

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

T-CELL AND B-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B04/2016 (COMPARED TO LOCAL NEGATIVE CONTROL)

DISPATCHED ON 15TH MARCH 2016

HLA PHENOTYPE OF BLOOD DONOR: HLA-A29, A68; B7, B44; Cw7, Cw16; DR7, DR11; DQ2, DQ7

Summary of Results											
	T-cells				B-cells						
Total tested	45	46	45	44	42	38	41	43			
Positive	0	0	1	44	0	8	3	43			
Negative	45	46	44	0	42	30	38	0			
NT/Equivocal	6	5	6	7	6	10	7	5			
% Positive	0.0%	0.0%	2.2%	100.0%	0.0%	21.1%	7.3%	100.0%			
% Negative	100.0%	100.0%	97.8%	0.0%	100.0%	78.9%	92.7%	0.0%			
Consensus	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive			
HLA Antibody Specificity (Defined By CDC)	A30, A31	A1	B15,B57	DR7, DQ2	A30, A31	A1	B15,B57	DR7, DQ2			
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	Positive	16-Mar	17-Mar	
112	Equivocal	Negative	Equivocal	Positive	Equivocal	Positive	Positive	Positive	18-Mar	18-Mar	
114	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	17-Mar	17-Mar	
115	Negative	Negative	Negative	Positive	Negative	Positive	Negative	Positive	17-Mar	17-Mar	
116	Negative	Negative	Negative	Positive	Negative	Positive	Negative	Positive	16-Mar	17-Mar	
117	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	17-Mar	17-Mar	
118	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	16-Mar	16-Mar	
119	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	16-Mar	17-Mar	
120	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	16-Mar	17-Mar	
122	Negative	Negative	Negative	Positive	Negative	Positive	Negative	Positive	16-Mar	17-Mar	
126	Negative	Negative	Negative	Positive	Negative	Positive	Positive	Positive	09-Mar	10-Mar	
130	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	16-Mar	17-Mar	
133	Negative	Negative	Negative	Positive	Negative	Negative	Negative	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	Positive	Negative	Negative	Negative	Positive	21-Mar	21-Mar	
142	Negative	Negative	Negative	Equivocal	Negative	Negative	Negative	Positive	18-Mar	21-Mar	
143	Negative	Negative	Negative	Equivocal					17-Mar	17-Mar	
144	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	16-Mar	16-Mar	
145	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	16-Mar	17-Mar	
147	Negative	Negative	Negative	Positive	Negative	Negative	Equivocal	Positive	17-Mar	17-Mar	
154	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	16-Mar	17-Mar	
157	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	16-Mar	17-Mar	
159	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	16-Mar	17-Mar	
160	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	16-Mar	17-Mar	
163	Negative	Negative	Negative	Positive	Negative	Positive	Negative	Positive	16-Mar	22-Mar	
167	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	16-Mar	17-Mar	
169	NT	NT	NT	NT	NT	NT	NT	NT	17-Mar		Technical problem
176	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	17-Mar	17-Mar	
186	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	16-Mar	16-Mar	
190	NT	NT	NT	NT	NT	NT	NT	NT	16-Mar		>40% cell death
191	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	16-Mar	17-Mar	
193	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	16-Mar	16-Mar	
194	Negative	Negative	Negative	Positive	Negative	Positive	Equivocal	Positive	16-Mar	16-Mar	
195											No results returned
201	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	16-Mar	17-Mar	
202	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	16-Mar	16-Mar	
204	Negative	Negative	Negative	Positive	Negative	Equivocal	Negative	Positive	16-Mar	16-Mar	
209	Negative	Negative	Negative	Positive	Negative	Equivocal	Negative	Positive	15-Mar	17-Mar	
218	Negative	Negative	Positive	Positive	Negative	Positive	Positive	Positive	22-Mar	23-Mar	
220	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	16-Mar	17-Mar	
227	NT	NT	NT	NT	NT	NT	NT	NT	16-Mar		Technical failure
235	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	16-Mar	16-Mar	
238	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	16-Mar	17-Mar	
245	Negative	Negative	Negative	Positive	Negative	Equivocal	Negative	Positive	16-Mar	17-Mar	
246	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	16-Mar	17-Mar	
252	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	17-Mar	17-Mar	
262	Negative	Negative	Negative	Positive	Negative	Equivocal	Negative	Positive	16-Mar	16-Mar	
271	NT	NT	NT	NT	NT	NT	NT	NT	31-Mar	31-Mar	Poor cell viability
284	Negative	Negative	Negative	Positive	Negative	Equivocal	Negative	Positive	16-Mar	16-Mar	
297	NT	NT	NT	NT	NT	NT	NT	NT			Poor cellularity
341	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive	16-Mar	17-Mar	

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

T-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B04/2016 (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	3						Ratio fluorescence mean sample/negative control	
112		0.481		4.9	0.388	1.56			ratio >1.5	Median log channel	100
114	269	242	227	463	230	319			280 (50 linear channel shift)	Median linear channel	
115	218	233	217	339	208	347			>40	Median linear channel shift	
116	0.29	0.23	0.18	1.86	0.2	18.95			ratio >1.7	Median log channel	
117	5.07	5.38	5.54	14.32	5.18	91.63				Median log channel	95
118	220	215	210	352	221	805			287 (221+66)	Median linear channel MCI	90
119	0.25	0.203	0.244	2.42	0.192	9.9			ratio: pos>1.289, B-line(1.289-1.45)	MnIX	95
120	1.08	1.12	1.02	2.61	86.5	9996			ratio >1.6	Median	100
122	13	12	11	86	10		170	49	3SD	Geomean linear values	98
126	204	205	199	337	182.5	707			>81 median channel shift	Median	90
130	194	178	168	335	167	313			>40	Mean channel shift	97
133	35	35	39	53	28	135			>x1.5 of NC	Median	
136	4.5	2.8	2.65	25	2.27	89			NR >200	Mean channel	98
138	0.02	0.05	0.07	0.32	0	0.95			>0.20	D value kolmogorov-smirnov statistic	
139	1.64	2.08	1.73	4.9	2.135	20.5			>1.5 of neg mean log channel	Mean log channel	70
142	126	148	140	219	168	5915			182 (168+3SD)	Median log channel	93
143	12	1	13		29	808			>40 linear channel shift	Geomean channel shift	92
144	1.26	1.28	1.32	3.68	1386/1	6.43			1.7	Median/Ratio	
145	0.315	0.336	0.351	1.23	0.296	55.5			2SD of the ratio	Median log channel	90
147	83	67	87	220	64	503			>40 linear channel shift	Linear channel	100
154	53	58	50	267	46	700			Median >150% control and shape of the curve	MFI	
157	129	128	136	222	125	557			140 (2SD)	Median linear channel	92
159	161	160	167	334	150	469			40 linear channel shift	MLC	100
160	15	12.5	15.3	129	9.4	601			>19.3 (neg+2SD)	Mean linear	
163	1.8	1.5	1	24	1	12.8			2.3 (ratio above)	Geomean linear channel	93
167	250	251	224	1314	207	17770			2SD	Median log channel	96
169	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
176	0.11	0.05	0.20	1.31	0.00	1.49			0.5	MFI shift	
186	0.441	0.445	0.437	2.570	0.436	4.71			1.5 fold the local negative control	MFI log channel	99
190	NT	NT	NT	NT	NT	NT	NT	NT	NT	Median log channel	59
191	1/2	1.9	1.2	108	0	213			>30	MFI	100
193	4.83	3.86	3.18	64.03	2.75	379.1			Neg control mean x2.5	Geometric mean linear channel	
194	0.4	0.3	0.1	5	<0.7	38			>0.7 (mean log)	X-median	99
195											
201	0.456	0.393	0.387	2.290	0.369	1.8			ratio (s/nc) ≥2.0	X-mean	95
202	1.2	1.8	0.6	7.4	0.7	99.8			5% above the local neg control	Linear scale	
204	0.31	0.31	0.31	3.42	0.31	35.7			0.47 = 1.5x loc neg control	Mean log channel	
209	1.3	1.2	1.3	8	221	988 (4.5)			1.6	Geometric mean log channel (ratio)	
218	110	143	175	582	130	894			130 x1.2 = 156	Geometric mean fluorescence intensity	
220	4248	4087.5	3913	38186	4118	193729			6000 above the neg control	Linear acquisition, Linea values	95
227	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
235	1.89	2.19	1.53	10.09	1.91	288.76			>2 of neg median log channel	Median log channel	85
238	1236	1098	1234	3341	966	39471			MESF serum/MESF neg control	MESF	
245	2	1	1.5	17	4.5	9.0			7 linear channel shift	Linear channel shift	100
246	2.0%	3.6%	3.0%	42.7%	2.1%	49.7%			30%	%	93
252	0.95	1	1.11	1.43	44	69			Median ratio +2SD		60
262	1528	1441	616	4002	1247	15975			ratio sample/neg >2, cell lysis >12%	Median channel log	82
				Ratio 2.8 Lysis 60%							
271	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	20
284	486	477	475	734	498		3282	571	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	4.77	4.69	4.72	16.84	4.59	20.03			3SD	Geomean linear values	96

