

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

T-CELL AND B-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B02/2017 (COMPARED TO LOCAL NEGATIVE CONTROL)

DISPATCHED ON 17TH JANUARY 2017

HLA PHENOTYPE OF BLOOD DONOR: HLA-A1, A11; B27, B35; Cw2, Cw4; DR1, DR16; DQ5, DQ-

Summary of Results												
T-cells					B-cells							
Total tested	46	48	49	49	46	39	43	47				
Positive	3	36	1	36	1	18	14	45				
Negative	43	12	48	13	45	21	29	2				
NT/Equivocal	11	9	8	8	9	16	12	8				
% Positive	6.5%	75.0%	2.0%	73.5%	2.2%	46.2%	32.6%	95.7%				
% Negative	93.5%	25.0%	98.0%	26.5%	97.8%	53.8%	67.4%	4.3%				
Consensus	Negative	Positive	Negative	Not Assessed	Negative	Not Assessed	Not Assessed	Positive				
HLA Antibody Specificity (Defined By CDC)	B57	A11	B44	A2, A28, A9	B57	A11	B44	A2, A28, A9				
Lab No.	Serum 1	Serum 2	Serum 3	Serum 4	Serum 1	Serum 2	Serum 3	Serum 4	Date Received	Date Tested	Viability (%)	Comments
101	Negative	Positive	Negative	Positive	Negative	Negative	Negative	Positive	18-Jan	19-Jan		B-cells results after pronase treatment
112	NT	NT	NT	NT	NT	NT	NT	NT	23-Jan	23-Jan		Cell viability 0%
114	Equivocal	Positive	Negative	Positive	Negative	Negative	Positive	Positive	18-Jan	19-Jan		Serum 1 - T cell results are equivocal (cytometer readings are in a grey zone) and not in agreement with B cell results. Serum is probably negative.
115	Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive	18-Jan	19-Jan		
117	Negative	Positive	Negative	Equivocal	Negative	Equivocal	Negative	Positive	19-Jan	19-Jan	95	Low number of B cells noted
118	NT	NT	NT	NT	NT	NT	NT	NT	19-Jan	NT		The samples were not tested due to a delivery delay as discussed with Luke Gardner
119	Negative	Positive	Negative	Positive	Negative	Positive	Equivocal	Positive	16-Jan	17-Jan	95	
120	NT	NT	NT	NT	NT	NT	NT	NT	20-Jan	20-Jan	0	Sample delivery delay
122	Negative	Positive	Negative	Positive	Negative	Negative	Positive	Positive	18-Jan	19-Jan	90	
126	Negative	Negative	Negative	Positive	Negative	Positive	Negative	Positive	19-Jan	20-Jan	90	
130	Negative	Positive	Negative	Positive	Negative	Positive	Positive	Positive	18-Jan	19-Jan	99	
133	Negative	Negative	Negative	Negative	Negative	Negative	Equivocal	Positive	19-Jan	20-Jan	99	
136	Negative	Positive	Negative	Negative	Negative	Negative	Positive	Positive	18-Jan	19-Jan	99	
138	Negative	Negative	Negative	Negative	Negative	Negative	Positive	Positive	18-Jan	18-Jan	90	
139	Negative	Positive	Negative	Positive	Negative	Negative	Negative	Positive	20-Jan	20-Jan	80	
142	Positive	Positive	Negative	Positive	Negative	Negative	Positive	Positive	19-Jan	20-Jan	94	
143	Negative	Negative	Negative	Negative	NT	NT	NT	NT	19-Jan	19-Jan	91	
144	Negative	Positive	Negative	Positive	Negative	Negative	Negative	Positive	18-Jan	19-Jan		
145	Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive	18-Jan	19-Jan	90	
147	Negative	Positive	Negative	Positive	Negative	Equivocal	Negative	Positive	18-Jan	19-Jan	100	Sera 2 B cells displays a negative reaction which is discrepant with the reaction observed on T cells
149	Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive	18-Jan	19-Jan	83	
154	Positive	Positive	Negative	Positive	Negative	Positive	Equivocal	Positive	19-Jan	20-Jan	NT	
