

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

T-CELL AND B-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B02/2016 (COMPARED TO LOCAL NEGATIVE CONTROL)

DISPATCHED ON 12TH JANUARY 2016

HLA PHENOTYPE OF BLOOD DONOR: HLA-A29, A31; B18, B44; Cw5, Cw16; DR1, DR17; DQ2, DQ5

Summary of Results												
T-cells					B-cells							
Total tested	49	49	46	48	46	44	46	43				
Positive	49	0	46	43	46	3	45	35				
Negative	0	49	0	5	0	41	1	8				
NT/Equivocal	2	2	5	3	2	4	2	5				
% Positive	100.0%	0.0%	100.0%	89.6%	100.0%	6.8%	97.8%	81.4%				
% Negative	0.0%	100.0%	0.0%	10.4%	0.0%	93.2%	2.2%	18.6%				
Consensus	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive				
HLA Antibody Specificity (Defined By CDC)	B12	B12	DR7, DQ2	Cw5, DR4	B12	B12	DR7, DQ2	Cw5, DR4				
Lab No.	Serum 1	Serum 2	Serum 3	Serum 4	Serum 1	Serum 2	Serum 3	Serum 4	Date Received	Date Tested	Comments	
101	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Negative	13-Jan	14-Jan		
112	NT	NT	NT	NT	NT	NT	NT	NT	18-Jan	19-Jan		
114	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	13-Jan	14-Jan		
115	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	13-Jan	14-Jan		
116	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	13-Jan	14-Jan		
117	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	14-Jan	15-Jan		
118	Positive	Negative	Positive	Positive	Positive	Negative	Negative	Negative	13-Jan	13-Jan		
119	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	12-Jan	13-Jan		
120	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	13-Jan	14-Jan		
122	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	14-Jan	15-Jan		
126	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	13-Jan	14-Jan		
130	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	13-Jan	14-Jan		
136	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	13-Jan	13-Jan		
138	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	13-Jan	13-Jan		
139	Positive	Negative	Positive	Positive	Positive	Positive	Positive	Positive	15-Jan	15-Jan		
142	Positive	Negative	Equivocal	Positive	Positive	Negative	Positive	Equivocal	13-Jan	14-Jan		
143	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	14-Jan	14-Jan		
144	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	13-Jan	13-Jan		
145	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	13-Jan	18-Jan		
147	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	13-Jan	14-Jan		
154	Positive	Negative	Positive	Positive	Positive	Positive	Positive	Positive	14-Jan	14-Jan		
157	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Negative	13-Jan	14-Jan		
159	Positive	Negative	Positive	Positive	Positive	Equivocal	Positive	Positive	13-Jan	14-Jan		
160	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	13-Jan	14-Jan		
163	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	14-Jan	15-Jan		
167	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	15-Jan	18-Jan		
169	Positive	Negative	Equivocal	Positive	Positive	Negative	Positive	Positive	13-Jan	13-Jan		
176	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	13-Jan	14-Jan		
186	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	12-Jan	13-Jan		
190	Positive	Negative	Positive	Equivocal	Positive	Negative	Positive	Equivocal	13-Jan	14-Jan		
191	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative	13-Jan	13-Jan		
193	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	13-Jan	13-Jan		
194	Positive	Negative	Positive	Positive	Positive	Equivocal	Positive	Positive	13-Jan	13-Jan		
195	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	15-Jan	15-Jan		
201	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	13-Jan	14-Jan		
202	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative	13-Jan	13-Jan		
204	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	13-Jan	13-Jan		
209	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	13-Jan	14-Jan		
218	Positive	Negative	Positive	Positive	Positive	Positive	Positive	Positive	14-Jan	15-Jan	B cell results were difficult to interpret	
220	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	13-Jan	14-Jan		
227	NT	NT	NT	NT	NT	NT	NT	NT	13-Jan	13-Jan	Technical failure	
235	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	14-Jan	14-Jan		
238	Positive	Negative	Equivocal	Negative	Positive	Negative	Positive	Negative	13-Jan	14-Jan	Serum 3: anti A29 weakly positive on T cells and positive on B cells	
245	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative	13-Jan	14-Jan		
246	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative	13-Jan	13-Jan		
252	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	14-Jan	14-Jan		
262	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	13-Jan	14-Jan		
271	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	14-Jan	14-Jan		
284	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	13-Jan	13-Jan		
297	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	13-Jan	14-Jan		
341	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Equivocal	13-Jan	14-Jan		

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T-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B02/2016 (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 (%)
101											
112											
114	525	212	434	390	210	305			260	Median channel	
115	511	210	431	425	224	333			>40	Median linear channel shifts	
116	4.06	0.27	1.97	1.64	0.19	21.3			Ratio >1.7	Median log channel	
117	33.4	5.17	12.82	16.04	5.35	28.05			Ratio (RMF) >1.3	Median log channel	95
118	379	184	315	360	191	660			257 (191 + 66)	Median linear channel MCI	90
119	4.16	0.29	1.77	2.24	0.216	6.76			Ratio: Pos >1.289, B-line (1.289 - 1.45)	Mnlx	97
120	3.97	1.02	1.99	3.57	878	5365			Ratio >1.6	Median	100
122	120.5	10.5	58.5	78.5	10.5		45	17	3SD	Geo mean linear value	98
126	606	286	520	498	267	639			>55 linear channel shift	Median	90
130	391	160	293	365	156	219			>40	Mean channel shift	97
136	59	3	22	19	2.97	138			NR >200	Mean channel	99
138	0.59	0.06	0.3	0.53	0	0.99			> 0.20	D value kolmogorov-smirnov statistic	
139	3.39	0.261	1.4	2.1	0.224	8.25			≥1.5 of neg median log channel	Median log channel	
142	987	204	363	512	215	6673			245 (215 + 3SD)	Median log channel	95.6
143	343	-9	387	220	39	426			>40	GeoMean channel shift	92
144	5.2	1.1	2.5	3.3	1400	3.7			1.7	Median/ratio	
145	2.68	0.522	0.875	1.47	0.44	60.2			2SD of the ratio	Median log channel	90
147	345	134.5	272	281.5	126.5	446			>40 linear channel shift	Linear channel	100
154	215	53	155	298	298	997			Median >150% control and shape of curve	MFI	
157	229	154	224	217	146	507			161	Median linear channel	95
159	423	185	361	372	164	410			40 mean linear channel shift (204 MLC)	MLC	80
160	139	8.7	67.4	64.2	8	107			18.0 (Negative + 2SD)	Mean linear	
163	42	1.5	22.2	6.7	1	6.4			2.3 (ratio above)	GeoMean linear channel	100
167	2675	237	1449	939	226	11363			2SD	Median log channel	82
169	106.73	19.15	Equivocal	109.5	43.2	827.4			NR>180	Mean log channel	80
	NR 247	42	Equivocal	253		1915					
176	1.35	0.03	1.01	0.7	0 (by definition)	0.26			0.5	MFI shift	N.D.
186	6.83	0.59	2.96	2.67	0.53	19.6			1.5x local neg control	MFI	95
190	285	41.8	125	80	41.3	161			Ratio sample/negative >1.5	Median log channel	68
191	207	5	123	23	0 (used distinctive value)	198			>30	MFI	100
193	170.06	3.89	69.68	83.89	258	307.43			Negative control mean x 2.5	Geometric mean linear channel	
194	8	0.2	1.9	5.7	<0.7	14			>0.7 (Median log)	Median log	100
195	514	254	376	346	237	2014			Test/negative control >1.25	Median log channel	90
201	1.82	0.362	1.05	1.59	0.369	11.2			Ratio (S/NC) ≥2.0	X-Mean	97
202	10	0.9	8.4	2.6	0.2	99.7			5% above the local negative control	Linear scale	
204	9.28	0.31	3.77	2.28	0.33	9.79			0.5 = 1.5 x local neg control	Mean log channel	
209	9.5	1.2	4.6	3.5	448	928 (2.1)			1.6	Geometric mean log channel (ratio)	90
218	252	47.2	149	187	56.7	351			56.7 x x1.2 = 68.04	Geometric MFI	
220	32513.5	2634.5	26124.5	13413	2428.5	152174			8000 above the negative control	Linear acquisition, linear values	92
227	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
235	18.77	2.92	32.2	5.62	1.43	82.79			>2 of neg median log channel	Median log channel	85
238	1583	1012	1430	1393	948	2224			MESF serum/MESF negative control	MESF	
245	32	1.5	14.5	2	5	11			7 linear channel shift	Linear channel shift and mean linear channel	100
246	82	0.7	48.4	22.9	1.4	36.8			30	%	95.2
252	193	93	125	157	83	319			Median + 2SD ratio		60-70
262	3.3 (88%)		2.1 (50%)	2 (52%)	932	12645			R >2 Neg control and lysis >12%	Median log channel	82
271	498	162	427	346	132	312			64	Median log channel	92
284	781	417	673	625	439		2402	493	Sample serum/negative control: ratio >1.2	Median log channel	
297	800	84	390	337	64	1412			Ratio ≥1.5 x NC MFI	Median MFI	
341	33.03	4.32	11.6	12.56	4.49	34.27			3SD	GeoMean linear values	97

