

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

T-CELL AND B-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B07/2016 (COMPARED TO LOCAL NEGATIVE CONTROL)

DISPATCHED ON 12TH JULY 2016

HLA PHENOTYPE OF BLOOD DONOR: HLA-A1, A2; B8, B44; Cw5, Cw7; DR7, DR17; DQ2, -

	Summary of Results							
	T-cells				B-cells			
Total tested	50	50	46	49	44	47	41	44
Positive	47	47	23	13	36	47	24	12
Negative	3	3	23	36	8	0	17	32
NT/Equivocal	3	3	7	4	6	3	9	6
% Positive	94.0%	94.0%	50.0%	26.5%	81.8%	100.0%	58.5%	27.3%
% Negative	6.0%	6.0%	50.0%	73.5%	18.2%	0.0%	41.5%	72.7%
Consensus	Positive	Positive	Not Assessed	Not Assessed	Positive	Positive	Not Assessed	Not Assessed
HLA Antibody Specificity (Defined By CDC)	Cw5, DR4	B12	A1	B7,B27,B42,Cw1	Cw5, DR4	B12	A1	B7,B27,B42,Cw1

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	Positive	Positive	Positive	Negative	Negative	Positive	Negative	Negative	13-Jul	15-Jul	
112	Positive	Positive	Equivocal	Negative	Positive	Positive	Equivocal	Negative	15-Jul	15-Jul	
114	Positive	Positive	Positive	Negative	Positive	Positive	Positive	Negative	13-Jul	14-Jul	
115	Positive	Positive	Negative	Positive	Positive	Positive	Negative	Positive	13-Jul	14-Jul	
116	Positive	Positive	Positive	Negative	Positive	Positive	Positive	Negative	13-Jul	14-Jul	
117	Positive	Positive	Equivocal	Negative	Positive	Positive	Positive	Negative	14-Jul	14-Jul	
118	NT	NT	NT	NT	NT	NT	NT	NT	14-Jul	14-Jul	Delivery delay
119	Positive	Positive	Negative	Negative	Positive	Positive	Negative	Negative	11-Jul	12-Jul	
120	Positive	Positive	Negative	Negative	Positive	Positive	Negative	Negative	13-Jul	13-Jul	
122	Positive	Positive	Positive	Negative	Positive	Positive	Positive	Negative	13-Jul	14-Jul	
126	Positive	Positive	Positive	Negative	Positive	Positive	Positive	Positive	13-Jul	14-Jul	
130	Positive	Positive	Positive	Negative	Positive	Positive	Positive	Negative	13-Jul	14-Jul	
133	Negative	Negative	Negative	Negative	Negative	Positive	Negative	Negative	14-Jul	15-Jul	
136	Positive	Positive	Negative	Negative					14-Jul	15-Jul	
138	Positive	Positive	Negative	Negative					14-Jul	14-Jul	
139	Positive	Positive	Equivocal	Negative	Negative	Positive	Negative	Negative	15-Jul	15-Jul	
142	Positive	Positive	Positive	Negative	Positive	Positive	Equivocal	Negative	13-Jul	14-Jul	
143	Positive	Positive	Negative	Negative					15-Jul	16-Jul	
144	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Negative	13-Jul	14-Jul	
145	Positive	Positive	Negative	Negative	Positive	Positive	Negative	Negative	13-Jul	14-Jul	
147	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive	13-Jul	15-Jul	
154	Positive	Positive	Positive	Negative	Positive	Positive	Positive	Negative	12-Jul	12-Jul	
