

**UK NEQAS FOR H&I SCHEME 2B - CROSSMATCHING BY FLOW CYTOMETRY**

T-CELL AND B-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B03/2015 (COMPARED TO LOCAL NEGATIVE CONTROL)

DESPATCHED ON 10TH MARCH 2015

HLA PHENOTYPE OF BLOOD DONOR: HLA-A2, A11; B35, B44; Cw4, Cw5; DR4, DR15; DQ5, DQ7

Summary of Results												
T-cells					B-cells							
Total tested	47	48	49	47	42	42	39	44				
Positive	42	9	2	4	23	1	6	31				
Negative	5	39	47	43	19	41	33	13				
NT/Equivocal	4	3	2	4	6	6	9	4				
% Positive	89.4%	18.8%	4.1%	8.5%	54.8%	2.4%	15.4%	70.5%				
% Negative	10.6%	81.3%	95.9%	91.5%	45.2%	97.6%	84.6%	29.5%				
<b>Consensus</b>	<b>Positive</b>	<b>Negative</b>	<b>Negative</b>	<b>Negative</b>	<b>Not Assessed</b>	<b>Negative</b>	<b>Negative</b>	<b>Not Assessed</b>				
HLA Antibody Specificity (Defined By CDC)	A11	A3	DR7, DQ2	DR1	A11	A3	DR7, DQ2	DR1				
	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	
112	Equivocal	Negative	Negative	Negative	Equivocal	Negative	Negative	Positive	13-Mar	13-Mar	Serum 1 - Incoherent results between cells T and B	
114	Positive	Negative	Negative	Negative	Negative	Negative	Negative	Weak positive	11-Mar	12-Mar		
115	Positive	Negative	Negative	Negative	Positive	Negative	Negative	Positive	11-Mar	12-Mar		
116	Positive	Positive	Negative	Positive	Negative	Negative	Negative	Positive	11-Mar	12-Mar		
117	Positive	Negative	Negative	Negative	Positive	Negative	Weak positive	Positive	12-Mar	12-Mar		
118	Positive	Negative	Negative	Positive	Negative	Negative	Negative	Negative	11-Mar	11-Mar		
119	Positive	Negative	Negative	Negative	Positive	Negative	Positive	Positive	11-Mar	12-Mar		
120	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Positive	11-Mar	12-Mar		
122	Positive	Negative	Negative	Negative	Negative	Negative	Negative	Positive	11-Mar	16-Mar		
126	Positive	Negative	Negative	Negative	Positive	Negative	Negative	Negative	11-Mar	12-Mar		
130	Positive	Negative	Negative	Negative	Positive	Negative	Positive	Positive	11-Mar	12-Mar		
136	Positive	Negative	Negative	Negative					11-Mar	12-Mar		
138	Positive	Negative	Negative	Negative					11-Mar	11-Mar		
139	Positive	Positive	Negative	Positive	Negative	Negative	Negative	Negative	13-Mar	13-Mar		Not in clinical use
142	Positive	Positive	Negative	Negative	Negative	Negative	Negative	Negative	11-Mar	12-Mar		B-cells serum 4 = different local controls
143	Positive	Negative	Negative	Negative					12-Mar	13-Mar		
144	Positive	Negative	Negative	Negative	Negative	Negative	Negative	Negative	11-Mar	12-Mar		
145	Positive	Negative	Negative	Negative	Positive	Negative	Negative	Positive	11-Mar	12-Mar		
147	Positive	Negative	Negative	Negative	Positive	Equivocal	Equivocal	Positive	11-Mar	11-Mar		
154	Positive	Negative	Negative	Negative	Positive	Negative	Negative	Positive	12-Mar	13-Mar		
157	Positive	Negative	Negative	Negative	Negative	Negative	Negative	Negative	11-Mar	11-Mar	One vial of cells was open	
159	Positive	Negative	Negative	Negative	Positive	Equivocal	Equivocal	Positive	11-Mar	12-Mar		
160	Positive	Negative	Negative	Negative	Weak positive	Negative	Negative	Positive	11-Mar	12-Mar		
163	Positive	Positive	Negative	Negative	Positive	Negative	Negative	Positive	11-Mar	16-Mar	Performed on frozen cells	
167	Positive	Positive	Negative	Positive	Negative	Negative	Negative	Positive	12-Mar	13-Mar		
169	Positive	Negative	Negative	Negative	NT	NT	NT	NT	12-Mar	13-Mar	No B cell results submitted	
174	Positive	Negative	Negative	Negative	Negative	Negative	Negative	Positive	14-Mar	14-Mar		
176	Positive	Negative	Negative	Negative	Negative	Negative	Negative	Negative	12-Mar	13-Mar	We are currently having problems with high background staining on B-cells which leads to false negatives. Normally, serum 1 would be reported as pos on both T and B-cells. Serum 4 in borderline pos on B-cells, neg on T-cells	
186	Positive	Positive	Negative	Negative	Negative	Negative	Negative	Negative	11-Mar	11-Mar	High background level on B-cells	
190	Positive	Positive	Positive	Equivocal	Equivocal	Negative	Negative	Positive	11-Mar	12-Mar		
191	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	12-Mar	12-Mar		
193	Positive	Equivocal	Negative	Negative	Positive	Negative	Equivocal	Positive	11-Mar	11-Mar		
194	Positive	Negative	Negative	Negative	Positive	Negative	Equivocal	Positive	11-Mar	12-Mar		
195	Positive	Negative	Negative	Negative	Positive	Negative	Negative	Negative	13-Mar	13-Mar		
201	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Positive	11-Mar	12-Mar		
202	Negative	Negative	Negative	Negative	Positive	Negative	Negative	Negative	11-Mar	11-Mar		
204	Positive	Negative	Negative	Negative	Positive	Negative	Negative	Positive	11-Mar	11-Mar		
209	Positive	Positive	Negative	Equivocal	Positive	Negative	Equivocal	Positive	11-Mar	12-Mar		
218	Positive	Positive	Positive	Negative	Negative	Positive	Negative	Negative	11-Mar	24-Mar		Samples were degenerate
220	Positive	Negative	Negative	Negative	Positive	Negative	Negative	Positive	11-Mar	12-Mar		
227	NT	NT	NT	NT	NT	NT	NT	NT	11-Mar	12-Mar		Cellular viability less than normal values.
235	Positive	Negative	Negative	Negative	Positive	Negative	Negative	Positive	11-Mar	11-Mar		
238	Equivocal	Negative	Negative	Negative	Negative	Negative	Negative	Equivocal	11-Mar	12-Mar		
245	Positive	Negative	Negative	Negative	Equivocal	Negative	Negative	Positive	11-Mar	12-Mar		
246	Positive	Negative	Negative	Negative	Positive	Negative	Positive	Positive	11-Mar	12-Mar		
252	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Positive	12-Mar	13-Mar		
262	Positive	Negative	Negative	Negative	Positive	Negative	Equivocal	Positive	11-Mar	11-Mar		
268	Positive	Negative	Negative	Negative	Negative	Negative	Positive	Positive	13-Mar	13-Mar		
271	Positive	Negative	Negative	Negative	Positive	Negative	Positive	Positive	12-Mar	12-Mar		
283	Positive	Negative	Negative	Negative	Positive	Negative	Negative	Negative	11-Mar	12-Mar		
284	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	Awaiting testing validation	

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T-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B03/2015 (COMPARED TO LOCAL NEGATIVE CONTROL)

DESPATCHED ON 10TH MARCH 2015

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	FCXM NIBSC negative control used?	Viability (%)
112		0.232	0.245	0.318	0.339	1.05			Ratio > 1.5	Median log channel	No	95
114	370	224	208	239	205	364			255 (205 + 50)	Median linear channel	No	87
115	402	251	215	248	220	384			> 40 linear channel shifts	Median linear channel shifts	Yes	
116	0.8	0.29	0.19	0.28	0.16	34.35			Ratio > 1.7	Median log channel	No	
117	7.48	3.68	3.57	3.7	3.44	96.44			Ratio (RMF) > 1.3	Median log channel	Yes	
118	270	146	140	180	127	844			149 (127 + 22)	Median linear channel (MCI)	Yes	85
119	1.08	0.215	0.189	0.217	0.175	5.47			Ratio > 1.285 (B.line - 1.48)	Mnlx	No	95
120	1.55	1.17	0.92	0.96	115.5	10330.5			Ratio > 1.6	Median (ratio)	No	100
122	19.5	10	9	10	10.5		60	21	3 SD	Geomean linear values	Yes	
126	385	199	40	149	142	655			> 80 linear channel shifts	Median linear channel	No	
130	262	166	138	150	130	260			>40	Median linear channel	No	
136	10.8	2.2	2.2	2.4	1.93	57 (NR = 2948)			NR > 200	Mean channel	No	98
138	0.2	0.04	0.03	0.01	0	0.98			> 0.20	Median linear channel	No	
139	3.01	1.1	0.913	1.11	0.639	19.8			≥ 1.5 of neg mean log channel	Mean log channel	No	
142	495	278	220	255	252.67	9012			269.19 (3 SD)	Median log channel	No	88
143	108	1	10	-9	10	268			≥ 60	Geo mean shift channel	No	95
144	1.88	1.18	1.31	1.31	1	6.32			Ratio 1.70	Ratio	No	
					1542	9750				MFI		
145	0.708	0.273	0.102	0.263	0.234	4.28			Med log ch test/med log ch neg > mean + 2 SD	Median log channel	No	95
147	218	144	131	139	129	558			>40 linear channel shift	Median linear channel	No	100
154	182	84	62	71	67	2125			Median > 150% control and shape of the curve	MFI	No	
157	170	121	114	115	111	414			126 (Neg+15)	Median linear channel	No	96
159	319	174	152	167	148	463			188 mean linear channel (40 channel shift)	Mean linear channel	No	90
160	35.5	15.8	11.1	11.6	10.7	232			>20.9 (Neg +2SD)	Mean linear channel	No	
163	10.3	7.7	1.2	2.3	1	14.1			2.3	Geomean log channel	Yes	100
167	243	570	235	306	107	17990			2SD	Median lof channel	No	97
169	MLC 44.01 NR 175	7.99 32	14.45 58	8.5 34	25.02	9325			NR= (MFI serum/MFI neg serum) x100 Pos= NR>150	Mean log channel	No	80
174	0.444	0.315	0.318	0.321	0.324	36.1			Ratio >1	X median (log)	No	>90
176	SI 1.18	0.3	0.04	0.22	0	0.84			SI ≥0.5		No	
	MESF 9712	2252	1403	2016	1293	25197						
186	0.87	0.71	0.37	0.46	0.39	27.2			1.5 fold the local neg	MFI log channel	No	99
190	85.7	64.4	61.9	58.5	39.4	94.1			Ratio sample/neg >1.5	Median log channel	No	86
191	-1.15	-6.93	-2.3	-3.9	0	245			MFI >+30	MFI	Yes	99
193	36.45	9.72	3.37	5	2.75	230.73			Neg control mean x2.5	Geometric mean linear channel	No	
194	9%	0.4%	0.4%	0.2%	0.2%	99%			>2.5%	Median log channel	No	90
195	327	251	243	242	242	2752			Test/Neg control >1.25	Median log channel	Yes	
201	0.5	0.3	0.29	0.3	0.28	16.4			x-mean ≥2	x-mean	No	95
202	1.5	0.5	0.3	1.6	0.6	91.2			5% above the local neg control	Linear scale		
204	2.26	0.35	0.3	0.36	0.33	23.8			0.5 mean log channel (1.5x local neg)	Mena log channel	No	
209	3.9	2	1.1		245	967			>1.3 ratio	Geomean log channel	Yes	94
218	1476	972	1279	521	709.2	3753			591 x1.2		No	
220	187.5	165.5	150.5	148	139.75		633	442	40 linear channel shift	Median linear channel	No	93
227	NT	NT	NT	NT	5.48	8.77			10.96 (2 x local mean log channel)	Meqan log channel	No	78
235	12.82	6.42	5.87	6.89	5.38	232.91			±2SD	Median log channel	No	85
238	1116	742	756	851	734	38.36			MESF serum/MESF neg control		No	
245	9	4	0	1.5	5	19			7 linear channel shift	Mean linear channel	Yes	100
246	46.6%	1.3%	5.9%	2.0%	0.2%	97.2%			30%		No	97
252	0.88	1.05	1.16	1.06	209	495			XM median/Neg median	Median channel ratio	No	80
262	Ratio 1.7 Lysis 20%				1341	54722			Ratio sample/Neg >2 Lysis >12%	Meidan log channel	No	76
268											No	
271	352	205	158	201	151	385			67 log channel shift	Median log channel	No	76
283	4.968	0.203	-0.2545	-0.0495	2.502	54.238			3 channel shift	Channel shift	No	
284	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT

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B-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B03/2015 (COMPARED TO LOCAL NEGATIVE CONTROL)

DESPATCHED ON 10TH MARCH 2015

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	FCXM NIBSC negative control used?	Viability (%)
112		0.428	1.01	2.540	0.605	1.39			Ratio > 2.0	Median log channel	No	95
114	509	476	498	546	475	633			535 (475 + 60)	Median linear channel	No	
115	508	426	452	546	414	667			>60 linear channel shifts	Median linear channel shifts	Yes	
116	2.59	1.94	2.49	4.08	1.84	40.0			Ratio > 1.7	Median log channel	No	
117	23.57	13.51	1.75	30.77	12.87	252.64			Ratio (RMF) > 1.5	Median log channel	Yes	
118	145	135	139	149	141	460			167 (141 + 26)	Median linear channel (MCI)	Yes	85
119	8.4	6.21	.86	8.31	3.44	15			Ratio > 1.7 (B.line 1.5-1.7)	Mnlx	No	95
120	1.17	.97	1.25	2.12	605	17082			Ratio > 2	Median (ratio)	No	100
122	66.5	43.0	56.5	92.0	35.5		201	66	3 SD	Geomean linear values	Yes	
126	546.0	486.0	495	500.0	445	749			>80 linear channel shifts	Median linear channel	No	
130	376	325	362	393	250	445			>80	Median linear channel	No	
139	13	11.6	15.4	21.5	13.5	115			≥ 2 of neg mean log channel	Mean log channel	No	
142	1210	1024	1110	5117	1144.33, 4923	21632, 21794			1611 (3 SD) , 5760 (3 SD)	Median log channel	No	88
144	1.39	1.04	1.20	1.53	1	3.42			Ratio 2.5	Ratio	No	
					8779					MFI		
145	1.580	0.855	1.16	1.760	1.01	9.62			Med log ch test/med log ch neg > mean + 2 SD	Median log channel	No	97
147	311	266	295	360	212	720			>40 linear channel shift	Median linear channel	No	100
154	368	277	258	374	203	5600			Median > 150% control and shape of the curve	MFI	No	
157	197	166	177	182	174	481			203 (Neg+35)	Median linear channel	No	96
159	398	301	304	355	239	675			299 mean linear channel (40 channel shift)	Mean linear channel	No	90
160	178	205	230	266	139	656			>210 (Neg +2SD)	Mean linear channel	No	
163	1.7	1.5	1.4	1.8	1	2.1			1.7	Geomean log channel	Yes	100
167	2041	2550	2109	3570	1050	30105			2SD	Median log channel	No	97
174	0.395	0.371	0.413	3.95	0.728	55.5			Ratio of list: Neg control >1.2 +2SD	X median (log)	No	>90
176	SI 0.22	0.02	0.07	0.19	0	0.49			SI ≥0.3		No	
	MESF 24234	13766	15593	22116	12801	57357						
186	3.33	3.73	3.77	3.1	4.87	27.1			2 fold the local neg	MFI log channel	No	99
190	143.7	105.3	120.7	171.7	65.7	345			Ratio sample/neg >2.5	Median log channel	No	86
191	-12.76	-14.60	-5.18	-3.95	0	375			MFI >+50	MFI	Yes	99
193	113.64	68.80	97.19	168.79	46.79	561.33			Neg control mean x2.5	Geometric mean linear channel	No	
194	12%	9.6%	10%	14%	6%	99%			>10%		No	90
195	393	354	378	380	290	6145			Test/Neg control >1.35	Median log channel	Yes	
201	2.33	1.58	1.95	2.99	1.2	37.7			x-mea ≥2.5	x-mean	No	95
202	15.2	2.8	3.3	2.9	3.2	93.4			8% above the local neg control	Linear scale		
204	9.5	4.64	5.51	10	4.75	91.1			9.5 mean log channel (2x local neg)	Mean log channel	No	
209	2.2	1.6		2.9	1014	2740			>1.8 ratio	Geomean log channel	Yes	94
218	5788	7907	5790	4387	5934.7	4492			3491 x1.7		No	
220	275	228.75	225.5	268	234.5		674	519	40 linear channel shift	Median linear channel	No	93
227	NT	NT	NT	NT		95.2			78.2 (2 x local mean log channel)	Median log channel	No	78
235	38.54	12.47	18.11	41.60	14.20	609.76			±4SD	Median log channel	No	85
238	2165	1786	2314	2817	2070	23288			MESF serum/MESF neg control		No	
245	14	5	7	23	23	49.5			15 linear channel shift	Mean linear channel	Yes	100
246	76.3%	26.9%	59.7%	72.6%	11.5%	96.7%			30%		No	97
252	1.04	1.52	1.79	2.11	148	425			XM median/Neg median	Median channel ratio	No	80
262	Ratio 1.7			2	2208	92847						
	Lysis 20%			32%					Ratio sample/Neg >2	Median log channel	No	76
									Lysis >12%		No	
268											No	
271	375	261	299	400	192	472			106 log channel shift	Median log channel	No	76
283	13.291	-18.174	-25.519	-18.864	124.304	100.376			10 channel shift	Channel shift	No	
284	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT