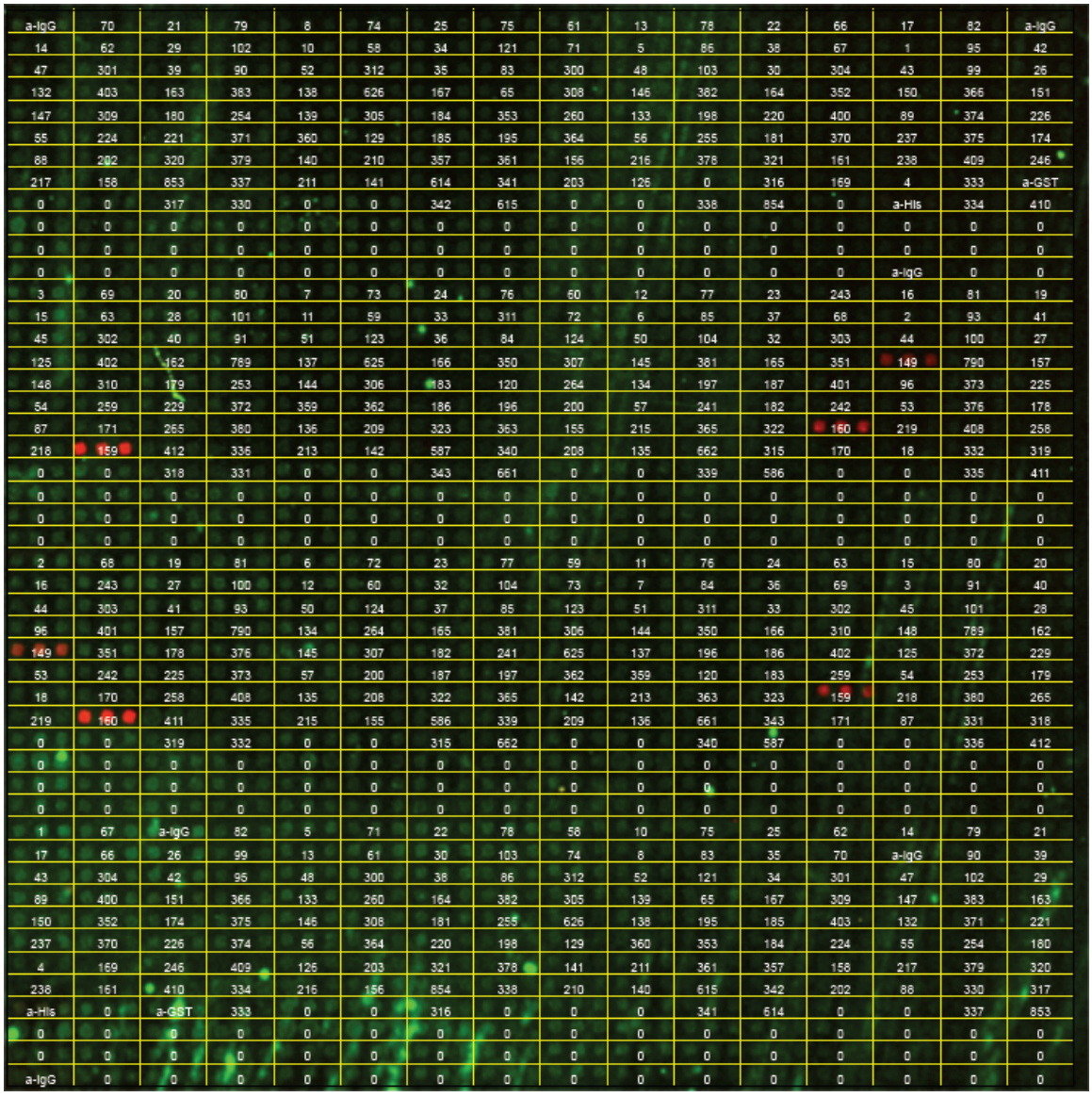
## Analysis of anti-H3R17Me2a on the *EpiTitan*™ Histone Peptide Array



| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| a-IgG | 70 | 21 | 79 | 8 | 74 | 25 | 75 | 61 | 13 | 78 | 22 | 66 | 17 | 82 | a-IgG |
| 14 | 62 | 29 | 102 | 10 | 58 | 34 | 121 | 71 | 5 | 86 | 38 | 67 | 1 | 95 | 42 |
| 47 | 301 | 39 | 90 | 52 | 312 | 35 | 83 | 300 | 48 | 103 | 30 | 304 | 43 | 99 | 26 |
| 132 | 403 | 163 | 383 | 138 | 626 | 167 | 65 | 308 | 146 | 382 | 164 | 352 | 150 | 366 | 151 |
| 147 | 309 | 180 | 254 | 139 | 305 | 184 | 353 | 260 | 133 | 198 | 220 | 400 | 89 | 374 | 226 |
| 55 | 224 | 221 | 371 | 360 | 129 | 185 | 195 | 364 | 56 | 255 | 181 | 370 | 237 | 375 | 174 |
| 88 | 282 | 320 | 379 | 140 | 210 | 357 | 361 | 156 | 216 | 378 | 321 | 161 | 238 | 409 | 246 |
| 217 | 158 | 653 | 337 | 211 | 141 | 614 | 341 | 203 | 126 | 0 | 316 | 169 | 4 | 333 | a-GST |
| 0 | 0 | 317 | 330 | 0 | 0 | 342 | 615 | 0 | 0 | 338 | 854 | 0 | a-His | 334 | 410 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | a-IgG | 0 | 0 |
| 3 | 69 | 20 | 80 | 7 | 73 | 24 | 76 | 60 | 12 | 77 | 23 | 243 | 16 | 81 | 19 |
| 15 | 63 | 28 | 101 | 11 | 59 | 33 | 311 | 72 | 6 | 85 | 37 | 68 | 2 | 93 | 41 |
| 45 | 302 | 40 | 91 | 51 | 123 | 36 | 84 | 124 | 50 | 104 | 32 | 303 | 44 | 100 | 27 |
| 125 | 402 | 162 | 789 | 137 | 625 | 166 | 350 | 307 | 145 | 381 | 165 | 351 | 149 | 790 | 157 |
| 148 | 310 | 179 | 253 | 144 | 306 | 183 | 120 | 264 | 134 | 197 | 187 | 401 | 96 | 373 | 225 |
| 54 | 259 | 229 | 372 | 359 | 362 | 186 | 196 | 200 | 57 | 241 | 182 | 242 | 53 | 376 | 178 |
| 87 | 171 | 265 | 360 | 136 | 209 | 323 | 363 | 155 | 215 | 365 | 322 | 160 | 219 | 408 | 258 |
| 218 | 159 | 412 | 336 | 213 | 142 | 587 | 340 | 208 | 135 | 662 | 315 | 170 | 18 | 332 | 319 |