157	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Negative	13-Jul	14-Jul	
159	Positive	Positive	Positive	Equivocal	Positive	Positive	Positive	Equivocal	13-Jul	15-Jul	
160	Positive	Positive	Negative	Negative	Positive	Positive	Negative	Negative	13-Jul	14-Jul	
163	Positive	Positive	Positive	Negative	Positive	Positive	Positive	Negative	13-Jul	13-Jul	
167	Positive	Positive	Positive	Positive	Equivocal	Positive	Equivocal	Positive	13-Jul	14-Jul	
169	Positive	Positive	Negative	Negative	Positive	Positive	Positive	Negative	13-Jul	14-Jul	
176	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive	13-Jul	14-Jul	
186	Positive	Positive	Positive	Negative	Positive	Positive	Positive	Negative	13-Jul	13-Jul	
190	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive	13-Jul	13-Jul	
191	Positive	Positive	Negative	Negative	Positive	Positive	Negative	Negative	15-Jul	18-Jul	
193	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive	13-Jul	13-Jul	
194	Positive	Positive	Positive	Negative	Positive	Positive	Equivocal	Equivocal	13-Jul	13-Jul	
195	Positive	Positive	Equivocal	Positive	Positive	Positive	Equivocal	Positive	15-Jul	15-Jul	
201	Positive	Positive	Negative	Negative	Positive	Positive	Positive	Negative	13-Jul	14-Jul	
202	Negative	Negative	Negative	Negative	Negative	Positive	Negative	Negative	13-Jul	13-Jul	
204	Positive	Positive	Positive	Negative	Positive	Positive	Positive	Negative	13-Jul	13-Jul	
209	Positive	Positive	Positive	Positive	Equivocal	Positive	Equivocal	Positive	13-Jul	15-Jul	
218	Positive	Positive	Negative	Negative	Negative	Positive	Positive	Negative	15-Jul	21-Jul	
220	Positive	Positive	Positive	Negative	Positive	Positive	Positive	Negative	14-Jul	15-Jul	
227	NT	NT	NT	NT	NT	NT	NT	NT			No results returned
235	Positive	Positive	Negative	Negative	Positive	Positive	Negative	Negative	13-Jul	13-Jul	
238	Positive	Positive	Negative	Equivocal	Positive	Positive	Equivocal	Equivocal	13-Jul	15-Jul	
245	Positive	Positive	Equivocal	Negative	Equivocal	Positive	Positive	Negative	13-Jul	13-Jul	
246	Positive	Positive	Negative	Positive	Negative	Positive	Negative	Positive	14-Jul	15-Jul	
252	Positive	Negative	Negative	Negative	Positive	Positive	Negative	Negative	13-Jul	15-Jul	
262	Positive	Positive	Negative	Negative	Positive	Positive	Positive	Equivocal	13-Jul	13-Jul	
271	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive	17-Jul	17-Jul	
284	Positive	Positive	Negative	Negative	Positive	Positive	Negative	Negative	13-Jul	13-Jul	
297	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive	13-Jul	13-Jul	
341	Positive	Positive	Negative	Negative	Negative	Positive	Negative	Negative	13-Jul	14-Jul	
351	NT	NT	Negative	Negative	NT	NT	Negative	Negative	17-Jul	18-Jul	Technical error

