

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

T-CELL AND B-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B05/2017 OS (COMPARED TO LOCAL NEGATIVE CONTROL)

DISPATCHED ON 9th May 2017

HLA PHENOTYPE OF BLOOD DONOR: HLA-A1, A3; B8, B35; Cw4, Cw7; DR1, DR17; DQ2, DQ5

	T-cells				B-cells			
	Not Assessed	Negative	Not Assessed	Negative	Positive	Positive	Not Assessed	Negative
Total tested	49	52	51	52	43	43	39	44
Positive	26	1	24	1	35	37	15	5
Negative	23	51	27	51	8	6	24	39
NT/Equivocal	12	9	10	9	14	14	18	13
% Positive	53.1%	1.9%	47.1%	1.9%	81.4%	86.0%	38.5%	11.4%
% Negative	46.9%	98.1%	52.9%	98.1%	18.6%	14.0%	61.5%	88.6%
Consensus	Not Assessed	Negative	Not Assessed	Negative	Positive	Positive	Not Assessed	Negative
HLA Antibody Specificity (Defined By CDC)	B44	DR4, DR9	A2	B7	B44	DR4, DR9	A2	B7

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	Negative	Positive	Negative	Equivocal	Equivocal	Equivocal	Equivocal	10-May	11-May	Less than 1% CD19 positive cells (0.4-0.7%). For each serum, we analysed less than 500 B-cells. We prefer not to give an interpretation.
112	NT	NT	NT	NT	NT	NT	NT	NT	12-May	12-May	Unable to test this sample, very low lymphocyte count
114	Positive	Negative	Negative	Negative	Positive	Negative	Negative	Negative	10-May	11-May	
115	Negative	Negative	Equivocal	Negative	Negative	Positive	Equivocal	Negative	11-May	12-May	Serum 3: Low lymphocyte count
117	NT	NT	NT	NT	NT	NT	NT	NT	11-May	NT	The samples were not tested as the number of cells was too low
118	Negative	Negative	Negative	Negative					10-May	10-May	Very low lymphocyte count
119	NT	NT	NT	NT	NT	NT	NT	NT	09-May	10-May	Little number of cells to perform test
120	Positive	Negative	Negative	Negative	Positive	Positive	Negative	Negative	10-May	11-May	
122	Positive	Negative	Positive	Negative	Positive	Positive	Negative	Positive	10-May	12-May	
126	Positive	Negative	Positive	Negative	Positive	Positive	Positive	Negative	10-May	11-May	
130	Positive	Negative	Positive	Negative	Positive	Positive	Positive	Negative	11-May	12-May	
133	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	11-May	12-May	
136	NT	NT	NT	NT					16-May	16-May	Low cell viability
138	Negative	Negative	Negative	Negative					10-May	10-May	
139	Positive	Negative	Positive	Negative	NT	NT	NT	NT	11-May	12-May	Low B cell count
142	Negative	Negative	Negative	Negative	Negative	Positive	Negative	Negative	10-May	12-May	
143	Positive	Negative	Positive	Negative	Positive	Positive	Negative	Negative	12-May	12-May	
144	Positive	Negative	Positive	Negative	Positive	Positive	Positive	Negative	10-May	11-May	
145	Negative	Negative	Positive	Negative	Positive	Positive	Positive	Negative	11-May	11-May	
147	Positive	Negative	Positive	Negative	Positive	Positive	Equivocal	Negative	10-May	11-May	Serum 2B05 03 shows positive reaction on T cells but being negative on B cells, the result is given as equivocal (please note that the number of counted B cells was very low)
149	Negative	Negative	Positive	Negative	Positive	Positive	Equivocal	Equivocal	10-May	11-May	Very few B cells
154	Positive	Negative	Positive	Negative	Positive	Positive	Positive	Equivocal	11-May	11-May	Equivocal because at the level of cut off value
157	Equivocal	Negative	Negative	Negative	Equivocal	Positive	Negative	Negative	10-May	10-May	Low cell count
159	Equivocal	Negative	Negative	Negative	Positive	Positive	Positive	Negative	10-May	11-May	Equivocal because value is near positive threshold
160	Negative	Negative	Negative	Negative	Positive	Negative	Negative	Negative	10-May	11-May	
