

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

T-CELL AND B-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B01/2016 (COMPARED TO LOCAL NEGATIVE CONTROL)

DISPATCHED ON 12TH JANUARY 2016

HLA PHENOTYPE OF BLOOD DONOR: HLA-A2, A29; B44, B-; Cw5, Cw16; DR7, DR-; DQ2, DQ-

| Summary of Results | | | | | | | | | | | |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------|-------------|-------------------------|
| T-cells | | | | | B-cells | | | | | | |
| Total tested | 49 | 49 | 48 | 49 | 43 | 46 | 41 | 46 | | | |
| Positive | 2 | 48 | 47 | 47 | 2 | 46 | 31 | 43 | | | |
| Negative | 47 | 1 | 1 | 2 | 41 | 0 | 10 | 3 | | | |
| NT/Equivocal | 2 | 2 | 3 | 2 | 5 | 2 | 7 | 2 | | | |
| % Positive | 4.1% | 98.0% | 97.9% | 95.9% | 4.7% | 100.0% | 75.6% | 93.5% | | | |
| % Negative | 95.9% | 2.0% | 2.1% | 4.1% | 95.3% | 0.0% | 24.4% | 6.5% | | | |
| Consensus | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | | | |
| HLA Antibody Specificity (Defined By CDC) | B12 | DR7, DQ2 | Cw5, DR4 | B12 | B12 | DR7, DQ2 | Cw5, DR4 | B12 | | | |
| Lab No. | T-cells | | | | B-cells | | | | Date Received | Date Tested | Comments |
| | Serum 1 | Serum 2 | Serum 3 | Serum 4 | Serum 1 | Serum 2 | Serum 3 | Serum 4 | | | |
| 101 | Negative | Positive | Positive | Positive | Negative | Positive | Negative | Positive | 13-Jan | 14-Jan | Low cell viability (5%) |
| 112 | NT | NT | NT | NT | NT | NT | NT | NT | 18-Jan | 19-Jan | |
| 114 | Negative | Positive | Positive | Positive | Negative | Positive | Negative | Negative | 13-Jan | 14-Jan | |
| 115 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 13-Jan | 14-Jan | |
| 116 | Negative | Positive | Positive | Positive | Negative | Positive | Equivocal | Positive | 13-Jan | 14-Jan | |
| 117 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 14-Jan | 15-Jan | |
| 118 | Negative | Positive | Positive | Positive | Negative | Positive | Negative | Positive | 13-Jan | 13-Jan | |
| 119 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 12-Jan | 13-Jan | |
| 120 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 13-Jan | 14-Jan | |
| 122 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 14-Jan | 15-Jan | |
| 126 | Negative | Positive | Positive | Positive | Equivocal | Positive | Positive | Positive | 13-Jan | 14-Jan | |
| 130 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 13-Jan | 14-Jan | |
| 136 | Negative | Positive | Positive | Positive | | | | | 13-Jan | 13-Jan | |
| 138 | Negative | Positive | Positive | Positive | | | | | 13-Jan | 13-Jan | |
| 139 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 15-Jan | 15-Jan | |
| 142 | Negative | Positive | Positive | Positive | Negative | Positive | Equivocal | Positive | 13-Jan | 14-Jan | |
| 143 | Negative | Positive | Positive | Positive | | | | | 14-Jan | 14-Jan | |
| 144 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 13-Jan | 13-Jan | |
| 145 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 13-Jan | 18-Jan | |
| 147 | Negative | Positive | Positive | Positive | Equivocal | Positive | Positive | Positive | 13-Jan | 14-Jan | |
| 154 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 14-Jan | 14-Jan | |
| 157 | Negative | Positive | Positive | Positive | Negative | Positive | Negative | Positive | 13-Jan | 14-Jan | |
| 159 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 13-Jan | 14-Jan | |
| 160 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 13-Jan | 14-Jan | |
| 163 | Negative | Positive | Positive | Positive | Negative | Positive | Negative | Positive | 14-Jan | 15-Jan | |
| 167 | Negative | Positive | Positive | Positive | Negative | Positive | Negative | Positive | 15-Jan | 18-Jan | |
| 169 | Negative | Positive | Positive | Positive | Negative | Positive | NT | Positive | 12-Jan | 13-Jan | |
| 176 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 13-Jan | 14-Jan | |
| 186 | Negative | Positive | Positive | Positive | Negative | Positive | Negative | Positive | 13-Jan | 13-Jan | |
| 190 | Negative | Positive | Equivocal | Positive | Negative | Positive | Equivocal | Positive | 13-Jan | 14-Jan | |
| 191 | Negative | Positive | Positive | Negative | Negative | Positive | Positive | Negative | 13-Jan | 13-Jan | |
| 193 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 13-Jan | 13-Jan | |
| 194 | Negative | Positive | Positive | Positive | Equivocal | Positive | Positive | Positive | 13-Jan | 13-Jan | |
| 195 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 15-Jan | 15-Jan | |
| 201 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 13-Jan | 14-Jan | |
| 202 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 13-Jan | 13-Jan | |
| 204 | Negative | Positive | Positive | Positive | Negative | Positive | Negative | Positive | 13-Jan | 13-Jan | |
| 209 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 13-Jan | 14-Jan | |
| 218 | Positive | Positive | Positive | Positive | Positive | Positive | Negative | Positive | 14-Jan | 15-Jan | |
| 220 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 13-Jan | 14-Jan | |
| 227 | NT | NT | NT | NT | NT | NT | NT | NT | 13-Jan | | |
| 235 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 14-Jan | 14-Jan | |
| 238 | Negative | Negative | Negative | Negative | Negative | Positive | Negative | Negative | 13-Jan | 14-Jan | |
| 245 | Negative | Positive | Positive | Positive | Negative | Positive | Equivocal | Positive | 13-Jan | 14-Jan | |
| 246 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 13-Jan | 13-Jan | |
| 252 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 14-Jan | 14-Jan | |
| 262 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 13-Jan | 14-Jan | |
| 271 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 14-Jan | 14-Jan | |
| 284 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 13-Jan | 13-Jan | |
| 297 | Positive | Positive | Positive | Positive | Positive | Positive | Positive | Positive | 13-Jan | 14-Jan | |
| 341 | Negative | Positive | Positive | Positive | Negative | Positive | Positive | Positive | 13-Jan | 14-Jan | |
| | | | | | | | | | | | Technical failure |

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T-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B01/2016 (COMPARED TO LOCAL NEGATIVE CONTROL)

DISPATCHED ON 12TH JANUARY 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 | | | | | | | | | | | |
| 112 | | | | | | | | | | | 5 |
| 114 | 228 | 351 | 310 | 384 | 201 | 287 | | | 251 | Median channel | 94 |
| 115 | 188 | 386 | 399 | 489 | 222 | 338 | | | >40 | Median linear channel shift | |
| 116 | 0.29 | 2.09 | 1.63 | 6.54 | 0.19 | 31.1 | | | Ratio >1.7 | Median log channel | |
| 117 | 5.35 | 12.19 | 12.28 | 33.15 | 5.48 | 67.05 | | | Ratio (RMF) >1.3 | Median log channel | 95 |
| 118 | 204 | 328 | 364 | 430 | 190 | 735 | | | 256 (190+66) | Median linear channel | 90 |
| 119 | 0.271 | 3.01 | 2.27 | 6.83 | 0.245 | 3.12 | | | Ratio: Pos >1.289, B-line (1.289-1.45) | Mnlx | 95 |
| 120 | 1.07 | 2.55 | 4.4 | 6.66 | 82 | 8918 | | | Ratio >1.6 | Median | 100 |
| 122 | 11.5 | 76 | 85.5 | 184.5 | 11 | | 74 | 23 | 3SD | Geomean linear values | 98 |
| 126 | 306 | 541 | 507 | 645 | 260 | 699 | | | >55 linear channel shift | Median | 90 |
| 130 | 158 | 315 | 305 | 410 | 137 | 212 | | | >40 | Mean channel shift | 99 |
| 136 | 1.7 | 19 | 18 | 70 | 1.57 | 238 | | | NR> 200 | Mean channel | 99 |
| 138 | 0.07 | 0.37 | 0.42 | 0.59 | 0 | 0.99 | | | >0.20 | D value kolmogorov-smirnov | |
| 139 | 0.291 | 2.56 | 2.78 | 7.21 | 0.226 | 3.67 | | | ≥1.5 of neg median log channel | Median log channel | |
| 142 | 143 | 354 | 452 | 1046 | 136 | 5978 | | | 166 (136+3SD) | Median log channel | 93 |
| 143 | 18 | 156 | 710 | 113 | 30 | 1745 | | | >40 | Geomean shift channel | 90 |
| 144 | 1.1 | 4.6 | 4.2 | 10.7 | 1284 | 12.1 | | | 1.7 | Median/Ratio | |
| 145 | 0.597 | 1.39 | 1.59 | 3.42 | 0.592 | 67.1 | | | 2SD of the ratio | Median log channel | 85 |
| 147 | 12.8 | 278.5 | 280.5 | 378.5 | 118 | 550.5 | | | >40 linear channel shift | Linear channel | 100 |
| 154 | 47 | 225 | 447 | 937 | 48 | 1186 | | | Median >150% control and shape of the curve | MFI | |
| 157 | 138 | 244 | 224 | 300 | 133 | 446 | | | 148 | Median linear channel | 93 |
| 159 | 182 | 365 | 363 | 448 | 162 | 466 | | | 40 mean linear channel shift (202 MLC) | MLC | 80 |
| 160 | 6.3 | 67.5 | 35.3 | 168 | illegible | illegible | | | 11.7 (Neg +2SD) | Mean linear | |
| 163 | 2.3 | 27.8 | 7.9 | 69.1 | 1 | 13.4 | | | 2.3 | Geomean linear channel | 99 |
| 167 | 288 | 1346 | 903 | 2995 | 206 | 5299 | | | 2SD | Median log channel | 70 |
| 169 | 17.92 | 170 | 191.88 | 193.42 | 75.8 | 1513.64 | | | NR>180 | Mean log channel | 75 |
| | NR 24 | 224 | 253 | 255 | | 19967 | | | | | |
| 176 | 0.11 | 1.08 | 0.82 | 1.58 | 0 | 1.51 | | | 0.5 | MFI | |
| 186 | 0.58 | 2.35 | 2.14 | 6.23 | 0.46 | 11.60 | | | 1.5x local neg control | MFI | 95 |
| 190 | 63.87 | 177 | 112 | 311 | 41.3 | 229 | | | Ratio sample/neg >1.5 | Median log channel | 74 |
| 191 | 7 | 53 | 204 | 24 | 0 | 300 | | | >30 | MFI | 100 |
| 193 | 4.1 | 84.64 | 80.21 | 210.63 | 2.79 | 206.49 | | | Neg control mean x2.5 | Geometric mean linear channel | |
| 194 | 0.3 | 2.5 | 4.8 | 7.6 | <0.7 | 35 | | | >0.7 median log | x-Median | 100 |
| 195 | 176 | 400 | 297 | 646 | 176 | 3172 | | | Test/Neg control >1.25 | Median log channel | 90 |
| 201 | 0.33 | 1.48 | 1.67 | 2.69 | 0.34 | 8.59 | | | ratio (S/NC) ≥2.0 | x-Mean | 97 |
| 202 | 1.6 | 7.8 | 10.2 | 27.7 | 0.8 | 99.8 | | | 5% above the local negative control | Linear scale | |
| 204 | 0.29 | 5.22 | 1.84 | 12.7 | 0.31 | 14.3 | | | 0.46 = 1.5x local neg control | Mean log channel | |
| 209 | 1.50 | 5.60 | 4.10 | 12.60 | 392.00 | 911 (2.32) | | | 1.6 | Geometric mean log channel (ratio) | 90 |
| 218 | 119 | 218 | 128 | 569 | 92.5 | 857 | | | 92.5x1.2=111 | Geometric MFI | |
| 220 | 2761 | 27986 | 15960 | 59106 | 2615 | 262143 | | | 8000 above the negative control | Linear values | 95 |
| 227 | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| 235 | 3.34 | 32.78 | 23.71 | 55.23 | 2.72 | 62.08 | | | >2 of neg median log channel | Median log channel | 85 |
| 238 | 930 | 1343 | 1317 | 1332 | 1097 | 2659 | | | MESF serum/MESF neg control | MESF | |
| 245 | 0 | 12.5 | 7 | 35.5 | 4 | 10.5 | | | 7 linear channel shift | Linear channel shift and mean linear channel | 100 |
| 246 | 0.9 | 38 | 43.6 | 93.9 | 10.6% | 45.5% | | | 30% | | 95 |
| 252 | 72 | 108 | 120 | 266 | 66 | 168 | | | Median +2SD ratio | | 70 |
| 262 | | 2.45 (74%) | 2.3 (59%) | 4.6 (97%) | 1008 | 11884 | | | R> 2 neg control and lysis >12% | Median log channel | 86 |
| 271 | 190 | 479 | 378 | 557 | 142 | 437 | | | 64 | Median log channel | 91 |
| 284 | 421 | 787 | 631 | 1158 | 414 | | 3665 | 516 | Sample serum/neg control: ratio >1.2 | Median log channel | |
| 297 | 165 | 629 | 454 | 1303 | 53 | 1981 | | | Ratio ≥1.5 of neg MFI | MFI | |
| 341 | 4.21 | 10.73 | 13.65 | 32.57 | 4.09 | 26.86 | | | 3SD | Geomean linear values | 97 |

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B-CELL FLOW CYTOMETRY RESULTS OF SAMPLE 2B01/2016 (COMPARED TO LOCAL NEGATIVE CONTROL)

DISPATCHED ON 12TH JANUARY 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 | | | | | | | | | | | |
| 112 | | | | | | | | | | | 5 |
| 114 | 410 | 638 | 445 | 494 | 456 | 769 | | | 516 | Median channel | 94 |
| 115 | 300 | 715 | 447 | 566 | 366 | 436 | | | >60 | Median linear channel shift | |
| 116 | 2.66 | 24.2 | 3.19 | 12 | 2.09 | 37.15 | | | Ratio >1.7 | Median log channel | |
| 117 | 12.6 | 164.87 | 21.05 | 90.17 | 12.72 | 148.74 | | | Ratio (RMF) >1.5 | Median log channel | 95 |
| 118 | 256.5 | 341.75 | 262.25 | 282.5 | 241.5 | 479 | | | 267 (241.5+25.5) | Median linear channel | 90 |
| 119 | 10.36 | 66.4 | 9.46 | 29.4 | 3.29 | 5.07 | | | Ratio: Pos >1.7, B-line (1.5-1.7) | Mnlx | 95 |
| 120 | 1.21 | 17.01 | 2.7 | 4.06 | 313.5 | 13197.5 | | | Ratio >2 | Median | 100 |
| 122 | 73.5 | 1471 | 199.5 | 577.5 | 53 | | 311 | 91 | 3SD | Geomean linear values | 98 |
| 126 | 421 | 858 | 582 | 722 | 333 | 775 | | | >80 linear channel shift | Median | 90 |
| 130 | 265 | 648 | 405 | 480 | 225 | 399 | | | >80 | Mean channel shift | 99 |
| 139 | 4.6 | 96.2 | 10.7 | 27.5 | 2.45 | 19 | | | ≥2 of neg median log channel | Median log channel | |
| 142 | 819 | 7774 | 1794 | 2459 | 937 | 14591 | | | 1355 (937+3SD) | Median log channel | 93 |
| 144 | 1.9 | 22.8 | 3.7 | 9.2 | 3554 | 8.5 | | | 2.5 | Median/Ratio | |
| 145 | 0.979 | 16.1 | 1.71 | 5.55 | 1.65 | 9.53 | | | 2SD of the ratio | Median log channel | 85 |
| 147 | 295.5 | 641 | 395.5 | 505 | 216.5 | 680 | | | >60 linear channel shift | Linear channel | 100 |
| 154 | 283 | 5153 | 1155 | 3186 | 234 | 4415 | | | Median >150% control and shape of the curve | MFI | |
| 157 | 220 | 479 | 251 | 326 | 326 | 534 | | | 361 | Median linear channel | 93 |
| 159 | 358 | 695 | 416 | 541 | 268 | 635 | | | 100 mean linear channel shift (368 MLC) | MLC | 80 |
| 160 | 102.00 | 1341.00 | 249.00 | 407.00 | 61.50 | 571.00 | | | 138 (Neg +2SD) | Mean linear | |
| 163 | 1.10 | 7.40 | 1.60 | 4.90 | 1.00 | 2.10 | | | 1.7 | Geomean linear channel | 99 |
| 167 | 1196 | 183393 | 1965 | 6715 | 1127 | 15674 | | | 2SD | Median log channel | 70 |
| 169 | 116.72 | 964.78 | | 352.55 | 171.2 | 1871.1 | | | NR>200 | Mean log channel | 75 |
| | NR 68 | 563 | | 206 | | 1092 | | | | | |
| 176 | 0.03 | 1 | 0.23 | 0.8 | 0 | 0.64 | | | 0.22 | MFI | |
| 186 | 2.13 | 9.93 | 2.59 | 6.30 | 2.28 | 14.50 | | | 2x local neg control | MFI | 95 |
| 190 | 135 | 824 | 184 | 518 | 83.3 | 693 | | | Ratio sample/neg >2.5 | Median log channel | 74 |
| 191 | 63 | 307 | 243 | 73 | 0 | 418 | | | >100 | MFI | 100 |
| 193 | 70.59 | 1679.52 | 176.09 | 444.48 | 60.52 | 526.14 | | | Neg control mean x2.5 | Geometric mean linear channel | |
| 194 | 1 | 11 | 2 | 6 | <1 | 17 | | | >1 median log | x-Median | 100 |
| 195 | 330 | 4982 | 459 | 1253 | 258 | 5050 | | | Test/Neg control >1.35 | Median log channel | 90 |
| 201 | 2.94 | 29.8 | 5.5 | 10 | 2.12 | 23.8 | | | ratio (S/NC) ≥2.5 | x-Mean | 97 |
| 202 | 5.2 | 33.3 | 18.6 | 23.3 | 3.6 | 100 | | | 8% above the local negative control | Linear scale | |
| 204 | 3.3 | 26.3 | 4.99 | 17.6 | 3.29 | 26.3 | | | 6.57 = 2x local neg control | Mean log channel | |
| 209 | 1.5 | 27 | 2.6 | 9.5 | 1006 | 1959 (1.95) | | | 1.9 | Geometric mean log channel (ratio) | 90 |
| 218 | 1298 | 3984 | 746 | 3497 | 455 | 2473 | | | 455x1.7=773.5 | Geometric MFI | |
| 220 | 2937 | 248327 | 14896 | 71091.5 | 2085.5 | 262143 | | | 8000 above the negative control | Linear values | 95 |
| 227 | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| 235 | 12.63 | 241.44 | 125.03 | 96.47 | 10.75 | 453.16 | | | >18 of neg median log channel | Median log channel | 85 |
| 238 | 1444 | 6898 | 1756 | 2491 | 1536 | 6965 | | | MESF serum/MESF neg control | MESF | |
| 245 | -6 | 79 | 4 | 42 | 17 | 31 | | | 15 linear channel shift | Linear channel shift and mean linear channel | 100 |
| 246 | 25.6 | 94.2 | 66.9 | 98.8 | 10.7% | 62.7% | | | 30% | | 95 |
| 252 | 94 | 1370 | 186 | 389 | 58 | 207 | | | Median +2SD ratio | | 70 |
| 262 | | 13.9 (91%) | 2.5 (37%) | 6.7 (87%) | 1695 | 42762 | | | R> 2 neg control and lysis >12% | Median log channel | 86 |
| 271 | 240 | 721 | 381 | 6570 | 189 | 534 | | | 90 | Median log channel | 91 |
| 284 | 560 | 1760 | 737 | 1439 | 523 | | 11496 | 644 | Sample serum/neg control: ratio >1.2 | Median log channel | |
| 297 | 2801 | 16958 | 2804 | 5913 | 1913 | 7528 | | | Ratio ≥1.5 of neg MFI | MFI | |
| 341 | 14.83 | 145.28 | 20.13 | 75.22 | 9.09 | 98.42 | | | 3SD | Geomean linear values | 97 |