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T-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B07/2016 (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	0.71	1.74	0.52	0.22	0.33	4.89				MFI	75
112	1.21	1.19		0.452	0.42	2.63			Ratio >1.5	Median log channel	95
114	397	524	348	224	206	394			256 (50 linear channel)	Median linear channel	
115	427	472	302	428	267	317			>40	Median linear channel shifts	
116	1.53	3.88	0.77	0.16	0.17	36.05			Ratio >1.7	Median log channel	
117	14.32	34.8		4.73	4.63	77.21			Ratio >1.3	Median log channel	
118	NT	NT	NT	NT	NT	NT	NT	NT	NT	Median linear channel	NT
119	1.55	2.94	0.40	1.37	0.228	11.6			Ratio: Pos >1.289 (B-line 1.289-1.45)	MnIX	97
120	3.47	4.76	1.58	1.05	68.5	4413			Ratio >1.6	Median	100
122	84.5	193	23.5	14.5	12.5		74	21	3SD	Geomean linear values	95
126	408	526	326	400	196	667			>80 channel shift	Median linear channel	90
130	353	436	197	171	140	280			>40	Mean channel shift	100
133	72	65	52	45	56	1230			>x1.5 of NC	Median	96
136	7.8	26.9	2.1	1.3	1.3	18 NR= 1385			NR >200	Mean channel	100
138	0.37	0.47	0.11	0.07	0	0.92			>0.2	D value kolmogorov-smirnov statistic	
139	3.33	6.89	1.21	0.55	1.2	10.8			>1.5 of neg mean log channel	Mean log channel	80
142	431	522	284	139	126	7085			148 (126+3SD)	Median log channel	99
143	63	154	23	16	17	65			>40 linear channel shift	Geomean channel shift	90
144	4	7.1	2.3	2.2	1144	9.89			1.7	Ratio	
145	0.55	0.531	0.296	0.230	0.293	1.92			2SD of the ratio	Median log channel	87
147	320	430	197	328	116	556			>40 linear channel shift	Linear channel	100
154	291	465	127	47	46	978			Median >150% control x shape of the curve	MFI	
157	118	147	112	120	110	451			132	Median linear channel	97
159	355	447	2746	214	162	466			202 MLC (40 linear channel shift)	Mean linear channel	
160	53.4	81.7	12.6	8.7	6.5	156			>15.6 (Neg+2SD)	Mean linear	
163	11.9	57.2	7.4	1.1	1	12.6			2.3 (ratio above)	Geomean linear channel	97
167	945	2306	419	651	222	15782			2SD		93
169	435	496	322	261	289	600			≥50 channel	Median channel	98
176	0.81	1.33	0.51	0.92	0	1.45			0.5	MFI Shift	100
186	2.97	5.19	1.37	0.468	0.460	27.1			1.5x the local NC	Mean fluorescence intensity - log channel	99
190	346.33	677.33	140.7	230.3	62.5	567			Ratio sample/Neg >1.5	Median log channel	95
191	124	106	10	18	0	380			>30	MFI	90
193	57.86	110.44	21.19	51.52	5.5	180.77			NC mean x2.4	Geometric mean linear channel	
194	7.4	11.6	2	0.413	18.4	1115			Ratio sample/Neg >1.2	Median log channel	100
195	244	413	152	196	118	1115			Test/NC ≥1.3	Median log channel	95
201	1.36	1.65	0.566	0.434	0.398	19.7			S/NK ≥2	x-mean	95
202	0.3	0.7	0.4	0.2	0.2	98.6			5% above the local neg control	Linear scale	
204	2.3	7.34	0.90	0.32	0.33	11.6			0.49=1.5x loc neg control	Mean log channel	
209	4.1	11	2.1	6.2	228	565 (2.5)			1.6	Geometric mean log channel (ratio)	
218	202	428	130	86.5	132	576			132x1.2=158.4	Geometric mean fluorescence intensity	20
220	11958.5	63050	17717	5770	3612	153015			6000 above the mean of the NC	Linear acquisition, Linear values	97
227											
235	7.77	14.2	2.37	2.19	2.31	94.75			>2 of Neg median log channel	Median log channel	85
238	1483	1517	974	1371	697	8392			MESF serum/MESF neg control	MESF	
245	9	30.5	6	0	2	12			7 linear channel shift	Linear channel shift	100
246	2.4	9.5	1.1	3.5	3.2	3.2			1.75 med log fl ratio	Median log fl	96
252	1.134	1.027	0.632	0.368	112.57	4293.51			Median ratio +2SD		70
262	Ratio 1.8	3.2			1184	21260			Ratio sample/neg >2		
	Lysis 30%	87%							Lysis >12%	Median channel log	98
271	335	453	283	397	153	395			64	Median log channel	93
284	299	416	214	191	200		2534	245	Sample serum/NC >1.2	Median log channel	
297	498	562	130	147	41.5	2265			1.5x Tneg	Median MFI	
341	8.37	15.61	4.67	4.01	4.12	25.44			3SD	Geomean linear values	97
351	NT	NT	805	650	669	3657			500+neg results	Fluorescence intensity	80

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B-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B07/2016 (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	4.28	11.75	3.87	1.61	EQ	13.15				MFI	75
112	1.33	4.6		0.432	0.388	8.25			Ratio >2	Median log channel	95
114	495	731	525	436	433	590			493 (60 linear channel)	Median linear channel	
115	507	706	492	558	427	702			>60	Median linear channel shifts	
116	2.23	1615	2.59	0.90	0.95	34.8			Ratio >1.7	Median log channel	
117	35.22	169	19.92	14.47	10.21	325.29			Ratio >1.5	Median log channel	
118	NT	NT	NT	NT	NT	NT	NT	NT	NT	Median linear channel	NT
119	11.8	31.1	9.79	12.3	2.56	17.9			Ratio: Pos >1.7 (B-line 1.5-1.7)	MnIX	97
120	2.2	7.49	1.67	1.33	373.5	8088			Ratio >2	Median	100
122	312	1487	363.5	156	116		650	214	3SD	Geomean linear values	95
126	588	700	595	571	350	817			>160 channel shift	Median linear channel	90
130	594	747	644	320	254	726			>80	Mean channel shift	100
133	74	367	67	40	40	2329			>x2 of NC	Median	96
139	9.44	52.6	7.9	4.09	11.4	59.2			>2 of neg mean log channel	Mean log channel	80
142	1723	3803	1221	831	962	21277			1119 (962+3SD)	Median log channel	99
144	3.1	11.7	2.7	2.3	3555	8.32			2.5	Ratio	
145	1.6	3.3	0.825	0.402	0.782	4.48			2SD of the ratio	Median log channel	87
147	401	610	383.5	399.5	283	699			>60 linear channel shift	Linear channel	100
154	764	3500	640	283	207	2013			Median >200% control x shape of the curve	MFI	
157	143	356	143	154	287	561			346	Median linear channel	97
159	449	660	438	364	265	673			365 MLC (100 linear channel shift)	Mean linear channel	
160	133	775	66	89	37.1	424			>92 (Neg+2SD)	Mean linear	
163	2.1	11.6	2.3	1.1	1	2.8			1.7 (ratio above)	Geomean linear channel	97
167	2157	8924	2031	2514	1273	40122			2SD		93
169	563	728	482	389	377	709			≥80 channel	Median channel	98
176	0.36	1.17	0.36	0.41	0	0.82			0.23	MFI Shift	100
186	4.33	13.6	3.07	1.34	1.61	32.8			2x the local NC	Mean fluorescence intensity - log channel	99
190	608	780.3	572.3	627.7	144	816			Ratio sample/Neg >2.5	Median log channel	95
191	178	194	84	90	0	906			>100	MFI	90
193	164.03	877.53	136.28	171.40	49.54	629.88			NC mean x1.9	Geometric mean linear channel	
194	3.3	11.9	1.9	3.71	43.04				Ratio sample/Neg >4	Median log channel	100
195	436	1755	295	338	194	3343			Test/NC ≥1.6	Median log channel	95
201	5.77	2.22	3.85	2.97	2.17	50.8			S/NK ≥2.5	x-mean	95
202	4	58.6	6.9	3.9	1.1	100			8% above the local neg control	Linear scale	
204	5.36	35.4	5.55	1.97	1.98	47.2			3.95=2x loc neg control	Mean log channel	
209		7.9		2.7	1786	4196 (2.3)			1.9	Geometric mean log channel (ratio)	
218	574	4002	927	343	513	1461			513x1.7=872.1	Geometric mean fluorescence intensity	20
220	10730	167687	23171.5	4140.5	2785.25	224357			6000 above the mean of the NC	Linear acquisition, Linear values	97
227											
235	27.87	51.4	23.08	6.26	6.1	697.83			>18 of Neg median log channel	Median log channel	85
238	3150	6202	2607	2542	1245	17570			MESF serum/MESF neg control	MESF	
245	11.5	105	18	2	10	84.5			15 linear channel shift	Linear channel shift	100
246	1.4	9.9	1.1	4.8	8.4				2.5 med log fl ratio	Median log fl	96
252	2.267	4.869	1.218	0.547	116.52	3554.52			Median ratio +2SD		70
262	Ratio 2.1	8.3	2	1.5	2108	84324			Ratio sample/neg >2		
	Lysis 33%	86%	25%	17%					Lysis >12%	Median channel log	98
271	413	585	410	508	234	561			90	Median log channel	93
284	338	1011	256	174	227		8928	291	Sample serum/NC >1.2	Median log channel	
297	1151	4531	637	557	254.5	14659			2x Tneg	Median MFI	
341	14.84	69.47	15.33	8.39	10.68	129.52			3SD	Geomean linear values	97
351	NT	NT	563	465	590	11260			2500+neg results	Fluorescence intensity	80