163	Positive	Negative	Positive	Negative	Positive	Positive	Positive	Negative	10-May	11-May	
167	Positive	Negative	Positive	Negative	Positive	Positive	Negative	Negative	10-May	11-May	
169	Negative	Negative	Negative	Negative	Negative	Equivocal	Negative	Negative	10-May	11-May	
176	Positive	Negative	Positive	Negative	Positive	Positive	Positive	Negative	10-May	11-May	
185	Positive	Negative	Negative	Negative	Positive	Equivocal	Negative	Negative	11-May	11-May	Method in validation
186	Positive	Negative	Positive	Negative	Positive	Positive	Negative	Negative	15-May	15-May	
190	Positive	Equivocal	Positive	Negative	NT	NT	NT	NT	10-May	11-May	Not enough cells
191	Negative	Negative	Negative	Negative	Positive	Positive	Negative	Positive	11-May	11-May	Low viability, ratio of B cells about 2.8-3%. Therefore, our last two results were in grey area
193	Positive	Negative	Positive	Negative	Positive	Positive	Equivocal	Negative	10-May	10-May	Insufficient materials for duplicate testing
194	Equivocal	Negative	Negative	Negative	Equivocal	Positive	Equivocal	Negative	10-May	10-May	
195	NT	NT	NT	NT	NT	NT	NT	NT			Sample received with very low cell count, could not proceed to test.
201	Negative	Negative	Negative	Negative	NT	NT	NT	NT	10-May	11-May	Unable to test B lymphocytes due to low cell count
202	Negative	Negative	Negative	Negative	Positive	Equivocal	Equivocal	Negative	10-May	10-May	Sample delivery was late
204	Positive	Negative	Negative	Negative	Positive	Positive	Negative	Negative	10-May	10-May	
206	Negative	Negative	Negative	Negative	Positive	Negative	Negative	Negative	10-May	10-May	
209	Positive	Negative	Positive	Negative	Positive	Positive	Positive	Negative	09-May	11-May	
218	NT	NT	NT	NT	NT	NT	NT	NT			Samples not received
220	Negative	Negative	Positive	Negative	Negative	Positive	Positive	Negative	10-May	11-May	
227	NT	NT	NT	NT	NT	NT	NT	NT	09-May		Samples not tested
230	Negative	Negative	Negative	Negative	Positive	Positive	Negative	Negative	11-May		
235	NT	NT	Negative	Negative	NT	NT	Negative	Negative	10-May	10-May	
238	Negative	Negative	Negative	Negative	Positive	Positive	Negative	Negative	10-May	11-May	Serum 3 has a weak B35 (MFI:3500)
240	Positive	Negative	Positive	Negative	Positive	Positive	Positive	Positive	11-May	11-May	
245	NT	NT	NT	NT	NT	NT	NT	NT	10-May	11-May	Low lymphocyte count
246	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative	10-May	10-May	
252	Negative	Negative	Negative	Negative	Positive	Positive	Negative	Negative	11-May	11-May	
260	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	11-May	11-May	B lymphocyte count was too low
262	Negative	Negative	Negative	Negative	Positive	Positive	Positive	Negative	10-May	10-May	
271											No results returned
276	Negative	Negative	Negative	Negative	Negative	Negative	Positive	Positive	10-May	16-May	Too few cells provided
284	Positive	Negative	Equivocal	Equivocal	Positive	Positive	Negative	Negative	10-May	10-May	Not enough cells to repeat T cell crossmatch with serum 3 and 4
293	Positive	Negative	Negative	Negative	Positive	Positive	Negative	Negative	11-May	11-May	
297	Positive	Negative	Positive	Negative	Positive	Positive	Equivocal	Negative	11-May	12-May	Grey zone: 1.3-1.8 x Tneg (LT) and 1.5-2 x Tneg (LB). Poor cellularity on sample
302	Negative	Positive	Positive	Negative	Negative	Positive	Positive	Positive	15-May	17-May	
341	Negative	Negative	Negative	Negative	Positive	Positive	Negative	Negative	10-May	12-May	
351	Positive	Negative	Negative	Negative	Positive	Positive	Negative	Negative	13-May	13-May	
358	Negative	Negative	Negative	Negative	Positive	Positive	Negative	Negative	10-May	10-May	

