

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

T-CELL AND B-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B09/2017 (COMPARED TO LOCAL NEGATIVE CONTROL)

DISPATCHED ON 12th September 2017

HLA PHENOTYPE OF BLOOD DONOR: HLA-A1, A33; B37, B44; Cw6, Cw7; DR7, DR10; DQ2, DQ5

Summary of Results												
	T-cells				B-cells							
Total tested	58	57	57	50	54	53	54	48				
Positive	1	55	0	9	3	52	2	34				
Negative	57	2	57	41	51	1	52	14				
NT/Equivocal	5	6	6	13	9	10	9	15				
% Positive	1.7%	96.5%	0.0%	18.0%	5.6%	98.1%	3.7%	70.8%				
% Negative	98.3%	3.5%	100.0%	82.0%	94.4%	1.9%	96.3%	29.2%				
Consensus	<b>Negative</b>	<b>Positive</b>	<b>Negative</b>	<b>Negative</b>	<b>Negative</b>	<b>Positive</b>	<b>Negative</b>	<b>Not Assessed</b>				
HLA Antibody Specificity (Defined by CDC)	A10	B44	Cw9 Cw10	DR15	A10	B44	Cw9 Cw10	DR15				
	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	
101	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Negative	13-Sep	14-Sep	LT/LB: Samples received 20/09/17 (delayed). Samples not acceptable for testing.	
112	NT	NT	NT	NT	NT	NT	NT	NT	20-Sep			
114	NT	NT	NT	NT	NT	NT	NT	NT	13-Sep			
115	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Negative	13-Sep	15-Sep		
117	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Positive	14-Sep	14-Sep		
118	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Negative	13-Sep	13-Sep		
119	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Positive	13-Sep	14-Sep		
120	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Negative	13-Sep	14-Sep		
122	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Positive	13-Sep	14-Sep		
126	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Positive	13-Sep	14-Sep		
130	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Negative	13-Sep	14-Sep		
133	Negative	<b>Negative</b>	Negative	Negative	Negative	Positive	Negative	Positive	14-Sep	15-Sep	Serum 2: +2SD value is below predicted threshold detected for a positive XM. There was a remarkable 45% cell population shift	
136	Negative	Positive	Negative	Negative	NT	NT	NT	NT	13-Sep	14-Sep	B cell count too low to conclude	
138	Negative	Positive	Negative	Negative	NT	NT	NT	NT	13-Sep	18-May		
139	Negative	Positive	<b>Equivocal</b>	<b>Positive</b>	NT	NT	NT	NT	15-Sep	15-Sep		
142	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Positive	14-Sep	14-Sep		
143	Negative	Positive	Negative	Negative	NT	NT	NT	NT	14-Sep	14-Sep		
144	Negative	Positive	Negative	<b>Positive</b>	Negative	Positive	Negative	Positive	13-Sep	14-Sep		
145	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Positive	14-Sep	15-Sep		
147	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Positive	13-Sep	14-Sep		
149	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Positive	14-Sep	15-Sep		
154	Negative	Positive	Negative	<b>Equivocal</b>	Negative	Positive	Negative	<b>Equivocal</b>	13-Sep	14-Sep		
157	Negative	<b>Negative</b>	Negative	Negative	Negative	<b>Negative</b>	Negative	Negative	14-Sep	14-Sep		Low reactivity
159	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Positive	13-Sep	13-Sep	Sample delivery late (6 days)	
160	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Positive	13-Sep	14-Sep		
163	Negative	Positive	Negative	<b>Positive</b>	Negative	Positive	Negative	Positive	13-Sep	14-Sep		
167	Negative	Positive	Negative	<b>Equivocal</b>	Negative	Positive	Negative	<b>Equivocal</b>	13-Sep	14-Sep		