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B-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B02/2016 (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 (%)
101											
112											
114	685	340	607	514	429	589			489	Median Channel	
115	676	361	622	524	377	487			>60	Median linear channel shifts	
116	12.9	0.77	8.38	3.07	0.63	26.1			Ratio >1.7	Median log channel	
117	116.14	11.55	63.45	34.76	11.83	141			Ratio (RMF) >1.5	Median log channel	95
118	277.5	246	258.5	251		431.25			263.5 (238 + 25.5)	Median linear channel MCI	90
119	31.8	8.18	22.6	12	3.04	3.94			Ratio: Pos >1.7, B-line (1.5 - 1.7)	Mnlx	97
120	5.85	0.9	3.77	2.21	368.5	8291.5			Ratio >2	Median	100
122	661	95.5	577	193.5	56.5	209	81		3SD	Geo mean linear values	98
126	766	388	699	610	345	770			>80 linear channel shift	Median	90
130	575	312	533	436	265	415			>80	Mean channel shift	97
139	31.8	3.77	21.6	11.1	1.755	17.4			≥2 of neg median log channel	Median log channel	
142	2610	401	1737	990	529	21919			744 (529 + 3SD)	Median log channel	95.6
144	10	1.6	6.7	3.2	3603	4.7			2.5	Median/ratio	
145	5.71	0.775	4.5	3.15	1.13	10			2SD of the ratio	Median log channel	90
147	551.5	278	482.5	412	219	650			>60 linear channel shift	Linear channel	100
154	863	351	967	782	70	5116			Median >150% control and shape of curve	MFI	
157	396	190	405	235	338	573			373	Median linear channel	95
159	589	356	597	474	243	615			100 mean linear channel shift (343 MLC)	MLC	80
160	894	106	504	261	69.2	571			147 (Negative + 2SD)	Mean linear	
163	18	1.3	8.9	3.9	1	3.4			1.7 (ratio above)	GeoMean linear channel	100
167	8311	703	5783	2292	851	32145			2SD of the ratio	Median log channel	82
169	282.39	81.58	415.32	205.29	92.6	1254.43			NR>200	Mean log channel	80
	NR 305	88	449	222		1355					
176	1.25	0.05	0.96	0.45	0 (by definition)	0.93			0.22	MFI shift	N.D.
186	11	1.46	6.41	3.44	1.34	41.6			2x local neg control	MFI	95
190	720	105	496	181	93.7	711			Ratio sample/negative >2.5	Median log channel	68
191	229	69	220	-26	0 (used distinctive value)	371			>100	MFI	100
193	661.66	80.16	433.22	249.32	70.24	628.62			Negative control mean x 2.5	Geometric mean linear channel	
194	8	1	4	3	<1	32			>1 (Median log)	Median log	100
195	1871	399	1550	610	322	7134			Test/negative control >1.35	Median log channel	90
201	11.4	4.15	9.71	5.93	2.14	30			Ratio (S/NC) ≥2.5	X-Mean	97
202	58.6	3.3	46.3	6.5	1.1	100			8% above the local negative control	Linear scale	
204	24.9	1.42	10.5	5.08	0.94	35.1			1.88 = 2 x local neg control	Mean log channel	
209	11.9	1.2	7.9	3.6	1149	2414 (2.1)			1.9	Geometric mean log channel (ratio)	90
218	2122	433	2437	1605	247	1612			247 x 1.7 = 419.9	Geometric MFI	
220	73673	3375	68082	20693	2227.5	262143			8000 above the negative control	Linear acquisition, linear values	92
227	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
235	144.6	10.94	74.99	97.34	8.06	1321.58			>18 of neg median log channel	Median log channel	85
238	3573	1771	3580	2212	1313	11074			MESF serum/MESF negative control	MESF	
245	90.2	-0.8	37.2	5.7	8.3	21.5			15 linear channel shift	Linear channel shift and mean linear channel	100
246	99.7	22.5	95.3	28.6	16.7	99.4			30	%	95.2
252	637	100	422	235	69	302			Median + 2SD		60-70
262	6.8 (84%)		4.8 (64%)	2.5 (23%)	1495	31598			R >2 Neg control and lysis >12%	Median log channel	82
271	609	216	530	421	171	506			90	Median log channel	92
284	1136	390	1120	585	400		7121	513	Sample serum/negative control: ratio >1.2	Median log channel	
297	6402	121	4623	3955	1251	9344			Ratio ≥1.5 x NC MFI	Median MFI	
341	121.75	11.2	65.2	19.77	11.7	195.97			3SD	GeoMean linear values	97