157	Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive	18-Jan	18-Jan	98	
159	Negative	Positive	Negative	Positive	Negative	Equivocal	Positive	Positive	19-Jan	20-Jan	100	
160	Negative	Positive	Negative	Positive	Negative	Negative	Positive	Positive	18-Jan	19-Jan		
163	NT	NT	NT	NT	NT	NT	NT	NT	19-Jan	NT		Sample delivery delay
167	Negative	Positive	Negative	Positive	Negative	Negative	Negative	Positive	18-Jan	19-Jan	98	
169	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Positive	18-Jan	19-Jan	98	
176	Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive	19-Jan	20-Jan		
186	NT	Positive	Negative	Positive	Negative	Positive	Negative	Positive	18-Jan	18-Jan	99	Serum 1 NT because the tube cytometer spilled
190	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	18-Jan	19-Jan	78.4	
191	Negative	Positive	Negative	Positive	Negative	Negative	Negative	Positive	18-Jan	19-Jan	100	
193	Equivocal	Positive	Negative	Positive	Negative	Equivocal	Negative	Positive	18-Jan	18-Jan		
194	Negative	Positive	Negative	Positive	Negative	Positive	Equivocal	Positive	19-Jan	20-Jan		Few cells
195	NT	NT	NT	NT	NT	NT	NT	NT	19-Jan	20-Jan	NT	Sample delivery delay
201	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Positive	18-Jan	19-Jan	97	
202	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	18-Jan	18-Jan	60	
204	Negative	Positive	Negative	Positive	Negative	Positive	Positive	Positive	18-Jan	18-Jan		
206	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Positive	18-Jan	19-Jan		
209	Negative	Equivocal	Negative	Positive	Negative	Equivocal	Negative	Positive	17-Jan	19-Jan	90	
218	NT	NT	NT	NT	NT	NT	NT	NT	27-Jan	NT		Sample delivery delay
220	Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive	19-Jan	20-Jan	92	
227	NT	NT	NT	NT	NT	NT	NT	NT	18-Jan			Samples were not tested
235	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Positive	20-Jan	20-Jan	80	Cell count and viability rate are low.
238	Negative	Equivocal	Negative	Positive	Negative	Equivocal	Negative	Positive	19-Jan	20-Jan		Serum 2 weakly positive on T and B cells. Antibody identified and equivocal probably positive
245	Negative	Positive	Negative	Positive	Negative	Equivocal	Positive	Positive	18-Jan	19-Jan	100	
246	Negative	Positive	Negative	Positive	Negative	Negative	Negative	Positive	19-Jan	20-Jan	93	
252	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Positive	19-Jan	19-Jan	75	
260	Negative	Positive	Negative	Positive	Negative	Negative	Negative	Positive	19-Jan	19-Jan		
262	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Positive	19-Jan	20-Jan	52	samples arrived after three days, completely cold and the viability of cells was very low - some results cannot be interpreted due to low cell count
271	Negative	Positive	Negative	Positive	Negative	Positive	Positive	Positive	22-Jan	23-Jan	98	Specimens have been received 5 days later from shipping date and cells were clumped.
284	Negative	Positive	Equivocal	Positive	Negative	Positive	Positive	Positive	18-Jan	18-Jan		Coefficient of variation of sample 3' duplicates for T cells is superior to 20%
293	Negative	Positive	Negative	Positive	Negative	Positive	Positive	Positive	19-Jan	19-Jan	80	Sample 1 B cell Flow crossmatch has been reported as equivocal because there was only a minor shift seen from the negative control.
297	Equivocal	Positive	Negative	Positive	Negative	Equivocal	Negative	Positive	18-Jan	19-Jan		Not enough cells to test duplicates. Serum 2 on B cells is "Equivocal" because the result is just under the positive value with a T cell positive XM
341	Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive	18-Jan	19-Jan	98	
351	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Positive	21-Jan	21-Jan	94.8	
358	Positive	Positive	Negative	Positive	Positive	Positive	Positive	Positive	18-Jan	18-Jan		

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Lab No.	Serum 1		Serum 2		Serum 3		Serum 4		MoU range	Negative control (local)	Positive control (local)	Strong positive (local)	Weak positive (local)	Positive result value	Cytometer reading units
	cytometer reading	within MoU	cytometer reading	within MoU	cytometer reading	within MoU	cytometer reading	within MoU							
101	0.241	No	0.346	No	0.219	No	0.356	No	MFI samples/MFI negative control near 1.5	0.213	1.16			1.5 SD (0.32 to 0.33)	MFI
112	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
114	224	No	298	Yes	161	Yes	271	Yes	50 +/- 10	167	368			50 linear channel shift	Median channel
115	300		422		253		378			276	416			>40	
117	5.34	No	8.20	No	4.91	No	eq	Yes	6.66 - 7.17	5.12	63.45			Ratio (RMF) >1.3	Median log channel
118	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
119	0.21	No	0.83	No	0.25	Yes	0.47	Yes	1.289 - 1.45	0.18	0.62			Ratio >1.289	MnlX
120	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
122	19.00	No	57.60	No	11.00	No	72.80	No		13.90		160.50	56.20	3SD	Geomean linear values
126	106		165		98		264		?	96	541			>80 linear channel shift	Median linear channel
130	156		244		129		233			131	222			>40	Mean channel shift
133	7.00		5.00		5.00		8.00			7.00	63.00			> x1.5 of neg control	MFI
136	4.00		8.30		3.30		4.90			3.70	30 (NR = 796)			NR >200	Geomean channel
138	0.06		0.15		0.05		0.13			0.00	0.94			>0.2	D value Kolmogorov-Smirnov Statistic
139	0.43		2.54		0.29		1.69			0.32	40.50			0.48	Median
142	179.00	Yes	248.00	No	172.00	No	201.00	No		156.00	4587.00			178 (156 + 3SD)	Median log channel
143	18		0		7		0		N/A	3	74			>40 channel shift	Mean channel shift
144	1.69		2.40		1.12		2.25			939.00	8.47			1.7	Median -> Ratio
145	0.41		0.96		0.37		0.95			0.46	57.60			2SD of the ratio	Median log channel
147	117.00		170.00		90.00		147.00			87.00	492.00			>40 linear channel shift	Linear channel
149	0.33	No	0.64	Yes	0.35	No	0.76	No		0.42	102.00			2SD	Median log channel
154	131		292		69		202			65	1306			median>150% of control and shape of the c	MFI
157	120		168		117		172			121	459			2SD (+30)	Median linear channel
159	172.00		283.00		132.00		260.00			134.00	450.00			40 mean MLC shift (174 MLC)	Mean linear channel (MLC)
160	11.7		38.3		13.7		40.1			7.9	218			>15.5 (NEGATIVE+2SD))	Mean linear
163	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
167	250		723		183		734			220	26394.5			2SD	Median log channel
169	270		330		250		329			286	510			=>50	Median channel
176	1208		8109		774		4789			768	16546			MFI-shift >= 0.40	MFI Shift
186	NT	NT	2.73	No	0.33	No	2.39	No		0.40	21.10			1.5 fold the local negative control	MFI - log channel
190	50.17		53.23		49.9		49.6		ND	49.4	52.8			Ratio sample/negatif>1,5	Median log channel
191	2.8	No	63	No	-4	No	37	Yes	25-35	0	319			0	Mean
193	10.55		25.23		4.22		23.18			4.12	286.11			Negative control mean x 2.4	Geometric mean linear channel
194															Median log channel
195	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
201	0.56		0.99		0.48		0.64			0.49	15.80			S/NK >=2.0	X-mean
202	0.70%	No	0.90%	No	0.50%	No	1.60%	No	4%+Neg% < TCell% < 5%+Neg%	0.60%	99.80%			5%	Cell Percentage
204	0.381		2.01		0.324		1.24			0.315	13.3			0.473 = 1.5 x loc neg control	Mean log channel
206	4.25		4.13		4.28		4.49			4.26	11.98			Ratio MFI(Serum)/ MFI (Neg Control) >1.07	MFI
209										102.00	418.00			1.6	Geometric mean log channel (ratio)
218	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
220	3273.50		13967.50		1855.00		15794.00			1997.25	261705.00			6000 above the mean of the negative control	Linear acquisition, linear values
227															NT
235	1.47		3.05		1.32		3.62	Yes		1.15	95.60			>2 of negative control serum median log ch	Median log channel
238	991.00		1639.00		1026.00		1706.00			1017.00	18593.00			MESF serum/MESF negative control	MESF
245	1.8	No	7.3	No	0.3	No	5.8	Yes	5-7	5.8	7			Linear channel shift	Median log channel
246	1.21		4.25		1.31		4.35			36.35	1.75			Median log FI	Median log channel
252	1.19		1.12		1.48		1.19			34.91	248.05			Median ratio ± 2SD	Median channel ratio
260	109.93	No	315.12	No	125.66	No	290.47	No	1.8 x MFI (neg) > uncertainty < 2 x MFI	90.25	1086.85			2 x negative control MFI	MFI
262	945		1531		715		1160			975	14337			1.5SD	Median log channel
271	136	No	345	No	110	No	319	No		117	686			64	Median log channel
284	935	No	1106	No	1088	No	1088	No	1,10 < ratio < 1,20	881				sample serum / negative control: ratio > 1,2	median log channel
293	1.07	Yes	3.07	Yes	0.738	Yes	2.48	Yes	4.8	0.695	36.5	3119.00	988.00	10 CHANNEL SHIFT	Channel shift
297	75.00	Yes	236.00	No	40.00	No	140.00	No	1.3 - 1.8 x T neg	46.00	469.00			1.3 x T neg	Median MFI
341	3.67	No	6.74	No	4.07	No	8.11	No		3.6	30.35			3SD	Geomean linear values
351	219	No	336	No	208	No	298	No	500 + negative results	206	7738			500+NEGATIVE	MFI
358														3x neg	

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Lab No.	Serum 1		Serum 2		Serum 3		Serum 4		MoU range	Negative control (local)	Positive control (local)	Strong positive (local)	Weak positive (local)	Positive result value	Cytometer reading units
	cytometer reading	within MoU	cytometer reading	within MoU	cytometer reading	within MoU	cytometer reading	within MoU							
101	0.34	No	0.50	No	0.32	No	3.80	No	MFI samples/MFI negative control near 2	0.33	3.25			2SD (0.65)	MFI
112	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
114	384.00	Yes	425.00	Yes	605.00	Yes	589.00	Yes	60 +/- 10	397.00	507.00			60 linear channel shift	median channel
115	349.00		432.00		392.00					625.00	672.00			>60	
117	8.77	No	eq	Yes	8.47	No	24.63	No	13.71 - 15.54	9.14	234.37			Ratio (RMF) >1.5	Median log channel
119	2.49	No	3.92	Yes	8.87				1.5 - 1.7	13.90	33.60			Ratio >1.7	Mnlx
120	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
122	126.30	No	151.10	No	205.60	No	956.50	No		103.90		532.70	212.40	3SD	Geomean linear values
126	97.00		262.00		141.00		479.00		?	104.00	714.00			>120 linear channel shift	Median linear channel
130	244.00		379.00		382.00		522.00			223.00	414.00			>80	Mean channel shift
133	4.00		3.00		12.00		24.00			4.00	80.00			> x2 of neg control	MFI
139	4.68		6.89		6.36		32.00			4.77	79.00			9.53	Median
142	431.00	No	458.00	No	835.00	No	1268.00	No		523.00	11048.00			580 (523 + 3SD)	Median log channel