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

Poor cell viability

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

B-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B04/2016 (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	2.5						Ratio fluorescence mean sample/negative control	
112		1.53	1.31	81	0.419	27.1			ratio >2	Median log channel	100
114	420	466	434	706	438	578			498 (60 linear channel shift)	Median linear channel	
115	289	403	319	703	297	683			>60	Median linear channel shift	
116	1.1	1.99	1.14	18.3	1.13	35.15			ratio >1.7	Median log channel	
117	9.59	11.45	12.99	107.44	13.26	323.55			ratio (RMF) >1.5	Median log channel	95
118	111.5	113	108.75	226	111.5	493.75			137 (111.5+25.5)	Median linear channel MCI	90
119	5.58	5.69	4.5	35.8	3.18	29.1			ratio: pos>1.7, B-line(1.5-1.7)	MnIX	95
120	1.25	1.59	1.33	15.01	317	22619			ratio >2	Median	100
122	68	119.5	84.5	1242	51.5		523	184	3SD	Geomean linear values	98
126	392	582	530	652	358	842			>110 median channel shift	Median	90
130	306	345	334	676	275	527			>80	Mean channel shift	97
133	38	50	50	237	26	195			>x2 of NC	Median	
139	7.24	11.8	6.95	93.5	8.11	113			>2 of neg mean log channel	Mean log channel	70
142	670	839	789	4091	843	19022			1302 (843+3SD)	Median log channel	93
144	1.36	2.14	1.95	16.83	3238/1	8.76			2.5	Median/Ratio	
145	0.42	0.879	0.84	12.3	0.754	51.7			2SD of the ratio	Median log channel	90
147	174	196	241	511	189	704			>60 linear channel shift	Linear channel	100
154	203	452	395	5178	259	3991			Median >200% control and shape of the curve	MFI	
157	134	156	190	413	325	662			360 (2SD)	Median linear channel	92
159	239	337	317	603	260	686			100 linear channel shift	MLC	100
160	45	105	91	1375	46	1300			>92 (neg+2SD)	Mean linear	
163	1.2	1.9	1.2	16.7	1	3.1			1.7 (ratio above)	Geomean linear channel	93
167	1347	1565	1324	12944	1381	43725			2SD	Median log channel	96
169	NT	NT	NT	NT	NT	TNT	NT	NT	NT	NT	NT
176	-0.28	0.15	0.09	1.62	0	1.17			0.22	MFI shift	
186	0.596	0.705	0.919	2.36	0.896	9.36			2 fold the local negative control	MFI log channel	99
190	NT	NT	NT	NT	NT	NT	NT	NT	NT	Median log channel	59
191	-54	31	23	282	0	438			>100	MFI	100
193	55.01	97.76	67.07	968.56	49.43	882.5			Neg control mean x2.5	Geometric mean linear channel	
194	0.2	2	1	20	<1	33			>1 (mean log)	X-median	99
195											
201	3.56	3.64	2.64	25.7	23.4	40.3			ratio (s/nc) ≥2.5	X-mean	95
202	3.2	5.8	3	36.1	3.6	100			8% above the local neg control	Linear scale	
204	1.11	2.47	1.39	32.7	1.18	36.7			2.35 = 2x loc neg control	Mean log channel	
209	0.99		1.6	24.9	997	2950 (3)			1.9	Geometric mean log channel (ratio)	
218	627	2297	1565	6072	761	2018			761 x1.7 = 1293.7	Geometric mean fluorescence intensity	
220	4490	7457	7273.5	261649	4650.25	232724			6000 above the neg control	Linear acquisition, Linea values	95
227	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
235	8.54	10.09	7.6	117.57	8.47	1229.83			>18 of neg median log channel	Median log channel	85
238	2277	4112	3365	29951	3154	56125			MESF serum/MESF neg control	MESF	
245	6	12.5	5	82	14	14			15 linear channel shift	Linear channel shift	100
246	21%	26.4%	16.5%	100%	17%	99.6%			30%	%	93
252	0.86	1.42	1.33	13.53	45	156			Median ratio +2SD		60
262	2579	4075	2170	28659	2609	73585			ratio sample/neg >2, cell lysis >12%	Median channel log	82
				Ratio 8.6 Lysis 12%							
271	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	20
284	463	557	469	1766	495		13327	600	Sample serum/neg control: ratio >1.2	Median log channel	
297	NT	NT	NT	NT	NT	NT	NT	NT	2x Tneg	MFI	NT
341	10.43	12.46	9.59	149.82	9.93	109.5			3SD	Geomean linear values	96