20		No	
139	1.11	0.744	1.44	0.781	0.596	12.3			≥ 1.5 of neg mean log channel	Mean log channel	No	
142	264	213	335	211	219	7586			250.75 (3SD)	Median log channel	No	88
143	-51	53	-54	33	57	134			≥ 60	Geo mean shift channel	No	95
144	Ratio 1.4	1.36	1.46	1.11	1	4.95			1.7	Ratio	No	
	MFI				1347					MFI		
145	0.222	0.192	0.286	0.208	0.23	4.05			Med log ch test/med log ch neg > mean + 2 SD	Median log channel	No	94
147	146	121	158	127	117	469			>40 linear channel shift	Median linear channel		100
154	58	48	80	52	51	588			Median > 150% control and shape of the curve	MFI	No	
157	105	95	104	97	91	375			106 (Neg+15)	Median linear channel	No	94
159	164	136	173	133	135	384			175 mean linear channel (40 channel shift)	Mean linear channel	No	90
160	16.7	9.2	12.4	8.4	8.5	307			>17.4 (Neg +2SD)	Mean linear channel	No	
163	4.9	1.1	3	1	1	11.4			2.3	Geomean log channel	Yes	100
167	377	201	296	201	172	11476			2SD	Median lof channel	No	97
169	MLC 27.16	34.11	59.51	23.91	37.17	1453						
	NR 73	92	133	97					NR= (MFI serum/MFI neg serum) x100	Mean log channel	No	80
									Pos= NR>150			
174	0.312	0.315	0.332	0.321	0.321	5.81			Ratio >1	X median (log)	No	>90
176	SI 0.24	0.05	0.24	-0.03	0	0.79			SI ≥0.5		No	
	MESF 1960	1315	2072	1084	1161	11073						
186	0.51	0.44	0.59	0.39	0.36	23.2			1.5 fold the local neg	MFI log channel	No	99
190	46.9	40.9	47.9	39.9	37.8	99.9			Ratio sample/neg >1.5	Median log channel	No	83
191	-0.03	3.67	4.04	3.14	0	156.9			MFI >+30	MFI	Yes	99
193	9.06	2.94	7.75	2.66	2.5	209.48			Neg control mean x2.5	Geometric mean linear channel	No	
194	0.7%	0.7%	2.3%	0.5%	0.3%	100%			>2.5%		No	90
195	251	225	252	224	219	472			Test/Neg control >1.25	Median log channel	Yes	
201	0.31	0.28	0.34	0.28	0.27	20.3			x-mean ≥2	x-mean	No	93
202	1.4	2.8	2.4	3.6	0.8	95.2			5% above the local neg control	Linear scale		
204	0.37	0.32	0.6	0.33	0.34	41.3			0.5 mean log channel (1.5x local neg)	Mena log channel	No	
209	1.9	1	1.8	0.9	NT	NT	NT	NT	>1.3 ratio	Geomean log channel	cell results subrr	95
218	674	719	558	384	396	1407			330 x1.2		No	
220	150.5	125	147	134	122		460	612	40 linear channel shift	Median linear channel	No	96
227	NT	NT	NT	NT	0.84	53.4			1.68 (2 x MLF)	MLF	No	80
235	5.64	2.71	3.62	3.34	3.82	349.12			±2SD	Median log channel	No	85
238	940	687	850	680	697	7811			MESF serum/MESF neg control		No	
245	3.3	0	2.3	0.3	4.7	13.5			7 linear channel shift	Mean linear channel	Yes	100
246	1.4%	1.3%	1.7%	0.5%	8.6%	56.9%			30%		No	97
252	1.15	1.18	1.08	1.08	201	478			XM median/Neg median	Median channel ratio	No	60
262					1193	46996			Ratio sample/Neg >2	Meidan log channel	No	75
									Lysis >12%		No	
268											No	
271	NT	158	254	148	153	388			67 log channel shift	Median log channel	No	72
283	0.414	0.214	0.4715	0.3815	1.246	51.084			3 channel shift	Channel shift	No	
284	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT

UK NEQAS FOR H&I SCHEME 2B - CROSSMATCHING BY FLOW CYTOMETRY

B-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B04/2015 (COMPARED TO LOCAL NEGATIVE CONTROL)