144	1.62		1.88		2.47		7.45			2517.00	6.36			2.5	Median -> Ratio
145	1.06		2.22		1.45		6.96			1.69	56.69			2SD of the ratio	Median log channel
147	206.00		228.00		206.00		345.00			208.00	677.00			>60 linear channel shift	Linear channel
149	0.60	No	4.40	Yes	2.38	No	12.10	No		2.86	151.00			2SD	Median log channel
154	506.00		731.00		575.00		2281.00			249.00	2263.00			median>250% of control and shape of the curve	Median Fluorescence Intensity
157	124.00		208.00		193.00		311.00			156.00	551.00			2SD	median linear channel
159	288.00		357.00		392.00		504.00			255.00	578.00			100 MLC shift (355 MLC)	
160	71.60		85.20		264.00		276.00			52.30	360.00			>105.3 (NEGATIVE + 2SD)	MEAN LINEAR
163	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
167	1023.00		1562.00		996.00		5100.00			1196.00	53852.00			2SD	Median log channel
169	327.00		357.00		323.00		563.00			362.00	652.00			=>80	MEDIAN CHANNEL
176	5410.00		11873.00		7982.00		57763.00			7099.00	43434.00			MFI-shift >= 0.22	MFI Shift
186	1.86	No	3.31	No	2.14	Yes	11.80	No		1.52	27.20			2 fold the local negative control	MFI - log channel
190	48.4		54.87		44.13		64.87		ND	56.7	189.00			Ratio sample/negatif>2.5	Median log channel
191	-5.00	No	53.00	No	32.00	No	129.00	No	101-120	0.00	435.00			0	MEAN
193	73.36		83.20		54.55		306.10			52.35	430.68			Negative control mean x 1.9	Geometric mean linear channel
194															Median channel log
195	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
201	1.86		2.63		2.56		4.80			2.46	40.20			S/NK >=2.5	X-mean
202	0.01	No	0.02	No	0.16	No	0.08	No	7%+Neg% < BCell% < 8%+Neg%	0.02	0.99			0.08	Cell Percentage
204	0.95		4.20		16.10		19.00			1.43	68.30			2.86 = 2 x loc neg control	Mean log channel
206	5.52		6.63		6.10		8.10			5.95	24.64			Ratio MFI(Serum)/ MFI (Neg Control) >1.17	MFI
209										632.00	1534.00			1.9	Geometric mean log channel (ratio)
218	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
220	3888.00		10553.00		3708.50		81685.00			4021.50	261761.00			6000 above the mean of the negative controls	Linear acquisition, linear values
227															
235	5.40		5.38		19.99		48.26			4.53	609.76			>18 of negative control serum median log channel	median log channel
238	1922		2772		1958		10328			2135	27670			MESF serum/MESF negative control	MESF
245	3.20	No	9.20	No	22.20	No	47.20	No	13-15	56.70	54.34			15	linear channel shift
246	1.29		2.33		0.83		4.97			56.70	54.34			2.5	Median log FI
252	0.90		1.05		1.74		3.16			52.80	1345.57			Median ratio ± 2SD	Median channel ratio
260	527.04	No	645.90	No	1995.04	No	1749.60	No	1.8 x MFI (neg) > uncertainty < 2 x MFI	674.80	2398.94			2 x negative control MFI	MFI
262	1790.00		2697.00		1995.00		8706.00			2144.00	40441.00			1.5SD	MEDIAN CHANNEL LOG
271	222.00	No	340.00	No	206.00	No	598.00	No		206.00	741.00			90	Median log channel
284	753.00	No	1000.00	No	2515.00	No	1795.00	No	1,10 < ratio < 1,20	782.00				sample serum / negative control: ratio > 1,2	median log channel
293	3.66	Yes	12.80	Yes	2.34	Yes	10.20	Yes	4.38	2.24	65.00			20 CHANNEL SHIFT	CHANNEL SHIFT
297	420.00	No	563.00	No	426.00	No	2276.00	No	1.5 - 2 x T neg	390.00	683.00			1.5 x T neg	Median MFI
341	6.23	No	9.33	No	19.47	No	39.84	No		9.81	78.37			3SD	Geo mean Linear Values
351	354.00	No	459.00	No	325.00	No	1388.00	No	2500 + negative results	334.00	6954.00			2500+NEGATIVE	MFI
358															