

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

T-CELL AND B-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B10/2016 (COMPARED TO LOCAL NEGATIVE CONTROL)

DISPATCHED ON 06TH SEPTEMBER 2016

HLA PHENOTYPE OF BLOOD DONOR: HLA-A2, A31; B35, B60; Cw4, Cw10; DR1, DR4; DQ5, DQ8

| Summary of Results | | | | | | | | | | | | |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------|-------------|--|--|
| T-cells | | | | B-cells | | | | | | | | |
| Total tested | 49 | 49 | 49 | 49 | 40 | 45 | 45 | 46 | | | | |
| Positive | 2 | 1 | 1 | 1 | 7 | 4 | 43 | 3 | | | | |
| Negative | 47 | 48 | 48 | 48 | 33 | 41 | 2 | 43 | | | | |
| NT/Equivocal | 4 | 4 | 4 | 4 | 10 | 5 | 5 | 4 | | | | |
| % Positive | 4.1% | 2.0% | 2.0% | 2.0% | 17.5% | 8.9% | 95.6% | 6.5% | | | | |
| % Negative | 95.9% | 98.0% | 98.0% | 98.0% | 82.5% | 91.1% | 4.4% | 93.5% | | | | |
| Consensus | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | | | | |
| HLA Antibody Specificity (Defined By CDC) | B12 | A1 | DR7, DQ2 | A23 | B12 | A1 | DR7, DQ2 | A23 | | | | |
| 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 | Positive | Negative | 07-Sep | 08-Sep | Low cell viability | |
| 112 | NT | NT | NT | NT | NT | NT | NT | NT | 13-Sep | 13-Sep | | |
| 114 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 07-Sep | 08-Sep | | |
| 115 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 07-Sep | 08-Sep | | |
| 116 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 07-Sep | 08-Sep | | |
| 117 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 08-Sep | 13-Sep | | |
| 118 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 07-Sep | 07-Sep | | |
| 119 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 07-Sep | 08-Sep | | |
| 120 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 07-Sep | 08-Sep | | |
| 122 | Negative | Negative | Negative | Negative | Positive | Positive | Positive | Negative | 07-Sep | 08-Sep | | |
| 126 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 07-Sep | 08-Sep | | |
| 130 | Negative | Negative | Negative | Negative | Negative | Negative | Negative | Negative | 07-Sep | 08-Sep | | |
| 133 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 08-Sep | 08-Sep | | |
| 136 | Negative | Negative | Negative | Negative | | | | | 07-Sep | 08-Sep | | |
| 138 | Negative | Negative | Negative | Negative | | | | | 07-Sep | 07-Sep | | |
| 139 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 09-Sep | 09-Sep | | |
| 142 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 08-Sep | 09-Sep | | |
| 143 | Negative | Negative | Negative | Negative | | | | | 08-Sep | 08-Sep | | |
| 144 | NT | NT | NT | NT | NT | NT | NT | NT | 07-Sep | 08-Sep | Results uninterpretable | |
| 145 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 13-Sep | 14-Sep | | |
| 147 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 08-Sep | 08-Sep | | |
| 154 | Negative | Negative | Negative | Negative | Negative | Negative | Equivocal | Negative | 08-Sep | 09-Sep | | |
| 157 | Negative | Negative | Negative | Negative | Equivocal | Equivocal | Equivocal | Equivocal | 07-Sep | 08-Sep | Negative control on B lymphocytes not evaluable, no sufficient PBMC to repeat FCXM | |
| 159 | Negative | Negative | Negative | Negative | Equivocal | Negative | Positive | Negative | 07-Sep | 08-Sep | | |
| 160 | Negative | Negative | Negative | Negative | Equivocal | Negative | Positive | Negative | 07-Sep | 08-Sep | | |
| 163 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 08-Sep | 08-Sep | | |
| 167 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 07-Sep | 08-Sep | | |
| 169 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 07-Sep | 08-Sep | | |
| 176 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 08-Sep | 09-Sep | | |
| 186 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 07-Sep | 07-Sep | | |
| 190 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 07-Sep | 08-Sep | | |
| 191 | Positive | Negative | Negative | Negative | Positive | Positive | Positive | Negative | 07-Sep | 08-Sep | | |
| 193 | Negative | Negative | Negative | Negative | Positive | Negative | Positive | Negative | 07-Sep | 07-Sep | | |
| 194 | Negative | Negative | Negative | Negative | Equivocal | Equivocal | Positive | Negative | 07-Sep | 08-Sep | | |
| 195 | NT | NT | NT | NT | Negative | Negative | Negative | Negative | 09-Sep | 08-Sep | Technical failure. Pos control too low | |
| 201 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 07-Sep | 08-Sep | | |
| 202 | Negative | Negative | Negative | Negative | Equivocal | Negative | Positive | Negative | 07-Sep | 08-Sep | | |
| 204 | Negative | Negative | Negative | Negative | Positive | Negative | Positive | Negative | 07-Sep | 07-Sep | | |
| 209 | Negative | Negative | Negative | Negative | Equivocal | Negative | Positive | Negative | 07-Sep | 08-Sep | | |
| 218 | Negative | Negative | Negative | Negative | Positive | Positive | Positive | Positive | 13-Sep | 13-Sep | | |
| 220 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 07-Sep | 08-Sep | | |
| 227 | NT | NT | NT | NT | NT | NT | NT | NT | 07-Sep | 07-Sep | Samples were not tested | |
| 235 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 07-Sep | 07-Sep | | |
| 238 | Negative | Negative | Negative | Negative | Positive | Negative | Positive | Negative | 07-Sep | 08-Sep | | |
| 245 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 07-Sep | 08-Sep | | |
| 246 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 07-Sep | 07-Sep | | |
| 252 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 08-Sep | 08-Sep | | |
| 262 | Negative | Negative | Negative | Negative | NT | Negative | Positive | Negative | 07-Sep | 07-Sep | S1 was tested but not interpretable because of low B cells count (< 500) | |
| 271 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 08-Sep | 08-Sep | | |
| 284 | Positive | Positive | Positive | Positive | Positive | Positive | Positive | Positive | 07-Sep | 08-Sep | | |
| 297 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 08-Sep | 09-Sep | | |
| 341 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Negative | 07-Sep | 08-Sep | | |
| 351 | Negative | Negative | Negative | Negative | Negative | Negative | Positive | Positive | 10-Sep | 10-Sep | | |

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T-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B10/2016 (COMPARED TO LOCAL NEGATIVE CONTROL)

DISPATCHED ON 06TH SEPTEMBER 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 sample/MFI neg control | |
| 112 | NT | NT | NT | NT | NT | NT | NT | NT | NT | Median log channel | 5 |
| 114 | 195 | 171 | 173 | 153 | 181 | 449 | | | 231 (50 linear channel) | Median linear channel | 86 |
| 115 | 208 | 222 | 245 | 212 | 228 | 287 | | | >40 channel shift | | |
| 116 | 0.22 | 0.21 | 0.29 | 0.22 | 0.23 | 19.05 | | | ratio >1.7 | | |
| 117 | 5.23 | 5.48 | 5.40 | 5.58 | 5.17 | 30.23 | | | ratio (RMF) >1.3 | Median log channel | 95 |
| 118 | 140 | 146 | 158 | 155 | 107 | 725 | | | 173 (107+66) | Median linear channel MCI | 80 |
| 119 | 0.229 | 0.211 | 0.264 | 0.201 | 0.186 | 14.2 | | | ratio >1.285 B-line (1.285-1.48) | MnIX | 97 |
| 120 | 1.06 | 1.02 | 1.12 | 0.98 | 65 | 3917.5 | | | ratio >1.6 | | 100 |
| 122 | 8.5 | 8.5 | 11 | 8 | 9 | | 107.00 | 31 | 3SD | Geomean linear values | 98 |
| 126 | 143 | 135 | 163 | 144 | 129 | 589 | | | >80 linear channel shift | | >90 |
| 130 | 141 | 142 | 150 | 143 | 137 | 239 | | | >40 | Mean channel shift | 99 |
| 133 | 33 | 31 | 31 | 29 | 35 | 813 | | | >x1.5 MFI of neg control | MFI | 95 |
| 136 | 1.9 | 2.1 | 2.9 | 2 | 2.07 | 36 NR=1739 | | | NR>200 | | 100 |
| 138 | 0.02 | 0.02 | 0.03 | 0.05 | 0 | 0.76 | | | >0.2 | D value kolmogorov-smirnov statistic | |
| 139 | | | | | | | | | | | 90 |
| 142 | 139 | 128 | 143 | 117 | 155.7 | 5958 | | | 160.3 (155.7+3SD) | Median log channel | 92 |
| 143 | -1 | 4 | -1 | 0 | 8 | 51 | | | 40 linear channel shift | | 87 |
| 144 | NT | NT | NT | NT | NT | NT | NT | NT | NT | Ratio (median) | |
| 145 | 0.271 | 0.280 | 0.312 | 0.305 | 0.244 | 23.6 | | | 2SD of the ratio | Median log channel | 94 |
| 147 | 92 | 89.5 | 100.5 | 86.5 | 87.5 | 377 | | | >40 linear channel shift | Linear channel | 99 |
| | 4.5 | 2 | 13 | -1 | | | | | | | |
| 154 | 36 | 35 | 36 | 35 | 37 | 372 | | | Median >150% control x shape of the curve | MFI | |
| 157 | 135 | 129 | 136 | 133 | 138 | 605 | | | 160 (2SD) | | 96 |
| 159 | 149 | 147 | 161 | 152 | 153 | 450 | | | 193 | Mean linear channel | |
| 160 | 6.7 | 6.8 | 6.8 | 7.2 | 6 | 233 | | | >13.0 (NEG+2SD) | | |
| 163 | 1.1 | 1 | 1.9 | 0.9 | 1 | 10.8 | | | 2.3 (ratio above) | Geomean linear channel | 97 |
| 167 | 217 | 201 | 233 | 217 | 213 | 13139 | | | 2SD | | 100 |
| 169 | 256 | 258 | 265 | 250 | 303 | 520 | | | ≥50 channel | Median channel | 98 |
| 176 | -0.01 | -0.05 | 0.06 | -0.03 | 0 | 0.91 | | | 0.4 | MFI shift | |
| 186 | 0.47 | 0.4 | 0.57 | 0.39 | 0.4 | 5 | | | 1.5x the local neg control | MFI log channel | 99 |
| 190 | 83.3 | 79.8 | 89.1 | 73.8 | 75.5 | 376 | | | Ratio sample/neg >1.5 | | 89 |
| 191 | 31 | 14 | 16 | 8 | 0 | 223 | | | >30 | MFI | 100 |
| 193 | 5.01 | 4.45 | 6.08 | 4.16 | 4.65 | 230.70 | | | Neg control x2.4 | Geometric mean linear channel | |
| 194 | | | | | 0.5 | 12 | | | ratio >1.2 | Median channel log | 100 |
| 195 | NT | NT | NT | NT | 97 | 126 | | | | | 99 |
| 201 | 0.438 | 0.483 | 0.482 | 0.432 | 0.422 | 17.5 | | | S/NK≥2.0 | X-mean | 97 |
| 202 | 0.3 | 0.7 | 0.5 | 0.2 | 0.3 | 99.1 | | | 5% above the local neg control | Linear scale | |
| 204 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 16.2 | | | 0.50 = 1.5x loc neg control | | |
| 209 | 1.2 | 1.1 | 1.1 | 0.9 | 222 | 508 (2.3) | | | 1.6 | Geometric mean log channel (ratio) | |
| 218 | 88.9 | 95.4 | 92.1 | 75.2 | 90.6 | 487 | | | 90.6 x1.2 | | 100 |
| 220 | 3601 | 3196 | 7688 | 3258.5 | 3884.25 | 114918 | | | 6000 above the mean of the neg controls | Linear acquisition, linear values | 93 |
| 227 | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| 235 | 2.08 | 2.68 | 2.65 | 4.63 | 2.34 | 56.94 | | | >2 of neg median log channel | Median log channel | 85 |
| 238 | 1061 | 1087 | 932 | 927 | 919 | 12602 | | | MESF serum/MESF neg control | MESF | |
| 245 | 0 | 0 | 0 | 0 | 3 | 9 | | | 7 linear channel shift | | 100 |
| 246 | 1 | 1.1 | 1.2 | 1.2 | | 6.3 | | | 1.75 med log fl ratio | Median log fluorescence | 95 |
| 252 | 0.98 | 0.83 | 1.08 | 1.03 | 55.23 | 361.9 | | | Median ratio +2SD | | 60-70 |
| 262 | 1447 | 1272 | 1249 | 1145 | 1110 | 15180 | | | 2x neg control value | | 85 |
| 271 | 137 | 130 | 165 | 127 | 134 | 342 | | | 64 | Median log channel | 92 |
| 284 | 827 | 460 | 366 | 291 | 159 | | 1142.00 | 218 | sample serum/neg control: ratio >1.2 | Median log channel | |
| 297 | 36 | 32 | 45 | 26 | 40 | 4266 | | | 1.5x Tneg | Median MFI | |
| 341 | 3.82 | 3.77 | 3.9 | 3.69 | 3.99 | 16.11 | | | 3SD | | 97 |
| 351 | 256 | 250 | 257 | 243 | 235 | 3733 | | | 500+ Neg | | 98 |

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DISPATCHED ON 06TH SEPTEMBER 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 sample/MFI neg control | |
| 112 | NT | NT | NT | NT | NT | NT | NT | NT | NT | Median log channel | 5 |
| 114 | 438 | 422 | 541 | 375 | 398 | 714 | | | 458 (60 linear channel) | Median linear channel | 86 |
| 115 | 422 | 420 | 624 | 402 | 396 | 653 | | | >60 channel shift | | |
| 116 | 1.57 | 1.47 | 9.25 | 1.42 | 1.59 | 22.05 | | | ratio >1.7 | | |
| 117 | 16.44 | 12.49 | 51.55 | 11.99 | 12.30 | 205.35 | | | ratio (RMF) >1.5 | Median log channel | 95 |
| 118 | 160 | 142 | 186 | 150 | 149 | 428 | | | 167 (149+18) | Median linear channel MCI | 80 |
| 119 | 22.5 | 7.18 | 28.7 | 4.33 | 2.89 | 6.17 | | | ratio >1.7 B-line (1.5-1.7) | MnlX | 97 |
| 120 | 1.34 | 1.17 | 3.35 | 1.11 | 300.5 | 11351.5 | | | ratio >2 | | 100 |
| 122 | 301 | 195 | 1033 | 120.5 | 76 | | 619 | 201 | 3SD | Geomean linear values | 98 |
| 126 | 225 | 218 | 541 | 185 | 205 | 787 | | | >120 linear channel shift | | >90 |
| 130 | 263 | 270 | 250 | 262 | 245 | 410 | | | >80 | Mean channel shift | 99 |
| 133 | 104 | 86 | 161 | 62 | 68 | 2350 | | | >x2 MFI of neg control | MFI | 95 |
| 139 | | | | | | | | | | | 90 |
| 142 | 413 | 502 | 1143 | 516 | 604.7 | 11138 | | | 720.2 (604.67+3SD) | Median log channel | 92 |
| 144 | NT | NT | NT | NT | NT | NT | NT | NT | NT | Ratio (median) | |
| 145 | 0.534 | 0.566 | 1.28 | 0.546 | 0.523 | 58.6 | | | 2SD of the ratio | Median log channel | 94 |
| 147 | 245 | 206 | 395 | 160 | 190.5 | 667 | | | >60 linear channel shift | Linear channel | 99 |
| 154 | 54.5 | 15.5 | 204.5 | -30.5 | | | | | | | |
| 157 | 139 | 85 | 304 | 75 | 115 | 2762 | | | Median >200% control x shape of the curve | MFI | |
| 159 | 180 | 170 | 286 | 178 | | | | | 160 (2SD) | | 96 |
| 159 | 428 | 339 | 571 | 356 | 316 | 663 | | | 416 | Mean linear channel | |
| 160 | 105 | 54 | 613 | 42 | 47 | 699 | | | >102 (NEG+2SD) | | |
| 163 | 1.5 | 1.4 | 6.3 | 1.1 | 1 | 4.6 | | | 1.7 (ratio above) | Geomean linear channel | 97 |
| 167 | 739 | 958 | 1590 | 1002 | 822 | 48197 | | | 2SD | | 100 |
| 169 | 413 | 373 | 582 | 352 | 454 | 735 | | | ≥80 channel | Median channel | 98 |
| 176 | -0.03 | -0.14 | 0.87 | -0.27 | 0 | 0.75 | | | 0.22 | MFI shift | |
| 186 | 1.19 | 1.26 | 4.66 | 1.67 | 1.13 | 40 | | | 2x the local neg control | MFI log channel | 99 |
| 190 | 279.3 | 216 | 706.3 | 184.7 | 178.5 | 832 | | | Ratio sample/neg >2.5 | | 89 |
| 191 | 130 | 138 | 209 | 96 | 0 | 456 | | | >100 | MFI | 100 |
| 193 | 111.59 | 62.27 | 274.43 | 34.21 | 43.72 | 573.79 | | | Neg control x1.9 | Geometric mean linear channel | |
| 194 | | | | | 1.9 | 40 | | | ratio >4 | Median channel log | 100 |
| 195 | 148 | 140 | 142 | 125 | 104 | 693 | | | Test/neg control ≥1.6 | | 99 |
| 201 | 4.92 | 4.03 | 12.3 | 3.53 | 2.7 | 63.2 | | | S/NK≥2.5 | X-mean | 97 |
| 202 | 12.5 | 7.1 | 24.2 | 2.7 | 0.8 | 100 | | | 8% above the local neg control | Linear scale | |
| 204 | 4.6 | 1.8 | 17.6 | 1.27 | 2.13 | 73.4 | | | 4.26 = 2x loc neg control | | |
| 209 | | 1.1 | 5.8 | 1 | 700 | 1900 (2.7) | | | 1.9 | Geometric mean log channel (ratio) | |
| 218 | 3769 | 3028 | 7311 | 3967 | 1764 | 1898 | | | 1764 x1.7 | | 100 |
| 220 | 3727 | 3108.5 | 46077.5 | 2574.5 | 3582.5 | 262143 | | | 6000 above the mean of the neg controls | Linear acquisition, linear values | 93 |
| 227 | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| 235 | 8.45 | 9.98 | 68.79 | 15.29 | 9.27 | 986.77 | | | >18 of neg median log channel | Median log channel | 85 |
| 238 | 4165 | 2871 | 8590 | 2113 | 1766 | 27528 | | | MESF serum/MESF neg control | MESF | |
| 245 | 5 | 1.5 | 29 | 0 | 6 | 78 | | | 15 linear channel shift | | 100 |
| 246 | 1.5 | 1 | 4.6 | 1.1 | | 14 | | | 2.5 med log fl ratio | Median log fluorescence | 95 |
| 252 | 1.87 | 1.41 | 6.04 | 1.33 | 50.94 | 4104.7 | | | Median ratio +2SD | | 60-70 |
| 262 | | 3252 | 11271 | 2150 | 2584 | 48967 | | | 2x neg control value | | 85 |
| 271 | 182 | 176 | 446 | 164 | 178 | 456 | | | 90 | Median log channel | 92 |
| 284 | 929 | 480 | 1039 | 324 | 206 | | 6780 | 285 | sample serum/neg control: ratio >1.2 | Median log channel | |
| 297 | 589 | 427 | 3164 | 393 | 398.5 | 33208 | | | 2x Tneg | Median MFI | |
| 341 | 17.54 | 14.48 | 64.38 | 8.47 | 13.74 | 161.41 | | | 3SD | | 97 |
| 351 | 487 | 615 | 2071 | 1293 | 492 | 2000 | | | 2500+ Neg | | 98 |