| 0 | 0 | 318 | 331 | 0 | 0 | 343 | 661 | 0 | 0 | 339 | 586 | 0 | 0 | 335 | 411 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 68 | 19 | 81 | 6 | 72 | 23 | 77 | 59 | 11 | 76 | 24 | 63 | 15 | 80 | 20 |
| 16 | 243 | 27 | 100 | 12 | 60 | 32 | 104 | 73 | 7 | 84 | 36 | 69 | 3 | 91 | 40 |
| 44 | 303 | 41 | 93 | 50 | 124 | 37 | 85 | 123 | 51 | 311 | 33 | 302 | 45 | 101 | 28 |
| 96 | 401 | 157 | 790 | 134 | 264 | 165 | 381 | 306 | 144 | 350 | 166 | 310 | 148 | 789 | 162 |
| 149 | 351 | 178 | 376 | 145 | 307 | 182 | 241 | 625 | 137 | 196 | 186 | 402 | 125 | 372 | 229 |
| 53 | 242 | 225 | 373 | 57 | 200 | 187 | 197 | 362 | 359 | 120 | 183 | 259 | 54 | 253 | 179 |
| 18 | 170 | 258 | 408 | 135 | 208 | 322 | 365 | 142 | 213 | 363 | 323 | 159 | 218 | 380 | 265 |
| 219 | 160 | 411 | 335 | 215 | 155 | 586 | 339 | 209 | 136 | 661 | 343 | 171 | 87 | 331 | 318 |
| 0 | 0 | 319 | 332 | 0 | 0 | 315 | 662 | 0 | 0 | 340 | 587 | 0 | 0 | 336 | 412 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 67 | a-IgG | 82 | 5 | 71 | 22 | 78 | 58 | 10 | 75 | 25 | 62 | 14 | 79 | 21 |
| 17 | 66 | 26 | 99 | 13 | 61 | 30 | 103 | 74 | 8 | 83 | 35 | 70 | a-IgG | 90 | 39 |
| 43 | 304 | 42 | 95 | 48 | 300 | 38 | 86 | 312 | 52 | 121 | 34 | 301 | 47 | 102 | 29 |
| 89 | 400 | 151 | 366 | 133 | 260 | 154 | 382 | 305 | 139 | 65 | 167 | 309 | 147 | 383 | 163 |
| 150 | 352 | 174 | 375 | 146 | 308 | 181 | 255 | 626 | 138 | 195 | 185 | 403 | 132 | 371 | 221 |
| 237 | 370 | 226 | 374 | 56 | 364 | 220 | 198 | 129 | 360 | 353 | 184 | 224 | 55 | 254 | 180 |
| 4 | 169 | 246 | 409 | 126 | 203 | 321 | 378 | 141 | 211 | 361 | 357 | 156 | 217 | 379 | 320 |
| 236 | 161 | 410 | 334 | 216 | 156 | 854 | 338 | 210 | 140 | 615 | 342 | 202 | 86 | 330 | 317 |