169	Negative	Positive	Negative	Negative	<b>Positive</b>	Positive	Negative	Positive	12-Sep	13-Sep		
176	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Positive	14-Sep	14-Sep		
185	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Positive	13-Sep	14-Sep		
186	Negative	Positive	Negative	<b>Positive</b>	Negative	Positive	Negative	Positive	15-Sep	15-Sep		
190	Negative	Positive	Negative	<b>Equivocal</b>	Negative	Positive	Negative	<b>Equivocal</b>	15-Sep	15-Sep		
191	Negative	Positive	Negative	<b>Positive</b>	Negative	Positive	Negative	Negative	13-Sep	14-Sep		
193	Negative	Positive	Negative	<b>Positive</b>	Negative	Positive	Negative	Positive	13-Sep	13-Sep		
194	Negative	Positive	Negative	<b>Equivocal</b>	Negative	Positive	Negative	<b>Equivocal</b>	13-Sep	13-Sep		
195	NT	NT	NT	NT	NT	NT	NT	NT	16-Sep			
201	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Negative	13-Sep	14-Sep		
202	Negative	<b>Equivocal</b>	Negative	<b>Equivocal</b>	Negative	<b>Equivocal</b>	Negative	Positive	13-Sep	13-Sep	Sample delivery late	
204	Negative	Positive	Negative	<b>Positive</b>	Negative	Positive	Negative	Positive	13-Sep	13-Sep	Serum 4: weak antibodies, could be positive,	
206	Negative	Positive	Negative	<b>Positive</b>	Negative	Positive	<b>Positive</b>	Positive	13-Sep	13-Sep		
209	Negative	Positive	Negative	<b>Equivocal</b>	Negative	Positive	Negative	<b>Equivocal</b>	13-Sep	14-Sep		
218	Negative	Positive	Negative	<b>Positive</b>	<b>Positive</b>	Positive	<b>Positive</b>	Positive	18-Sep	18-Sep		
220	Negative	Positive	Negative	<b>Positive</b>	Negative	Positive	Negative	Positive	13-Sep	14-Sep		
227	NT	NT	NT	NT	NT	NT	NT	NT				No results returned
230	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Positive	15-Sep	15-Sep		
235	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Positive	13-Sep	13-Sep		
238	Negative	Positive	Negative	Negative	Negative	Positive	Negative	<b>Equivocal</b>	13-Sep	14-Sep		
240	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Negative	15-Sep	15-Sep		
245	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Negative	13-Sep	14-Sep		
246	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Positive	13-Sep	13-Sep		
252	<b>Positive</b>	Positive	Negative	Negative	<b>Positive</b>	Positive	Negative	Positive	14-Sep	14-Sep		
260	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Negative	14-Sep	14-Sep		
262	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Positive	13-Sep	14-Sep		
271	Negative	Positive	Negative	NT	Negative	Positive	Negative	Positive	14-Sep	14-Sep	Result could not be confirmed. Not enough cells to repeat testing	
276	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Positive	13-Sep	13-Sep	Grey zone: 1.3-1.8 x Tneg (LT) and 1.5-2 x Tneg (LB). Poor cellularity on this sample	
284	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Positive	13-Sep	14-Sep		
293	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Positive	14-Sep	14-Jan		
297	Negative	Positive	Negative	<b>Equivocal</b>	Negative	Positive	Negative	Positive	13-Sep	14-Sep		
302	NT	NT	NT	NT	NT	NT	NT	NT	20-Sep			
341	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Positive	13-Sep	14-Sep		
351	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Negative	16-Sep	16-Sep		
358	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Negative	13-Sep	13-Sep		
374	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Negative	19-Sep	20-Sep		