DESPATCHED ON 10TH MARCH 2015

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 (%)
112	0.26	0.413	0.28	0.299	0.501	5.12			Ratio > 2.0	Median log channel	No	95
114	488	567	505	506	478	608			538 (478+60)	Median linear channel		
115	429	527	472	432	415	688			>60 linear channel shifts	Median linear channel shifts	Yes	
116	2.95	6.24	3.23	2.78	3.58	38.7			Ratio > 1.7	Median log channel	No	
117	24.33	56.49	27.32	30.04	14.92	462.48			Ratio (RMF) > 1.5	Median log channel	Yes	
118	151	169	145	153	145	325			171 (145+26)	Median linear channel (MCI)	Yes	80
119	7.62	10.5	6.53	6.28	3.265	9.61			Ratio > 1.7 (B.line 1.5-1.7)	Mnlx	No	95
120	1.31	2.73	1.15	1.38	579	20990			Ratio > 2	Median (ratio)	No	100
122	66.5	118.5	59	66.5	37.5		353	121	3 SD	Geomean linear values	Yes	
126	428	498	474	489	421	742			>80 linear channel shifts	Median linear channel	No	
130	356	445	363	357	260	484			>80		No	
139	14.1	25.6	13.4	20.8	15.85	170			≥ 2 of neg mean log channel	Mean log channel	No	
142	1564	2347	1777	1637	1655.00	19322			2092.29 (3SD)	Median log channel	No	88
144	Ratio 1.77 MFI	2.53	1.83	1.63	1	4.21			Ratio 2.5	Ratio	No	
145	1.060	1.580	0.94	1.010	0.848	13.10			Med log ch test/med log ch neg > mean + 2 SD	Median log channel	No	83
147	297	378	270	275	220	692			>40 linear channel shift	Median linear channel		100
154	165	196	256	297	139	5622			Median > 150% control and shape of the curve	MFI	No	
157	170	193	190	164	175	498			210 (Neg+35)	Median linear channel	No	94
159	342	376	315	313	247	683			307 mean linear channel (40 channel shift)	Mean linear channel	No	90
160	418	348	233	297	101	861			>220 (Neg +2SD)	Mean linear channel	No	
163	1.4	2	1.2	1.2	1	1.7			1.7	Geomean log channel	Yes	100
167	2167	3227	1552	1625	1009	23900			2SD	Median log channel	No	97
174	0.409	0.444	0.377	0.371	0.363	31.2			Ratio >1.2	X median (log)	No	>90
176	SI 0.07	0.23	0.09	0.03	0	0.57			SI ≥0.3		No	
MESF 23482	34582	24616	21489	19871	73412							
186	1.57	4.76	2.45	2.69	2.43	29.6			2 fold the local neg	MFI log channel	No	99
190	110.3	198.7	101.1	121.7	56.5	490			Ratio sample/neg >2.5	Median log channel	No	83
191	-0.03	-11.8	-10.6	-3.5	0	355			MFI >+50	MFI	Yes	100
193	85.69	174.31	73.81	80.89	45.20	744.55			Neg control mean x2.5	Geometric mean linear channel	No	
194	16%	14%	10%	10%	4%	99%			>10%		No	90
195	429	467	368	398	315	4952			Test/Neg control >1.35	Median log channel	Yes	
201	2.11	2.52	1.74	1.59	1.54	49.3			x-means ≥2.5	x-mean	No	93
202	2.6	3.3	5.1	5.6	3.4	96.1			8% above the local neg control	Linear scale		
204	6.08	4.09	6.02	6.47	5.15	72.1			10.3 mean log channel (2x local neg)	Mean log channel	No	
209	1.7	3.5	1.4	1.6	1194	3179			>1.8 ratio	Geomean log channel	Yes	95
218	8888	5790	5948	5259	7316.8	2845			4304 x1.7		No	
220	259	333	257	259.5	246.5		562	698	40 linear channel shift	Median linear channel	No	96
227	NT	NT	NT	NT	15	94.4			30 (2 x MLF)	MLF	No	80
235	25.48	33.38	23.71	13.70	25.8	4332.30			±4SD	Median log channel	No	85
238	4460	3515	2767	3047	NT	NT	NT	NT	MESF serum/MESF neg control	No B cell results submitted		
245	5.7	25.7	2.7	6.7	26.3	44.5			15 linear channel shift	Mean linear channel	Yes	100
246	29.8%	94.3%	21.3%	26.2%	21.5%	91.3%			30%		No	97
252	1.30	1.62	1.35	1.35	203	547			XM median/Neg median	Median channel ratio	No	60
262	MLC 1.83 Lysis 26%	1.97 29%			2181	120284			Ratio sample/Neg >2 Lysis >12%	Median log channel	No	75
268											No	
271	NT	432	334	299	226	484			106 log channel shift	Median log channel	No	72
283	17.721	69.4735	-19.4665	-20.069	120.064	79.826			10 channel shift	Channel shift	No	
284	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT