UKNEQAS for HISTOCOMPATIBILITY and IMMUNOGENETICS
UNITED KINGDOM EXTERNAL QUALITY ASSESSMENT SERVICE

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

T-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B03/2014 (COMPARED TO LOCAL NEGATIVE CONTROL)

DESPATCHED ON 11TH MARCH 2014

HLA PHENOTYPE OF BLOOD DONOR: HLA-A1, A32; B8, B13; Cw6, Cw7; DR7, DR17; DQ2, DQ-

Summary of Results

Total tested	47	42	47	47
Positive	0	12	2	2
Negative	47	30	45	45
Not Tested	1	1	1	1
% Positive	0.0%	28.6%	4.3%	4.3%
% Negative	100.0%	71.4%	95.7%	95.7%
Consensus	**Negative**	**Not Assessed**	**Negative**	**Negative**
HLA Antibody (Defined By CDC)	B12	B8	B57	A2, A28

Lab No.	Serum 1	Serum 2	Serum 3	Serum 4	Date Received	Date Tested	Comments
112	Negative	Negative	Negative	Negative	14-Mar	14-Mar	
114	Negative	Negative	Negative	Negative	13-Mar	14-Mar	
115	Negative	Negative	Negative	Negative	12-Mar	13-Mar	
116	Negative	Positive	Negative	Negative	12-Mar	13-Mar	
117	Negative	Negative	Negative	Negative	13-Mar	13-Mar	
118	Negative	Negative	Negative	Negative	11-Mar	11-Mar	
119	Negative	Negative	Negative	Negative	12-Mar	13-Mar	
120	Negative	Negative	Negative	Negative	12-Mar	13-Mar	T-cell: Ratio/Tem- <1.6 (-)
122	Negative	Negative	Negative	Negative	12-Mar	13-Mar	
126	Negative	Positive	Negative	Negative	11-Mar	12-Mar	
130	Negative	Positive	Negative	Negative	12-Mar	13-Mar	
136	Negative	Negative	Negative	Negative	13-Mar	14-Mar	
138	Negative	Negative	Negative	Negative	13-Mar	13-Mar	
142	Negative	Negative	Negative	Negative	12-Mar	13-Mar	
143	Negative	Positive	Negative	Negative	13-Mar	14-Mar	
144	Negative	Negative	Negative	Negative	13-Mar	14-Mar	
145	Negative	Negative	Negative	Positive	14-Mar	14-Mar	
147	Negative	Negative	Negative	Negative	12-Mar	12-Mar	
154	Negative	Positive	Negative	Negative	12-Mar	13-Mar	
157	Negative	Negative	Negative	Negative	12-Mar	12-Mar	
159	Negative	Equivocal	Negative	Negative	13-Mar	13-Mar	
160	Negative	Negative	Negative	Negative	12-Mar	13-Mar	
163	Negative	Weak Positive	Negative	Negative	12-Mar	12-Mar	
164	Negative	Negative	Negative	Negative	12-Mar	13-Mar	
167	Negative	Negative	Negative	Negative	12-Mar	13-Mar	
169	Negative	Negative	Negative	Negative	14-Mar	14-Mar	
176	Negative	Positive	Negative	Negative	13-Mar	14-Mar	
186	Negative	Equivocal	Negative	Negative	12-Mar	12-Mar	
190	Negative	Positive	Negative	Negative	12-Mar	13-Mar	
191	Negative	Negative	Positive	Negative	12-Mar	13-Mar	
193	Negative	Equivocal	Negative	Negative	12-Mar	12-Mar	
194	Negative	Equivocal	Negative	Negative	12-Mar	12-Mar	
195	Negative	Positive	Negative	Negative	14-Mar	14-Mar	
201	Negative	Negative	Negative	Negative	12-Mar	13-Mar	
202	Negative	Negative	Negative	Negative	13-Mar	13-Mar	
204	Negative	Negative	Negative	Negative	12-Mar	12-Mar	
209	Negative	Negative	Negative	Negative	12-Mar	13-Mar	
218	Negative	Positive	Positive	Positive	12-Mar	14-Mar	Serum 1 was borderline on the cut-off used, but lower than the other negative control cut-offs
220	Negative	Negative	Negative	Negative	12-Mar	13-Mar	
227	NT	NT	NT	NT			
235	Negative	Positive	Negative	Negative	12-Mar	12-Mar	
238	Negative	Negative	Negative	Negative	12-Mar	13-Mar	
245	Negative	Equivocal	Negative	Negative	12-Mar	13-Mar	
246	Negative	Negative	Negative	Negative	12-Mar	12-Mar	
252	Negative	Negative	Negative	Negative	13-Mar	13-Mar	
262	Negative	Negative	Negative	Negative	13-Mar	13-Mar	
271	Negative	Positive	Negative	Negative	16-Mar	17-Mar	
283	Negative	Negative	Negative	Negative	12-Mar	12-Mar	

PLEASE NOTE: THE NEXT DISTRIBUTIONS IS ON 20TH MAY 2014

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T-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B03/2014 (COMPARED TO LOCAL NEGATIVE CONTROL)

DESPATCHED ON 11TH MARCH 2014

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?
112	0.31	0.367	0.333	0.321	0.312	6.41			>1.5 ratio	Median log channel	No
114	219	227	226	218	219	409			269 (219+50)	Median linear channel	No
115	182	210	190	189	186	318			>40 channel shift	Median linear channel shifts	Yes
116	0.19	0.48	0.2	0.21	0.17	28			Ratio >1.7	Median log channel	No
117	3.39	3.71	3.49	3.5	3.43	38.03			Ratio (RMF) >1.3	Median log channel	Yes
118	180	186	191	202	199	736			221 (199+22)	Median linear channel	Yes
119	0.243	0.332	0.185	0.330	0.168	16.9			T-XM: Ratio >1.285 B-line [~1.48]	MulX	No
120	92.5	116	97	104	93	4484			Neg control median x1.6	Median	No
122	6	9	6	7	6		25	10	3SD	Geomean linear values	Yes
126	120.5	188.5	131.5	134.5	111	603			>55	Median linear shift	No
130	145	210	155	160	147	306			>40		No
136	1.9	3	1.4	1.7	1.8	69 NR: 3833			NR >200	Mean channel	No
138	0.03	0.1	0.09	0.04	0	0.89			>0.20	Kolmogorov-Smirnov (D value)	No
142	120	161	120	116	142.33	5980			169.55, 3SD	Median log channel	No
143	8	42	-6	-9	28	847			≥40	Mean linear channel	No
144	MFI 9.11	10.59	8.6	11.46	7.82	61.96					
	Ratio 1.16	1.35	1.1	1.47	1	7.92			1.76		No
145	0.214	0.238	0.263	0.286	0.214	54.6			Med log ch test/Med log ch neg >mean +2SD	Median log channel	No
147	98	125	103	103	96	481			>60 linear channel shift	Median linear channel	No
154	1.46	1.93	1.57	1.66	1.55	41.33			GMFI >115% control x shape of the curve	GMFI	No
157	108.5	111.5	104	107	107.5	181			132.5 (Neg +25)	Median linear channel	No
159	166	203	174	181	156	475			196 (40 mean linear channel shift)	Mean linear channel	No
160	9.2	12.3	9.8	9.3	6.7	16.8			>12.4 (Neg +2SD)	Mean linear channel	No
163	1	2.6	1.3	1.3	1	3.9			2.3 Geomean log channel	Geomean log channel	Yes
164	3	6	4	3	3	81			9 (3x MFI neg control)	MFI	No
167	6	8	5	6	6	449			2SD	Median log channel	No
169	MLC 7.92	7.95	7.05	9.01	7.09	984.96					
	NR 111	112.00	99.00	127.00		13892.00			NR= (MFI serum/MFI neg control) x100 Positive= NR >180 T-cell	Mean log channel	No
176	SI 0.12	0.52	0.16	0.14	0	1.34			SI≥0.5		
	MESF 1.339	2.676	1.426	1.368	1.071	11.36					No
186	0.309	0.402	0.304	0.291	0.285	13.9			1.5 fold of local negative	MFI log channel	No
190	37.65	51.65	38.05	43.7	38.47	74.6			Ratio Sample/Negative >1.2	Mean linear channel	No
191	MFI 3	2.2	6.5	3.4		277			MFI >5		
	0.6%	0.6%	0.9%	0.85%	<1%	94%					No
193	2.5	5.3	2.71	3.66	2.34	338.74			Negative control mean x2.5	Geometric mean linear channel	No
194	0.109	0.114	0.103	0.104	0.102	2			Ratio >1.5	MulX	No
195	295	380	306	317	300	2883			Test/Neg control >1.25	Median log channel	Yes
201	0.29	0.33	0.3	0.35	0.28	8.12			x-mean ratio ≥2	x-mean	No
202	0.8	1.4	1.4	1.2	1.9	100			5% above the local negative control	Linear	
204	0.29	0.42	0.28	0.31	0.31	9.88			0.47 = 1.5x local neg control	Mean log channel	No
209	1.11	1.26	0.99	1.05	287	549			>1.63 ratio	Geomean log channel	Yes
218	84.6	150	115	102	70.4	1653			70.4 x1.2 = 84.48	Geometric MFI	No
220	6.34	6.63	6.41	6.71	6.49		94.16	20.81	2SD		No
227											
235	1.08	5.30	0.85	1.93	1.25	16.3			Median +2SD	Median log channel	No
238	529	727	603	640	604	5102			MESF serum/MESF neg control	MESF	No
245	1	4	0.5	1	6	13.5			7 linear channel shift	Linear channel shift	Yes
246	<1%	<1%	<1%	1.7%	<1%	90.6%			30%		No
252	0.89	0.87	0.83	0.94	50.03	296.93			xm median channel/neg median channel	Median channel ratio	No
262					1701	21553			Sample/Neg >2 Cell lysis >12%	Median channel log	No
271	153	198	166	151	128	377			67 log channel shift	Median log channel	No
283	-22.89	-3.05	-16.95	-23.61	50.03	27.01			20 channel shift	Channel shift	No

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B-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B03/2014 (COMPARED TO LOCAL NEGATIVE CONTROL)

DESPATCHED ON 11TH MARCH 2014

HLA PHENOTYPE OF BLOOD DONOR: HLA-A1, A32; B8, B13; Cw6, Cw7; DR7, DR17; DQ2, DQ-

Summary of Results

Total tested	44	44	41	44
Positive	0	34	20	42
Negative	44	10	21	2
Not Tested	1	1	2	1
% Positive	0.0%	77.3%	48.8%	95.5%
% Negative	100.0%	22.7%	51.2%	4.5%
Consensus	**Negative**	**Positive**	**Not Assessed**	**Positive**
HLA Antibody (Defined By CDC)	B12	B8	B57	A2, A28

Lab No.	Serum 1	Serum 2	Serum 3	Serum 4	Date Received	Date Tested	Comments
112	Negative	Positive	Positive	Positive	14-Mar	14-Mar	
114	Negative	Negative	Negative	Negative	13-Mar	14-Mar	
115	Negative	Positive	Negative	Positive	12-Mar	13-Mar	
116	Negative	Negative	Negative	Positive	12-Mar	13-Mar	
117	Negative	Positive	Positive	Positive	13-Mar	13-Mar	
118	Negative	Positive	Negative	Positive	11-Mar	11-Mar	
119	Negative	Positive	Positive	Positive	12-Mar	13-Mar	
120	Negative	Positive	Negative	Positive	12-Mar	13-Mar	B-cell: Ratio/Tem- <2 (-)
122	Negative	Positive	Positive	Positive	12-Mar	13-Mar	
126	Negative	Positive	Positive	Positive	11-Mar	11-Mar	
130	Negative	Positive	Positive	Positive	12-Mar	13-Mar	
142	Negative	Positive	Negative	Positive	12-Mar	13-Mar	
144	Negative	Positive	Negative	Positive	13-Mar	14-Mar	
145	Negative	Negative	Negative	Positive	14-Mar	14-Mar	
147	Negative	Positive	Equivocal	Positive	12-Mar	12-Mar	
154	Negative	Positive	Positive	Positive	12-Mar	13-Mar	
157	Negative	Negative	Negative	Positive	12-Mar	12-Mar	
159	Negative	Positive	Positive	Positive	13-Mar	13-Mar	
160	Negative	Positive	Positive	Positive	12-Mar	13-Mar	
163	Negative	Weak Positive	Negative	Positive	12-Mar	12-Mar	
164	Negative	Negative	Negative	Positive	12-Mar	13-Mar	
167	Negative	Positive	Negative	Positive	12-Mar	13-Mar	
169	Negative	Negative	Negative	Negative	14-Mar	14-Mar	
176	Negative	Positive	Negative	Positive	13-Mar	14-Mar	
186	Negative	Negative	Negative	Weak Positive	12-Mar	12-Mar	
190	Negative	Positive	Positive	Positive	12-Mar	13-Mar	
191	Negative	Negative	Negative	Positive	12-Mar	13-Mar	
193	Negative	Positive	Equivocal	Positive	12-Mar	12-Mar	
194	Negative	Positive	Weak Positive	Positive	12-Mar	12-Mar	
195	Negative	Positive	Positive	Positive	14-Mar	14-Mar	
201	Negative	Positive	Negative	Positive	12-Mar	13-Mar	
202	Negative	Negative	Negative	Positive	13-Mar	13-Mar	
204	Negative	Positive	Negative	Positive	12-Mar	12-Mar	
209	Negative	Positive	Positive	Positive	12-Mar	13-Mar	
218	Negative	Negative	NT	Positive	12-Mar	14-Mar	The cells incubated with serum 3 lysed, resulting in insufficient B-cells for analysis
220	Negative	Weak Positive	Negative	Positive	12-Mar	13-Mar	
227	NT	NT	NT	NT			
235	Negative	Positive	Positive	Positive	12-Mar	12-Mar	
238	Negative	Positive	Positive	Positive	12-Mar	13-Mar	
245	Negative	Positive	Weak Positive	Positive	12-Mar	13-Mar	
246	Negative	Positive	Positive	Positive	12-Mar	12-Mar	
252	Negative	Positive	Positive	Positive	13-Mar	13-Mar	
262	Negative	Positive	Weak Positive	Positive	13-Mar	13-Mar	
271	Negative	Positive	Positive	Positive	16-Mar	17-Mar	
283	Negative	Positive	Negative	Positive	12-Mar	12-Mar	

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B-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B03/2014 (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	FCXM NIBSC negative control used?
112	0.44	2.68	1.89	10.4	.448	51.2			>2.0 ratio	Median log channel	No
114	412	425	426	475	433	604			493 (433+60)	Median linear channel	No
115	402	507	469	648	383	505			>100 channel shift	Median linear channel shifts	Yes
116	3.66	10.7	6.83	24.1	6.93	58.7			Ratio >1.7	Median log channel	No
117	13	46.9	21.86	56.83	11.3	168.59			Ratio (RMF) >1.5	Median log channel	Yes
118	137	175	147	272	139	472			165 (139+26)	Median linear channel	Yes
119	7.46	14.8	7.71	27.5	2.36	44.5			B-XM: Ratio >1.7 B-line [1.5-1.7]	MulX	No
120	1150	2195	1456	7306	967	11321			Neg control median x2	Median	No
122	44	133	71	370.5	24		220	74	3SD	Geomean linear values	Yes
126	296	503.5	173	645	253	742			>80	Median linear shift	No
130	337	504	425	641	307	506			>80		No
142	1626	250	1700	5844	1654.33	16621			2042.26, 3SD	Median log channel	No
144	MFI 43.32	107.64	67.02	375.66	30.48	272.77					
	Ratio 1.42	3.53	2.2	12.32	1	8.95			3		No
145	0.779	2.01	1.55	10.8	0.962	95.3			Med log ch test/Med log ch neg >mean +2SD	Median log channel	No
147	206	394	317	520	198	610			>60 linear channel shift	Median linear channel	No
154	8.51	18.13	14.21	74.75	8.83	205.89			GMFI >115% control x shape of the curve	GMFI	No
157	153.5	157.5	140	257.5	154	839			219 (Neg +65)	Median linear channel	No
159	316	510	426	611	265	725			325 (60 mean linear channel shift)	Mean linear channel	No
160	74.5	360	189	1258	30.9	297			>65 (Neg +2SD)	Mean linear channel	No
163	1.1	2.2	1.4	4.4	1	1.6			1.7 Geomean log channel	Geomean log channel	Yes
164	28	81	62	133	38	453			114 (3x MFI neg control)	MFI	No
167	31	133	47	386	34	1139			2SD	Median log channel	No
169	MLC 50.58	56.32	61.5	65.48	7.09	1283.37					
	NR 85	107	104	111		2166			NR= (MFI serum/MFI neg control) x100 Positive= NR >200 B-cell	Mean log channel	No
176	SI 0.08	0.32	0.14	0.58	0	0.38			SI≥0.30		
	MESF 22.964	41.545	27.709	99.42	17.931	66.738					No
186	1.13	1.36	1.14	2.76	1.48	20.8			Twice the local negative	MFI log channel	No
190	80.45	432.5	182	986	63.8	756			Ratio Samples/Negative >1.4	Mean linear channel	No
191	MFI -30	-0.3	8	35		292			MFI >10		
	5.6%	6.7%	9.3%	17%	<1%	93%					No
193	130.72	379.35	245.4	972.55	102.83	995.92			Negative control mean x2.5	Geometric mean linear channel	No
194	0.5	1.8	0.8	2	0.3	17			Ratio >1.5	MulX	No
195	442	1411	785	4634	472	12051			Test/Neg control >1.35	Median log channel	Yes
201	2.04	4.43	2.99	14.9	1.73	26.8			x-mean ratio ≥2.5	x-mean	No
202	3.2	5.6	8.5	25	10	100			8% above the local negative control	Linear	
204	4.36	12.1	7.34	29.9	4.01	38.1			8.02 = 2x local neg control	Mena log channel	No
209	1.32	6.28	3.09	20.37	607	2038			>1.69	Geomean log channel	Yes
218	4019	5409	NT	9220	3751	5485			3751 x1.7 = 6376.7	Geometric MFI	No
220	10.02	12.06	11.04	26.22	10.37		381.74	53.17	2SD		No
227											
235	2.46	4.90	16.0	7.49	0.80	2.80			Median +2SD	Median log channel	No
238	1731	7869	5089	21746	2164	25433			MESF serum/MESF neg control	MESF	No
245	3.5	37.5	18	90	47	88			20 linear channel shift	Linear channel shift	Yes
246	13.6%	77.9%	93.4%	96.7%	6.5%	87.9%			30%		No
252	1.39	3.43	3.23	7.10	108.43	582.94			xm median channel/neg median channel	Median channel ratio	No
262	Ratio	2.24	1.6	5.77							
	Lysis	51%	17%	83%	2864	132760			Samples/Neg >2 Cell lysis >12%	Median channel log	No
271	215	511	410	679	187	636			106 log channel shift	Median log channel	No
283	-53.46	142.57	26.19	251.75	310.51	327.21			140 channel shift	Channel shift	No