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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	0.55	0.21	0.51	0.24	0.22	23.00			2SD	MFI	
112	NT	NT	NT	NT	NT	NT			NT	Median Log Channel	95
114	263	174	215	185	185	313			50 linear channel shift	Median Channel	81
115	262	188		168	265	352			>40	Median Linear Channel Shifts	
117	NT	NT	NT	NT	NT	NT			NT		
118	136	119	149	104	101	398			167 (101+66)	Median Linear Channel	90
119	NT	NT	NT	NT	NT	NT			NT	MnIX	85
120	1.61	1.05	1.37	1.07	63	1212.5			ratio >1.6	Median	100
122	20	9	14	15.5	8		35	14	3SD	Geometric Mean Linear Value	97
126	320	156	288	180	136	602			>80 linear channel shift	Median Linear Channel	>90
130	202	130	176	134	126	288			>40	Mean Channel Shift	99
133	0.4	0.1	0.2	0.1	0.3	114			2SD	Median Fluorescence Intensity	99
136	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
138	0.16	0.07	0.14	0.03	0	0.88			>0.2	D Value Kolmogorov-Smirnof	
139											92.2
142	0.997	0.371	1.28	0.432	0.398	35			>1.5 local neg control	Median Log Channel	80
143	12	3	9	3	3	15			ratio >3	Mean Channel Shift	84.5
144	1.98	1.41	2.47	1.44	1117	4.3			1.7	Median/Ratio	
145	0.395	0.304	0.499	0.345	0.448	51.7			2SD of the ratio	Median Log Channel	94
147	181	138	212	154	119	459			>40 linear channel shift	Linear Channel	100
149	0.46	0.288	0.919	0.561	0.472	148			2SD	Median Log Channel	86
154	114	59	106	65	45	1030			median >150% of negative control	Median Fluorescence Intensity	
157		137	154	135	125	427			2SD	Median Linear Channel	95
159	187	147	202	139	139	388			179	Mean Fluorescence	99
160	10.3	5.5	7.7	7.3	7.3	211			>15 (negative + 2SD)	Mean Linear Channel	
163	8.5	1.2	3.5	1.3	1	6.7			2.3 (ratio above)	Geomean Linear Channel (serum/negative control)	100
167	4123	177	309	173	167	18681			2SD	Median Log Channel	92
169	300	278	282	303	370	477			≥50 channel	Median Channel	97
176	0.45	0.04	0.48	0.08	0	0.99			MFI ≥0.4	MFI Shift	
185	0.78	0.45	0.56	0.43	0.42	1.73			0.74	Median Log Channel	
186	0.9	0.3	1	0.37	0.3	15			1.5 fold local negative control	Mean Fluorescence Intensity-Log Channel	99
190	106	73	107	65	58	258			T< 1.2 neg >1.5 pos	Linear Channel	70
191	18	11.3	16	6.9	0	334			30	MFI	80
193	3.45	1.23	3.62	1.16	5.29	145.53			Negative control mean x 2.4	Geometric Mean Linear Channel	
194											
195	NT	NT	NT	NT	NT	NT					
201	881	571	635	482	497	35.3			S/NK ≥2	X-Mean	97
202	0.20%	0.50%	0.40%	0.10%	0.10%	98%			5%	Cell Percentage	60
204	0.51	0.4	0.38	0.34	0.34	23.6			0.5 = 1.5 x local negative control	Mean Log Channel	
206	2.84	2.76	2.8	2.78	2.78	4.87			ratio >1.07	MFI	90
209	275 (3.2)	84 (1.0)	236 (3.2)	92 (1.1)	83	325			1.5 (ratio)	Geometric Mean Log Channel (Ratio)	85
218											
220	4466.5	2598.5	9045.5	3154	2222.5	139896			6000 above the mean of negative controls	Linear Acquisition, Linear values	97
227											
230	10	6.9	7.37	6.92	8.45	142			20	MFI	
235		1.1	1.39	1.14	1.02	26.9			>2 negative median log channel	Median Log Channel	85
238	1174	901	1289	961	984	19848			MESF serum/MESF negative control	MESF	
240	31	15	32	17	20	370			1.2 x negative control	MFI	60
245	NT	NT	NT	NT	NT	NT			NT	Linear Channel Shift	
246	2.52	1	1.75	0.98	4.99				1.75	Median Log Fluorescence	93
252	1.45	1.36	1.35	1.3	48.7	281.33			Median Ratio ± 2SD	MCR	70
260	111.37	78.31	68.95	110.78	85.31	2442.61			2 x negative control MFI	MFI	
262	981	992	1093	991	778	17250			2SD	Median Log Channel	85
271											
276	202	188	185	182	182	8071			>1.25 x negative control	Median Fluorescence Intensity	94
284	467	370	429	406	381	high positive: 1908			negative control >1.2	Median Log Channel	
293	17.47	5.73	6.67	5.88	7.27	137.7			10 channel shift	Channel Shift	50
297	125	50	162	62	61	153			1.3 x Tneg	Mean Fluorescence Intensity	
302										Beckman Coulter Navios	70
341	5.44	4.125	4.82	3.99	4.35	26.16			3SD	Geo Mean Linear Values	98
351	280.5	213.5	249.5	227.5	193	10239.5			500	MFI	98.5
358											

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101	NT	NT	NT	NT	NT	NT				MFI	
112	NT	NT	NT	NT	NT	NT				Median Log Channel	
114	549	602	419	451	436	764			60 linear channel shift	Median Channel	
115	436	548		296	435	805			>60	Median Linear Channel Shifts	
117	NT	NT	NT	NT	NT	NT					
118										Median Linear Channel	
119	NT	NT	NT	NT	NT	NT				MnIX	
120	2.11	4.39	1.3	0.96	288	3170.5			ratio >2	Median	
122	1096	454	101	153	53		324	123	3SD	Geometric Mean Linear Value	97
126	350	581	395	273	215	751			>120 linear channel shift	Median Linear Channel	
130	638	557	385	294	216	482			>80	Mean Channel Shift	
133	25.4	17.8	6.8	4.1	4.6	233			2SD	Median Fluorescence Intensity	
136	NT	NT	NT	NT	NT	NT				NT	NT
138	NT	NT	NT	NT	NT	NT				D Value Kolmogorov-Smirnof	
139	NT	NT	NT	NT	NT	NT					
142	1445	3586	1081	635	117	8			20482	Median Log Channel	
143	NT	NT	NT	NT	NT	NT				Mean Channel Shift	
144	7.61	7.65	3.63	1.87	2692	6.35			2.5	Median/Ratio	
145	2.41	3.25	2.19	0.919	0.624	7.96			2SD of the ratio	Median Log Channel	94
147	468	471	378	324	339	698			>60 linear channel shift	Linear Channel	100
149	16.9	8.71	6.13	6.54	4.02	247			2SD	Median Log Channel	86
154	1729	1261	567	306	144	9620			median >250% of control and shape of curve	Median Fluorescence Intensity	
157		299	212	188	176	565			2SD	Median Linear Channel	
159	409	460	347	262	206	665			306	Mean Fluorescence	
160	318.4	32.7	21.7	26.1	14.4	647			>39.8 (negative + 2SD)	Mean Linear Channel	
163	3.7	6.2	2.4	1.3	1	3.9			1.7 (ratio above)	Geomean Linear Channel (serum/negative control)	100
167	4860	4416	1681	967	1144	29728			2SD	Median Log Channel	92
169	504	560	327	426	485	617			≥80 channel	Median Channel	
176	1.08	0.9	0.41	0.14	0	0.87			≥0.22	MFI Shift	
185	7.24	3.24	0.84	0.86	0.61	4.89			4.2	Median Log Channel	
186	5.7	10.6	2.7	1.8	1.8	85.6			2 fold negative control	Mean Fluorescence Intensity-Log Channel	
190										Linear Channel	
191	213	217	95	119	0	507			100	MFI	
193	4.92	8.39	2.2	1.25	42.34	612.71			Negative control mean x 1.9	Geometric Mean Linear Channel	
194											
195	NT	NT	NT	NT	NT	NT					
201									S/NK ≥2.5	X-Mean	
202	21.2%	7.8%	9.5%	6%	1%	100%			8%	Cell Percentage	
204	17.9	13.1	2.28	2.12	1.53	44.4			3.06 = 2 x local negative control	Mean Log Channel	
206	6.71	4.97	4.42	4.77	4.96	9.53			ratio >1.017	MFI	
209	2436 (3.9)	6245 (10)	1725 (2.7)	799 (1.3)	627	2164			1.7 (ratio)	Geometric Mean Log Channel (Ratio)	
218											
220	8226.5	125259	16719	4287	3306	261732			6000 above mean of negative control	Linear Acquisition, Linear values	
227											
230	83	60	6	7	7.38	557			40	MFI	
235										Median Log Channel	
238	19807	15132	5901	5540	3705	46065			MESF serum/MESF negative control	MESF	
240										MFI	
245										Linear Channel Shift	
246	3.54	2.06	2.81	1.25		11.48			2.5	Median Log Fluorescence	93
252	3.65	2.49	1.89	1.51	81.3	743.18			Median Ratio ± 2SD	MCR	70
260	3225.98	2579.82	679.58	2032.2	85.31	2442.61			2 x negative control MFI	MFI	
262	9864	7977	4365	2977	1400	47741			2SD	Median Log Channel	
271											
276	256	267	269	275	209	26386			>1.25 x negative control	Median Fluorescence Intensity	
284	1045	531	428	426	379		5632	506		Median Log Channel	
293	91.4	120.7	41.98	59.35	39.75	152.5			20 channel shift	Channel Shift	
297	1359	2887	701	422	468	778			1.5 x Tneg	Mean Fluorescence Intensity	
302										Beckman Coulter Navios	
341	83.325	33.53	13.29	12.735	11.46	216.16			3SD	Geo Mean Linear Values	98
351	1542	1594.5	387	366.5	344	17357			2500	MFI	
358											