

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

T-CELL AND B-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B10/2017 (COMPARED TO LOCAL NEGATIVE CONTROL)

DISPATCHED ON 12th September 2017

HLA PHENOTYPE OF BLOOD DONOR: HLA-A2, A-; B44, B-; Cw5, Cw-; DR4, DR-; DQ7, DQ8

Summary of Results												
T-cells					B-cells							
Total tested	58	56	58	57	53	47	52	47				
Positive	1	0	58	0	1	10	51	6				
Negative	57	56	0	57	52	37	1	41				
NT/Equivocal	5	7	5	6	10	16	11	16				
% Positive	1.7%	0.0%	100.0%	0.0%	1.9%	21.3%	98.1%	12.8%				
% Negative	98.3%	100.0%	0.0%	100.0%	98.1%	78.7%	1.9%	87.2%				
Consensus	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
HLA Antibody Specificity (Defined By CDC)	Cw9 Cw10	DR15	B44	A10	Cw9 Cw10	DR15	B44	A10				
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	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
112	NT	NT	NT	NT	NT	NT	NT	NT				
114	NT	NT	NT	NT	NT	NT	NT	NT				
115	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
117	Negative	Negative	Positive	Negative	Negative	Positive	Positive	Equivocal			Low number of cells	
118	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
119	Negative	Negative	Positive	Negative	NT	NT	NT	NT			Many clubs and apoptic cells. Was difficult to do the B-XM	
120	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
122	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
126	Negative	Negative	Positive	Negative	Negative	Negative	Negative	Negative				
130	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
133	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
136	Negative	Negative	Positive	Negative	NT	NT	NT	NT				
138	Negative	Negative	Positive	Negative	NT	NT	NT	NT			We do not study anti B antibodies	
139	Negative	Equivocal	Positive	Negative	NT	NT	NT	NT			Too low B cell count to conclude	
142	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
143	Negative	Negative	Positive	Negative	NT	NT	NT	NT				
144	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
145	Negative	Negative	Positive	Negative	Negative	Positive	Positive	Negative				
147	Negative	Negative	Positive	Negative	Negative	Positive	Positive	Negative				
149	Negative	Negative	Positive	Negative	Negative	Positive	Positive	Negative				
154	Negative	Negative	Positive	Negative	Negative	Equivocal	Positive	Negative				
157	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
159	Negative	Negative	Positive	Negative	Negative	Positive	Positive	Equivocal				
160	Negative	Negative	Positive	Negative	Negative	Positive	Positive	Equivocal				
163	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Positive				
167	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
169	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
176	Negative	Negative	Positive	Negative	Negative	Equivocal	Positive	Positive				
185	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
186	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative			High background on B cells	
190	Negative	Negative	Positive	Negative	Negative	Negative	Equivocal	Negative				
191	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
193	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
194	Negative	Negative	Positive	Negative	Negative	Equivocal	Positive	Negative				
195	NT	NT	NT	NT	NT	NT	NT	NT			NT - samples arrived late	
201	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
202	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
204	Negative	Negative	Positive	Negative	Negative	Positive	Positive	Negative				
206	Negative	Equivocal	Positive	Negative	Negative	Positive	Positive	Positive				
209	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Equivocal				
218	Negative	Negative	Positive	Negative	Negative	Positive	Positive	Negative				
220	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Positive				
227	NT	NT	NT	NT	NT	NT	NT	NT			No results returned	
230	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
235	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
238	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative			Serum 4: 1/3 beads A2 positive,	
240	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Positive				
245	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
246	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
252	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative				
260	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
262	Negative	Negative	Positive	Negative	Negative	Equivocal	Positive	Equivocal				
271	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Positive				
276	Negative	Negative	Positive	Negative	Negative	Positive	Positive	Negative				
284	Negative	Negative	Positive	Negative	Negative	Equivocal	Positive	Negative				
293	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
297	Negative	Negative	Positive	NT	Negative	Equivocal	Positive	NT			Grey zone: 1.3-1.8 x Tneg (LT) and 1.5-2 x Tneg (LB). Poor cellularity, Serum 4 - NT as not enough cells required	
302	NT	NT	NT	NT	NT	NT	NT	NT	20-Sep		Samples delivered late and could not be tested because cell viability was about 30%.	
341	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
351	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
358	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				
374	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative				

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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	0.155	0.169	0.73	0.173	0.161	0.446			2SD	MFI	
112											
114											
115	247	258	584	235	245	416			>40	Median Linear Channel Shifts	
117	5.03	5.09	24.83	5.17	4.39	97.53			Ratio (RMF) >1.3	Median Log Channel	95
118	183	193	426	179	148	823			214 (148+66)	Median Linear Channel	90
119	0.161	0.163	6.25	0.149	0.15	3.4			Ratio: pos >1.289 B.L.(1.289 - 1.45)	MnIX	65
120	1.14	0.95	9.61	0.95	55.5	8946			ratio >1.6	Median	100
122	9	9.5	270.5	9	93	93			3SD	Geo Mean Linear Value	98
126	146	121	257	126	141	688			>80 Linnear Channel Shift	Mean Linear Channel	>90
130	158	156	399	152	152	198			40	Mean Channel Shift	99
133	0.1	0.1	11	0.1	0.1	95.4			2SD	Median Fluorescence Intensity	99
136	1.4	1.5	49	1.8	1.5	39 NR=2543			NR >200	Geo Mean Channel	98
138	0.04	0.04	0.71	0.06	0	0.97			>0.2	D Value Kolmogorov-Smirnov Statistic	
139	0.4		15.9	0.32	0.28	13			>1.5 local negative control	MFI	
142	122	124	526	102	168	4590			235 (168 + 3SD)	Median Log Channel	92.4
143	2	0	355	1	2	392			PC:NC ratio >3	Mean Channel Shift	91
144	1	0.97	6.99	0.95	1287	9.06			1.6	Median Ratio	
145	0.402	0.413	3.24	0.288	0.405	53.6			2SD of ratio	Median Log Channel	95.2
147	105	103	435	105	129	669			>40 linnear channel shift	Linnear Channel	100
149	0.33	0.33	1.94	0.32	0.315	59.2			2SD	Median Log Channel	80
154	56	63	956	51	53	2688			meadian >1.5 of NC and shape of curve	Median Fluorescence Intensity	
157	98	127	145	122	107	333			137 (2SD)	Median Linear Channel	93
159	139	144	410	138	130	494			40 Linear Channel Shift	Mean Fluorescence	99
160	7.1	6.9	140	8	5.6	238			>11.8 (negative + 2SD)	Mean Linear Channel	
163	1.4	1.1	67.6	1.1	1	12.7			2.3 (ratio above)	Geomean Linear Channel (serum/negative control)	97
167	235	214	3071	202	184	5210			2SD	Median Log Channel	95
169	286	283	456	285	325	563			>50 channel	Median Channel	99
176	-0.02	-0.01	1.43	-0.01	0	1.45			0.4	MFI Shift	
185	0.36	0.36	1.49	0.34	0.39	4.29			2SD	Median Log Channel	NT
186	0.4	0.38	6.6	0.35	0.34	65.6			1.5 fold the local negative control	Mean Fluorescence Intensity-Log Channel	99
190	56	55.7	607	54	52	1000			ratio >1.5	Median	78
191	2.7	6.6	194	0.98	0	327			>30	MFI	90
193	5.22	5.51	106.97	4.64	4.48	78.31			Negative control mean x 2.4	Geometric Mean Linear Channel	
194											
195	NT	NT	NT	NT	NT	NT			NT	NT	NT
201	567	602	3.78	563	589	11.1			S/NK ≥2.0	X - Mean	
202		1.1	2.3	40.8	1	0.6	99.5		5	Cell Percentage	60
204	0.29	0.29	9.62	0.3	0.28	12			0.43 = 1.5 x local negative control	Mean Log Channel	
206	0.76	0.82-1.0	25.33	0.79	0.68	2.88			ratio >4	MFI	90
209	244 (1.22)	232 (1.2)	8194 (41.0)	200 (1.0)	200	1461 (7.3)			1.5 (ratio)	Geometric Mean Log Channel (ratio)	90
218	89.9	92.3	1105	72.1	104.16	1410			*1.2	Geometric MFI	50
220	2569.5	2461.5	67201	2445	2245.75	261796			6000 above mean of negative controls	Linear Aquisition, Linear Values	97
227											
230	7.91	7.40	41.29	8.06	7.91	132			20	MFI	
235	1.17	2.94	10.94	1.25	1.19	43.71			Negative control sera < 2	Median Log Channel	85
238					995	16289			MESF serum/MESF negative control	MESF	
240	36	37	102	36	38	502			NC*1.2	MFI	50
245	0.5	0.5	27.5	0	2 mean linear channel	38.5			7	Linear Channel Shift	100
246	1.08	1.13	17.07	1.14	1.14	4			1.75	Median Log Fluorescence	90.7
252	3.92	1.02	2.32	1.25	35.2	130.9			Median ratio +/- 2SD	MCR	75
260	4.24	10.41	97.48	8.81	1.77	99.68			20 + negative control	Percentage Gated Events	
262	1033	1276	4857	975	1196	16347			>2SD	Mean Channel Shift	83
271	154	178	533	138	190	413			64	Median Log Channel	91
276	158	135	4214	130	173	9755			1.25 x negative control	Median Fluorescence Intensity	87
284	342	353	737	334	349		1306	407	ratio sample serum/negative control >1.2	Median Log Channel	
293	2.92	2.81	29.16	2.92	2.97	32.05			10 channel shift	Channel Shift	80
297	36	48	1480		39	211			1.3 x Tneg		
302	NT	NT	NT	NT	NT	NT			NT	NT	NT
341	3.40	3.36	15.12	3.33	3.54	24.52			3SD	Geo Mean Linear Values	98
351	175	185	1025	177	172	11100			500	MFI	99
358											
374	0	1	26	1					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	0.642	0.955	3.44	0.639	1.21	2.56			2SD (0.65)	MFI	
112											
114											
115	500	533	656	536	483	679			>60	Median Linear Channel Shifts	
117	9.35	17.6	74.13		7.5	250			Ratio (RMF) >1.5	Median Log Channel	95
118	117	124	165	126	118	435			143,50 (118+25.5)	Median Linear Channel	90
119	NT	NT	NT	NT	NT	NT				MnIX	65
120	1.06	1	2.99	1.14	484.5	10812.5			Ratio > 2	Median	100
122	81.5	167.5	456	138.5	82	253			3SD	Geo Mean Linear Value	98
126	209	92	208	199	175	698			>120 linear channel shift	Mean Linear Channel	>90
130	306	398	484	388	367	480			80	Mean Channel Shift	99
133	11,1	8,9	38,2	11,7	3,8	198,0			2SD	Median Fluorescence Intensity	99
136											
138	NT	NT	NT	NT	NT	NT			NT	D Value Kolmogorov-Smirnov Statistic	
139										MFI	
142	327	277	932	347	432	10208			572 (432+3SD)	Median Log Channel	92.4
143											
144	1.29	2.13	4.11	1.60	3829	4.51			2.60	Median Ratio	
145	2.68	5.46	7.75	1.1	2.34	38.2			2SD of ratio	Median Log Channel	95.2
147	273	380	445	288	251	725			>60 linear channel shift	Linear Channel	100
149	1.34	2.28	3.84	1.13	0.919	65.7			2SD	Median Log Channel	80
154	546	797	2027	503	478	6843			>200% negative control and shape of the cytogram	Median Fluorescence Intensity	
157	94	129	160	118	113	370			155 (2SD)	Median Linear Channel	93
159	270	366	461	280	188	607			100 linear channel shift	Mean Fluorescence	99
160	115	282	464	132	62.4	558			>186 (negative + 2SD)	Mean Linear Channel	
163	1.2	1.5	6.4	1.7	1	2			1.7 (ratio above)	Geomean Linear Channel (serum/negative control)	97
167	2096	2653	5414	2456	1890	41.082			2SD	Median Log Channel	95
169	382	423	541	400	460	640			≥ 80 CHANELL	Median Channel	99
176	0.08	0.2	0.96	0.38	0	0.86			0.22	MFI Shift	
185	2.4	1.81	4.91	2.64	1.96	7.28			2SD	Median Log Channel	NT
186	3.1	3.8	10.1	3.4	3.1	69.4			2 fold the local negative control	Mean Fluorescence Intensity-Log Channel	99
190	202,7	230,3	767	299	249,3	1000			ratio>2,5	Median	78
191	0,16	51	106	-27	0	273			>100	MFI	90
193	69.35	103.73	240.57	100.13	55.99	196.36			negative control mean x 2.3	Geometric Mean Linear Channel	
194											
195	NT	NT	NT	NT	NT	NT			NT	NT	NT
201	2.32	3.54	9.23	2.84	1.98	39.6			S/NK ≥ 2,5	X - Mean	
202	1.7 %	6.5 %	18.6 %	6.4 %	1.3 %	99.4 %			8 %	Cell Percentage	60
204	1.94	4.48	14.30	3.74	2.05	28.60			4.10 = 2 x loc neg control	Mean Log Channel	
206	6.43	11.44	26.94	9.40	3.82	8.45			Ratio > 2.2	MFI	90
209	2913 (1.1)	3751 (1.4)	14077 (5.2)		2694.00	5092 (1.9)			1.7 (ratio)	Geometric Mean Log Channel (ratio)	90
218	707.00	1157.00	2312.00	683.00	1038.70	2451.00			*1.7	Geometric MFI	50
220	4613,00	3665,50	66155,00	12479,50	3769,00	261862,00			6000 above mean of negative controls	Linear Acquisition, Linear Values	97
227											
230	7.91	7.40	41.29	8.06	7.91	132			20	MFI	
235	31,91	25,9	518,61	29,3	31,21	777,37			13 >negative control sera	Median Log Channel	85
238									20327	MESF	
240	1193	1092	1674	1513	1009	1998			MESF serum/MESF negative control		
245	3.7	6.2	27.2	9.2	12.3	40.7			NC*1.4	MFI	50
246	0.98	1.94	7.8	1.12		18.78			15	Linear Channel Shift	100
252	12.3	1.65	3.5	1.57	64	813			2.5	Median Log Fluorescence	90.7
260	8.82	17.69	68.37	19.21	5.48	98.60			Median ratio +/- 2SD	MCR	75
262	21051	33860	65848	32847	20316	302432			%30 + Negative Control	Percentage Gated Events	
271	222	232	478	337	218	569			> 2 SD	Mean Channel Shift	83
276	2974	9304	7194	2875	4228	6053			90	Median Log Channel	91
284	453	606	818	445	532				>1,25 x neg ctrl	Median Fluorescence Intensity	87
293	10.65	10.37	51.4	12.86	11.34	310.59			ratio sample serum /negative control > 1,2	Median Log Channel	
297	123	197	1015		127	216			20 CHANNEL SHIFT	Channel Shift	80
302	NT	NT	NT	NT	NT	NT			1.5 x Tneg		
341	5.96	11.85	24.08	5.83	11.94	195.83			NT	NT	NT
351	447	509	2178	564	504	34730			3SD	Geo Mean Linear Values	98
358									2500	MFI	99
374	0	0	0.21	0					20	Cell Percentage	