

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

T-CELL AND B-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B05/2016 (COMPARED TO LOCAL NEGATIVE CONTROL)

DISPATCHED ON 17TH MAY 2016

HLA PHENOTYPE OF BLOOD DONOR: HLA-A2, A-; B7, B49; Cw7, Cw-; DR7, DR15; DQ6, DQ9

| Summary of Results | | | | | | | | | | | | | | | | |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|---------------------|-----------------|-----------------|---------------|-------------|------------------------------------|--|--|--|--|--|
| T-cells | | | | | B-cells | | | | | | | | | | | |
| Total tested | 48 | 48 | 47 | 49 | 44 | 42 | 44 | 44 | | | | | | | | |
| Positive | 2 | 3 | 1 | 2 | 3 | 14 | 2 | 2 | | | | | | | | |
| Negative | 46 | 45 | 46 | 47 | 41 | 28 | 42 | 42 | | | | | | | | |
| NT/Equivocal | 4 | 4 | 5 | 3 | 5 | 7 | 5 | 5 | | | | | | | | |
| % Positive | 4.2% | 6.3% | 2.1% | 4.1% | 6.8% | 33.3% | 4.5% | 4.5% | | | | | | | | |
| % Negative | 95.8% | 93.8% | 97.9% | 95.9% | 93.2% | 66.7% | 95.5% | 95.5% | | | | | | | | |
| Consensus | Negative | Negative | Negative | Negative | Negative | Not Assessed | Negative | Negative | | | | | | | | |
| HLA Antibody Specificity (Defined By CDC) | B12 | B12 | A1 | B15 | B12 | B12 | A1 | B15 | | | | | | | | |
| 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 | Negative | Negative | Negative | Negative | Negative | Negative | 18-May | 19-May | | | | | | |
| 112 | NT | NT | NT | NT | NT | NT | NT | NT | 20-May | 23-May | Low cell viability | | | | | |
| 114 | Negative | Negative | Negative | Negative | Negative | Negative | Negative | Negative | 18-May | 19-May | | | | | | |
| 115 | Negative | Negative | Negative | Negative | Negative | Negative | Negative | Negative | 18-May | 19-May | | | | | | |
| 116 | Negative | Negative | Negative | Negative | Negative | Negative | Negative | Negative | 19-May | 19-May | | | | | | |
| 117 | Negative | Negative | Negative | Negative | Negative | Positive | Negative | Negative | 19-May | 19-May | | | | | | |
| 118 | Negative | Negative | Negative | Negative | Negative | Negative | Negative | Negative | 18-May | 18-May | | | | | | |
| 119 | Negative | Negative | Negative | Negative | Negative | Negative | Negative | Negative | 18-May | 19-May | | | | | | |
| 120 | Negative | Negative | Negative | Negative | Negative | Negative | Negative | Negative | 18-May | 19-May | | | | | | |
| 122 | Negative | Negative | Negative | Negative | Negative | Negative | Negative | Negative | 18-May | 19-May | | | | | | |
| 126 | Negative | Negative | Negative | Negative | Positive | Positive | Positive | Negative | 18-May | 19-May | | | | | | |
| 130 | Negative | Negative | Negative | Negative | Negative | Positive | Negative | Negative | 18-May | 19-May | | | | | | |
| 133 | Negative | Negative | Negative | Negative | Negative | Positive | Negative | Negative | 20-May | 20-May | | | | | | |
| 136 | Negative | Negative | Negative | Negative | | | | | 17-May | 18-May | | | | | | |
| 138 | Negative | Negative | Negative | Negative | | | | | 19-May | 19-May | | | | | | |
| 139 | NT | NT | NT | NT | NT | NT | NT | NT | 20-May | | Cytometer failure | | | | | |
| 142 | Negative | Negative | Negative | Positive | Negative | Negative | Negative | Positive | 19-May | 20-May | | | | | | |
| 143 | Negative | Negative | Negative | Negative | | | | | 19-May | 19-May | | | | | | |
| 144 | Negative | Negative | Negative | Negative | Negative | Negative | Negative | Negative | 18-May | 19-May | | | | | | |
| 145 | Negative | Negative | Negative | Negative | Negative | Negative | Negative | Negative | 18-May | 19-May | | | | | | |
| 147 | Negative | Negative | Negative | Negative | Negative | Positive | Negative | Negative | 18-May | 18-May | | | | | | |
| 154 | Negative | Negative | Negative | Negative | Negative | Negative | Negative | Negative | 19-May | 19-May | | | | | | |
| 157 | Negative | Negative | Negative | Negative | Negative | Positive | Negative | Negative | 18-May | 18-May | | | | | | |
| 159 | Negative | Negative | Negative | Negative | Negative | Equivocal | Negative | Negative | 19-May | 20-May | | | | | | |
| 160 | Negative | Negative | Negative | Negative | Equivocal | Negative | Negative | Negative | 18-May | 19-May | | | | | | |
| 163 | Negative | Negative | Negative | Negative | Equivocal | Equivocal | Equivocal | Equivocal | 20-May | 20-May | Duplicates on B-cells are not good | | | | | |
| 167 | Negative | Negative | Negative | Negative | Negative | Negative | Negative | Negative | 18-May | 20-May | | | | | | |
| 169 | Negative | Negative | Negative | Negative | Negative | Positive | Negative | Negative | 18-May | 19-May | | | | | | |
| 176 | Negative | Negative | Negative | Negative | Negative | Negative | Negative | Negative | 18-May | 20-May | | | | | | |
| 186 | Negative | Negative | Negative | Negative | Negative | Negative | Negative | Negative | 18-May | 18-May | | | | | | |
| 190 | Equivocal | Equivocal | Equivocal | Negative | Negative | Negative | Negative | Negative | 18-May | 19-May | | | | | | |
| 191 | Negative | Positive | Positive | Negative | Negative | Positive | Positive | Negative | 18-May | 18-May | | | | | | |
| 193 | Negative | Negative | Negative | Negative | Negative | Negative | Negative | Negative | 18-May | 18-May | | | | | | |
| 194 | Negative | Negative | Negative | Negative | Positive | Positive | Equivocal | Equivocal | 18-May | 19-May | | | | | | |
| 195 | Negative | Negative | Negative | Negative | Negative | Positive | Negative | Negative | 20-May | 20-May | | | | | | |
| 201 | Negative | Negative | Negative | Negative | Negative | Negative | Negative | Negative | 18-May | 19-May | | | | | | |
| 202 | Negative | Negative | Negative | Negative | Negative | Negative | Negative | Negative | 18-May | 18-May | | | | | | |
| 204 | Negative | Negative | Negative | Negative | Negative | Negative | Negative | Negative | 18-May | 18-May | | | | | | |
| 209 | Negative | Positive | Negative | Negative | Negative | Equivocal | Negative | Negative | 18-May | 20-May | | | | | | |
| 218 | Positive | Positive | Negative | Positive | Positive | Positive | Negative | Positive | 20-May | 20-May | | | | | | |
| 220 | Negative | Negative | Negative | Negative | Negative | Positive | Negative | Negative | 18-May | 19-May | | | | | | |
| 227 | NT | NT | NT | NT | NT | NT | NT | NT | 18-May | | Technical failure | | | | | |
| 235 | Negative | Negative | Negative | Negative | Negative | Negative | Negative | Negative | 18-May | 18-May | | | | | | |
| 238 | Negative | Negative | Negative | Negative | Negative | Negative | Negative | Negative | 18-May | 19-May | | | | | | |
| 245 | Negative | Negative | Negative | Negative | Negative | Negative | Negative | Negative | 19-May | 19-May | | | | | | |
| 246 | Negative | Negative | Negative | Negative | Negative | Negative | Negative | Negative | 18-May | 18-May | | | | | | |
| 252 | Negative | Negative | Negative | Negative | Negative | Negative | Negative | Negative | 20-May | 20-May | | | | | | |
| 262 | Negative | Negative | Negative | Negative | Negative | Positive | Negative | Negative | 18-May | 18-May | | | | | | |
| 271 | Negative | Negative | Negative | Negative | Negative | Negative | Negative | Negative | 19-May | 19-May | | | | | | |
| 284 | Negative | Negative | Negative | Negative | Negative | Positive | Negative | Negative | 18-May | 18-May | | | | | | |
| 297 | Positive | Positive | Equivocal | Negative | Negative | Negative | Negative | Negative | 18-May | 19-May | | | | | | |
| 341 | Negative | Negative | Negative | Negative | Negative | Equivocal | Negative | Negative | 18-May | 19-May | | | | | | |