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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	0.169	0.169	0.171	0.201	0.167	3.72			2SD	MFI	
112										Median Log Channel	5
114											
115	251	541	231	264	256	379			>40	Median Linear Channel Shift	
117	3.58	24.11	3.63	4.2	3.85	57.19			Ratio (RMF) >1.3	Median Log Channel	95
118	216	336	205	238	190	485			256 (190+66)	Median Linear Channel	
119	0.15	3.11	0.16	0.273	0.148	15.4			Ratio: Pos >1.289	MnIX	90
120	0.92	5.38	1.05	1.27	53	2779.5			Ratio >1.6	Median	100
122	9	144	9.5	12	9	48			3SD	Geo Mean Linear Value	98
126	170	513	184	204	149	611			>80 linear channel shift	Median Linear Channel	>90%
130	149	424	160	177	138	196			40	Mean Channel Shift	99
133	0.1	0.7	0.5	0.7	0.1	85.1			2SD	Median Fluorescence Intensity	99
136	1.5	35	1.5	3.1	1.8	44 NR = 2400			NR >200	Geo Mean Channel	99
138	0.05	0.44	0.06	0.02	0	0.89			>0.2	D Value Kolmogorov-Smirnow Statistic	
139	0.26	11.8		0.71	0.316	55			>1.5 Local neg control	MFI	
142	158	506	119	262	224	4929			290 (224+3SD)	Median Log Channel	92.7
143	1	223	1	2	2	436			PC:NC Ratio >3	Mean Channel Shift	89.2
144	1.13	5.9	1.18	2.13	1113	5.17			1.6	Median-Ratio	
145	0.316	1.65	0.33	0.38	0.456	47.4			2SD of ratio	Median Log Channel	98
147	77	410	81.5	97.5	117	615			>40 linear channel shift	Linear Channel	100
149	0.299	1.39	0.275	0.324	0.288	68.3			2SD	Median Log Channel	80
154	50	476	54	84	57	986			median >150% of NC and shape of cytoqramm	Median Fluorescence	
157	135	128	120	119	119	121			151 (2SD)	Meadian Linear Channel	94
159	133	340	133	157	127	341			40 llinear channel shift	Mean Fluorescence	99
160	7.8	132.1	9.4	14.5	8.7	277			>20.5 (negative + 2SD)	Mean Linear Channel	
163	1.0	47.5	1.2	3.9	1	6			2.3 (ratio above)	Geomean Linear Channel (serum/negative control)	98
167	204	2150	206	255	182	14305			2SD	Median Log Channel	97
169	270	402	268	271	301	505			≥50 Channel	Median Channel	98
176	-0.04	1.25	0.01	0.08	0	1.28			0.4	MFI Shift	
185	0.33	1.58	0.33	0.42	0.33	3.10			2SD	Median Log Channel	NT
186	0.35	5.2	0.38	0.9	0.35	66.7			1.5 fold the local negative control	Mean-fluorescence intensity-Log channel	99
190	52.3	550.3	58.5	63.7	52	293			ratio >1.5	Median	86
191	0.01	152	13	59	0	229			>30	MFI	80
193	5.4	109.66	5.94	12.65	5.15	166.08			Negative control mean x 2.4	Geometric mean linear channel	
194											
195	NT	NT	NT	NT	NT	NT			NT	NT	NT
201	519	2.56	564	691	644	15.4			S/NK ≥2.0	X - Mean	97
202	0.5	4.1	0.6	4.6	1.0	99.5			5	Cell Percentage	60
204	0.4	6.59	0.36	0.61	0.36	2.61			0.54 = 1.5 x local NC	Mean Log Channel	
206	0.91	16.22	0.94	2.06	0.78	1.79			Ratio >1.4	MFI	90
209	210	5616 (26.4)	243 (1.1)		213	1052			1.5 (ratio)	Geometric Mean Log Channel	90
218	111	1573	120	187	126	1874			1.2	Geometric MFI	50
220	2284	46472.5	2739	4460.5	2271	261761			6000 above mean of NC	Linear Acquisition, Linear Values	94
227											
230	8.06	34.14	7.3	7.99	6.61	131.06			20	MFI	
235	1.14	4.94	1.04	2.35	1.07	50.48			>2 of NC sera	Median Log Channel	85
238					1594	14286			MESF serum/ MESF neg control	MESF	
240	36	86	38	39	37	147			1.2* NC	MFI	55
245	0.3	22.8	1.3	-1.2	1.7	40.8			7	Linear Channel Shift	100
246	1.04	9.69	1.08	1.09	1.09	2.74			1.75	Median Log Fluorescence	91.4
252	2.84	2.44	1.42	1.68	33.6	266.5			Median Ratio +/- 2SD	Median Channel Ratio	70
260	6.77	98.62	11.9	11.08	2.31	95.22			20% + NC	Percentage Gated Events	
262	1476	3700	1222	1393	1188	10448			>2SD	Mean Channel Shift	88
271	134	490	141	157	152	536			64	Median Log Channel	99
276	119	2099	119	157	154	8636			>1.25 x NC	Median Fluorescence Intensity	95
284	304	643	321	320	338		1522	363	Ratio sample serum/negative control >1.2	Median Log Channel	
293	3.02	16.7	3.19	3.31	3.11	34.14			10 Channel Shift	Channel Shift	80
297	34	519	30	52	38	153			1.3 x Tneg	Median Fluorescence Intensity	
302	NT	NT	NT	NT	NT	NT				NT	NT
341	3.53	11.25	3.49	3.92	3.82	19.82			3SD	Geo Mean Linear Values	98
351	174	555	175	190	180	5962			500	MFI	99
358											
374	0	22	5	5					20	Cell Percentage	

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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	1.08	3.59	0.992	1.15	1.77	15.2			2SD (1 to 1.2)	MFI	
112										Median Log Channel	5
114											
115	458	666	454	569	471	694			>60	Median Linear Channel Shift	
117	7.99	95.9	6.9	24.72	10.94	200			Ratio (RMF) >1.5	Median Log Channel	95
118	144	194	157	143	142	404			167 (141.5 + 22.5)	Median Linear Channel	
119	3.04	21.1	3.84	16.4	2.44	12.5			Ratio: Pos >1.7	MnlX	90
120	0.8	3.57	1.21	1.59	302	6589.5			Ratio >2	Median	100
122	95.5	466	123	339	95	294			3SD	Geo Mean Linear Value	98
126	203	586	271	382	186	776			>120 linear channel shift	Median Linear Channel	>90%
130	254	530	341	288	263	362			80	Mean Channel Shift	99
133	5.3	27.1	14.5	26.4	6.3	197.8			2SD	Median Fluorescence Intensity	99
136										Geo Mean Channel	99
138	NT	NT	NT	NT	NT	NT			NT	D Value Kolmogorov-Smirnow Statistic	
139										MFI	
142	624	1809	645	2150	1141	13827			1261 (1141 + 3SD)	Median Log Channel	92.7
143										Mean Channel Shift	89.2
144	1.5	8.06	1.73	4.09	2694	6.01			2.6	Median-Ratio	
145	1.61	8.18	2.34	8.03	1.13	35.2			2SD of ratio	Median Log Channel	98
147	255	492.5	299	438.5	277	748			>60 linear channel shift	Linear Channel	100
149	0.81	4.32	0.77	3.12	1.62	92.8			2SD	Median Log Channel	80
154	327	2048	456	1032	485	1709			median >200% of NC and shape of curve	Median Fluorescence	
157	148	136	126	124	128	379			170 (2SD)	Median Linear Channel	94
159	231	408	233	407	197	574			100 linear channel shift	Mean Fluorescence	99
160	90.6	772	101.4	535	63.4	710			>123.4 (negative + 2SD)	Mean Linear Channel	
163	1.3	9.5	1.4	4.5	1	2.8			1.7 (ratio above)	Geomean Linear Channel (serum/negative control)	98
167	1619	6779	1735	2717	1386	41589			2SD	Median Log Channel	97
169	570	548	377	517	373	702			≥80 channel	Median Channel	98
176	-0.17	0.96	-0.06	0.44	0	0.97			0.22	MFI Shift	
185	0.29	4.56	0.57	3.07	0.61	6.83			2SD	Median Log Channel	NT
186	1.5	8	1.5	5.8	1.4	37.5			2 fold the local negative control	Mean-fluorescence intensity-Log channel	99
190	172.7	1000	253.3	441	220	1000			ratio >2.5	Median	86
191	8	109	2	62	0	241			>100	MFI	80
193	69.75	400.5	84.5	221.27	61.32	507			Negative control mean x 2.3	Geometric mean linear channel	
194											
195	NT	NT	NT	NT	NT	NT			NT	NT	NT
201	2.66	12.5	3.84	6.71	4.72	47.1			S/NK ≥2.5	X - Mean	97
202	3.5	7	0.9	21.6	2.5	99.4			8	Cell Percentage	60
204	3.91	23.6	2.38	24.3	2.4	35.4			4.79= 2 x local NC	Mean Log Channel	
206	1.72	37057	5.35	21.55	2.15	19.43			Ratio >2.2	MFI	90
209	2778 (0.9)	15703 (5.1)	3488 (1.1)		3069	5945 (1.9)			1.7 (ratio)	Geometric Mean Log Channel	90
218	1620	8497	1961	3818	1496	4513			*1.7	Geometric MFI	50
220	2906.5	87038	4327	18381.5	4244.5	261855			6000 above mean of negative controls	Linear Acquisition, Linear Values	94
227											
230										MFI	
235	12.2	76.35	10.85	133.35	7.99	643.57			>13 of negative control sera	Median Log Channel	85
238										MESF	
240	1138	1400	947	1040	941	2327			MESF serum/ MEF neg control	MESF	
245	1.2	41.7	3.2	2.2	6.3 mean linear channel	66.7			NC*1.4	MFI	55
246	1.05	9.93	1.28	2.65		22.62			15	Linear Channel Shift	100
252	2.81	6.94	1.57	9.5	38	1843			2.5	Median Log Fluorescence	91.4
260	18.64	78.06	26.04	32.54	8.87	96.94			Median Ratio +/- 2SD	Median Channel Ratio	70
262	2481	7464	2297	8180	2262	42836			30 + negative control	Percentage Gated Events	
271	210	562	246	413	234	657			>2SD	Mean Channel Shift	88
276	453	7620	811	2696	1031	19857			90	Median Log Channel	99
284	350	840	404	1031	448		6487	480	>1.25 x negative control	Median Fluorescence Intensity	95
293	23.29	114.44	18.43	40.86	22.37	239.28			ratio sample serum/NC >1.2	Median Log Channel	
297	153	987	102	720	207	311			20 channel shift	Channel Shift	80
302	NT	NT	NT	NT	NT	NT			1.5 x Tneg	Median Fluorescence Intensity	
341	8.66	27.42	10.04	26.41	15.9	62.14			3SD	Geo Mean Linear Values	98
351	350	2349	415	476	438	19419			2500	MFI	99
358											
374	0	80	0	0					20	Cell Percentage	