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T-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B05/2016 (COMPARED TO LOCAL NEGATIVE CONTROL)

DISPATCHED ON 17TH MAY 2016

| 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 | | | | | | | | | | MFI | |
| 112 | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT | 30 |
| 114 | 166 | 193 | 208 | 182 | 205 | 432 | | | 255 (50 linear channel shift) | Median linear channel | 92 |
| 115 | 259 | 272 | 281 | 252 | 277 | 382 | | | >40 | Median linear channel shifts | |
| 116 | 0.17 | 0.19 | 0.16 | 0.22 | 0.2 | 15.1 | | | ratio >1.7 | Median log channel | |
| 117 | 3.36 | 3.49 | 3.43 | 3.34 | 3.34 | 112.91 | | | ratio >1.3 | Median log channel | 85 |
| 118 | 100 | 94 | 105 | 87 | 97 | 736 | | | 150 (84+66) | Median linear channel | 90 |
| 119 | 0.181 | 0.186 | 0.179 | 0.184 | 0.184 | 4.2 | | | ratio >1.285 (B-line 1.285-1.45) | MnIX | 97 |
| 120 | 1.06 | 1.06 | 1.3 | 1.03 | 58.5 | 5819.5 | | | ratio >1.6 | Median | 100 |
| 122 | 9 | 9 | 9 | 9 | 10.5 | | 153 | 46 | 3SD | Geomean linear values | 95 |
| 126 | 143 | 159 | 143 | 137 | 147 | 649 | | | >80 linear channel shift | Median | 90 |
| 130 | 158 | 157 | 152 | 150 | 150 | 275 | | | >40 | Mean channel shift | 99 |
| 133 | 18 | 48 | 19 | 14 | 33 | 890 | | | >x1.5 of NC | Median | 95 |
| 136 | 1.5 | 1.8 | 1.6 | 1.6 | 1.57 | 60 NR = 3830 | | | NR >200 | Mean channel | 98 |
| 138 | 0.03 | 0.05 | 0.08 | 0.13 | 0 | 0.95 | | | >0.20 | D value kolmogorov-smirnov statistic | |
| 139 | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| 142 | 132 | 149 | 136 | 335 | 144 | 9557 | | | 182 (144+3SD) | Median log channel | 95 |
| 143 | 5 | -3 | 8 | 5 | 22 | 1173 | | | 40 linear channel shift | Geomean channel shift | 90 |
| 144 | 1.19 | 1.3 | 1.24 | 0.99 | 1307 | 9.05 | | | 1.7 | Median/ratio | |
| 145 | 0.665 | 1.01 | 0.988 | 0.665 | 0.677 | 53.1 | | | 2SD of the ratio | Median log channel | 80 |
| 147 | 158 | 159.5 | 157.5 | 160 | 156 | 549 | | | >40 linear channel shift | Linear channel | 100 |
| 154 | 42 | 50 | 52 | 46 | 40 | 1080 | | | Median >150% control and shape of the curve | MFI | |
| 157 | 112 | 114 | 112 | 114 | 112 | 567 | | | 127 | Median linear channel | 96 |
| 159 | 187 | 187 | 187 | 179 | 185 | 464 | | | 40 linear channel shift | MLC | 100 |
| 160 | 8 | 9.3 | 9.4 | 7.2 | 7.2 | 425 | | | >13.8 (Neg+2SD) | Mean linear | |
| 163 | 0.9 | 1.1 | 0.9 | 0.9 | 1 | 13.6 | | | 2.3 (ratio above) | Geomean linear channel | 99 |
| 167 | 165 | 179 | 186 | 185 | 190 | 8590 | | | 2SD | Median log channel | 97 |
| 169 | 4.99 | 4.90 | 4.14 | 3.49 | 7.90 | 203.93 | | | | | |
| | NR 63 | 62 | 52 | 44 | | 2581 | | | NR >180 | Mean log channel | 97 |
| 176 | 0.01 | 0.01 | 0.10 | 0.00 | 0.00 | 1.35 | | | 0.5 | MFI shift | |
| 186 | 0.597 | 0.640 | 0.650 | 0.630 | 0.592 | 25.80 | | | 1.5x the local NC | MFI log channel | 99 |
| 190 | 131.0 | 133.0 | 143.3 | 106.9 | 105.0 | 651 | | | ratio sample/neg >1.5 | Median log channel | 83 |
| 191 | 9 | 32.0 | 30.0 | 5 | 0 | 82 | | | >30 | MFI | 100 |
| 193 | 2.79 | 2.99 | 2.90 | 2.74 | 2.90 | 249.7 | | | NC mean x2.5 | Geometric mean linear channel | |
| 194 | 0.2 | 0.3 | 0.5 | 0 | <0.7 | 33 | | | >0.7 (median log) | x-median | 98 |
| 195 | 163.00 | 179.00 | 189.00 | 189.00 | 172.00 | 650.00 | | | test/NC >1.25 | Median log channel | 85 |
| 201 | 0.463 | 0.447 | 0.427 | 0.423 | 0.421 | 46.3 | | | ratio (s/nc) ≥2 | x-mean | 96 |
| 202 | 0.3 | 2.4 | 0.5 | 1.1 | 0.3 | 95.4 | | | 5% above the local NC | linear scale | |
| 204 | 0.33 | 0.32 | 0.32 | 0.32 | 0.33 | 53.6 | | | 0.49 = 1.5x local NC | Mean log channel | |
| 209 | 1.1 | 1.2 | 1.0 | 1.0 | 302 | 922 (3.0) | | | 1.6 | Geometric mean log channel (ratio) | 90 |
| 218 | 93.8 | 92.1 | 79.1 | 91.8 | 72.1 | 547 | | | 72.1 x1.2 = 86.52 | Geometric MFI | 100 |
| 220 | 4443.5 | 5025.0 | 5286.5 | 4711.5 | 5508.0 | 262143.0 | | | 6000 above the mean of the NC | Linear acquisition, linear values | 97 |
| 227 | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| 235 | 2.84 | 2.44 | 2.79 | 2.25 | 3.52 | 232.90 | | | >2 of Neg median log channel | Median log channel | 85 |
| 238 | 1267 | 1165 | 1124 | 1421 | 1329 | 67215 | | | MESF serum/MESF NC | MESF | |
| 245 | 0 | 0 | 0.2 | 0 | 3.3 | 11.2 | | | 7 linear channel shift | Linear channel shift | 100 |
| 246 | 1 | 1 | 1.1 | 1 | | 4.6 | | | 1.75 Median log fluorescence ratio | MLF | 96 |
| 252 | 1.124 | 1.321 | 1.009 | 1.074 | 59.35 | 144.6 | | | Median ratio ±2SD | Median channel ratio | 70 |
| 262 | | | | | 1114 | 25706 | | | ratio sample/neg >2, lysis >12% | Median channel log | 80 |
| 271 | 123 | 132 | 141 | 123 | 125 | 410 | | | 64 | Median log channel | 96 |
| 284 | 586 | 596 | 555 | 570 | 595 | | 2760 | 723 | Sample serum/NC : ratio >1.2 | Median log channel | |
| 297 | 53 | 56 | 49 | 32 | 32 | 2256 | | | 1.5x MFI NC | Median MFI | |
| 341 | 4.33 | 4.39 | 4.35 | 4.18 | 4.59 | 26.67 | | | 3SD | Geomean linear values | 98 |

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DISPATCHED ON 17TH MAY 2016

| 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 | | | | | | | | | | MFI | |
| 112 | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT | 30 |
| 114 | 429 | 482 | 476 | 428 | 450 | 682 | | | 510 (60 linear channel shift) | Median linear channel | 92 |
| 115 | 420 | 470 | 474 | 384 | 448 | 694 | | | >60 | Median linear channel shifts | |
| 116 | 1.68 | 2.82 | 1.19 | 2.15 | 2.25 | 30.95 | | | ratio >1.7 | Median log channel | |
| 117 | 1.09 | 16.72 | 11.95 | 8.18 | 10.26 | 439.65 | | | ratio >1.5 | Median log channel | 85 |
| 118 | 125 | 143 | 143 | 134 | 145.75 | 526 | | | 171.30 (145.75+25.5) | Median linear channel | 90 |
| 119 | 5.32 | 6.7 | 4.7 | 3.5 | 3.12 | 48 | | | ratio >1.7 (B-line 1.5-1.7) | MnIX | 97 |
| 120 | 1.22 | 1.46 | 1.57 | 1.16 | 238 | 12428 | | | ratio >2 | Median | 100 |
| 122 | 50.5 | 68.5 | 61.5 | 51 | 59.5 | | 627 | 204 | 3SD | Geomean linear values | 95 |
| 126 | 554 | 574 | 524 | 465 | 349 | 814 | | | >160 linear channel shift | Median | 90 |
| 130 | 270 | 385 | 310 | 200 | 240 | 489 | | | >80 | Mean channel shift | 99 |
| 133 | 44 | 118 | 39 | 35 | 36 | 1568 | | | >x2 of NC | Median | 95 |
| 139 | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| 142 | 1844 | 2177 | 2654 | 4535 | 2695 | 23515 | | | 3623 (2695+3SD) | Median log channel | 95 |
| 144 | 1.64 | 2.15 | 1.86 | 1.04 | 3103 | 10.51 | | | 2.5 | Median/ratio | |
| 145 | 1.1 | 1.39 | 1.71 | 1.01 | 2.96 | 64.1 | | | 2SD of the ratio | Median log channel | 80 |
| 147 | 207.5 | 283.5 | 213 | 196 | 183.5 | 684 | | | >60 linear channel shift | Linear channel | 100 |
| 154 | 501 | 592 | 496 | 410 | 528 | 5998 | | | Median >200% control and shape of the curve | MFI | |
| 157 | 138 | 363 | 135 | 125 | 322 | 668 | | | 357 | Median linear channel | 96 |
| 159 | 417 | 468 | 432 | 384 | 371 | 666 | | | 100 linear channel shift | MLC | 100 |
| 160 | 91 | 47 | 46 | 24 | 27.5 | 719 | | | >65 (Neg+2SD) | Mean linear | |
| 163 | 1.2 | 1.3 | 1.4 | 1.1 | 1 | 3.3 | | | 1.7 (ratio above) | Geomean linear channel | 99 |
| 167 | 860 | 1200 | 1137 | 879 | 1015 | 22722 | | | 2SD | Median log channel | 97 |
| 169 | 46.79 | 79.60 | 4.14 | 36.96 | 36.10 | 98.54 | | | | | |
| | NR 130 | 221 | 102 | 36.1 | 273 | | | | NR >200 | Mean log channel | 97 |
| 176 | -0.20 | 0.02 | 0.00 | -0.41 | 0.00 | 0.96 | | | 0.23 | MFI shift | |
| 186 | 2.67 | 3.59 | 3.53 | 2.71 | 4.03 | 41.10 | | | 2x the local NC | MFI log channel | 99 |
| 190 | 274.3 | 390.6 | 286.6 | 179.6 | 206 | 1000 | | | ratio sample/neg >2.5 | Median log channel | 83 |
| 191 | 92 | 105 | 129 | 88 | 0 | 302 | | | >100 | MFI | 100 |
| 193 | 56.46 | 81.71 | 63.69 | 47.99 | 47.26 | 658.3 | | | NC mean x2.5 | Geometric mean linear channel | |
| 194 | 3 | 4 | 2 | 1 | <1 | 35 | | | >1 (median log) | x-median | 98 |
| 195 | 255 | 336 | 260 | 234 | 243 | 3979 | | | test/NC >1.35 | Median log channel | 85 |
| 201 | 6.12 | 6.63 | 5.19 | 3.4 | 4.47 | 151 | | | ratio (s/nc) ≥2.5 | x-mean | 96 |
| 202 | 1.0 | 7.8 | 2.1 | 3.1 | 0.9 | 88.3 | | | 8% above the local NC | linear scale | |
| 204 | 4.44 | 7.34 | 5.22 | 3.36 | 4.19 | 159 | | | 8.37 = 2x local NC | Mean log channel | |
| 209 | 1.35 | | 1.46 | 1.09 | 1230 | 2952 (2.4) | | | 1.9 | Geometric mean log channel (ratio) | 90 |
| 218 | 6686 | 4361 | 2465 | 3660 | 1781 | 1617 | | | 1781x1.7 = 3027.7 | Geometric MFI | 100 |
| 220 | 6672 | 13989 | 10137 | 8369 | 7567.67 | 262143 | | | 6000 above the mean of the NC | Linear acquisition, linear values | 97 |
| 227 | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| 235 | 15.53 | 11.6 | 10.27 | 11.24 | 12.8 | 1345.57 | | | >18 of Neg median log channel | Median log channel | 85 |
| 238 | 5017 | 5679 | 3950 | 6546 | 5392 | 142654 | | | MESF serum/MESF NC | MESF | |
| 245 | 0 | 4.8 | 2.8 | 0 | 20.7 | 26.8 | | | 15 linear channel shift | Linear channel shift | 100 |
| 246 | 1 | 1.6 | 1.2 | 0.9 | | 8.35 | | | 2.5 Median log fluorescence ratio | MLF | 96 |
| 252 | 1.345 | 1.61 | 1.554 | 1.094 | 56.23 | 346 | | | Median ratio ±2SD | Median channel ratio | 70 |
| 262 | | 3388 | | | | | | | ratio sample/neg >2, lysis >12% | Median channel log | 80 |
| 271 | 194 | 270 | 264 | 241 | 193 | 546 | | | 90 | Median log channel | 96 |
| 284 | 748 | 926 | 752 | 690 | 687 | | 10404 | 1021 | Sample serum/NC : ratio >1.2 | Median log channel | |
| 297 | 183 | 385 | 168 | 65 | 358 | 12784 | | | 2x MFI NC | Median MFI | |
| 341 | 18.67 | 30.1 | 14.54 | 11.81 | 19.94 | 202.52 | | | 3SD | Geomean linear values | 98 |