| a-His | 0 | a-GST | 333 | 0 | 0 | 316 | 0 | 0 | 0 | 341 | 614 | 0 | 0 | 337 | 853 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| a-IgG | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Data Specificity:**

EpiTitan™ Histone Peptide Array was used to analyze binding specificity of the H3R17me2a antibody at 1:5,000. Antibody signal appears in red, while the spotting tracer appears in green. The array image is overlayed with a frame containing numbers corresponding to the peptide number ("Peptide #") in the raw data list below. Raw data "Signal" is an average of the antibody signal intensities of all 6 instances of the corresponding peptide on the array (2 instances of three peptide spots in a row).

**Result:**
Anti-H3R17me2a only recognizes H3R17me2a peptides on the array.

| Peptide # | Signal | STDEV | Peptide Name |
|---|---|---|---|
| 160 | 343669 | 178002 | H3R17me2a + K18ac (1-25) |
| 159 | 273965 | 96587 | H3R17me2a (1-25) |
| 149 | 185544 | 60487 | H3R17me2a |
| 151 | 14390 | 11443 | H3R17me1 |
| 179 | 8466 | 11409 | H3R8me1 + K9me2 |
| 218 | 5823 | 7678 | H3K18-Nle (11-26) |
| 411 | 4343 | 5750 | H2BK20ac |
| 60 | 3902 | 480 | H3R2me2a + K4me2 |
| 219 | 3556 | 1335 | H3K23-Nle (15-31) |
| 351 | 3258 | 4563 | H4 (1-23) (no N-ac) |
| 141 | 3256 | 133 | H3R8me2a |
| 59 | 3000 | 4242 | H4K5ac + K8ac + K12ac + K16ac |
| 75 | 2845 | 3639 | H4R3me1 |
| 47 | 2395 | 2355 | H3R2me2a |
| 412 | 2028 | 1997 | H2BK12ac + K15ac + K16ac + K20ac |
| 147 | 1979 | 661 | H3K9me1 + S10p |
| 2 | 1791 | 2402 | H3K14ac |
| 403 | 1508 | 2132 | H2BK5me1 |
| 48 | 1268 | 1329 | H3R2me2a + K4ac + K9ac + K14ac + K18ac |
| 129 | 1085 | 666 | H3K9me2 + K27me2 |
| 11 | 914 | 1293 | H3K14ac + K18ac |
| 260 | 857 | 860 | H3K4me1 + K9me2 |
| 28 | 856 | 215 | H3R2me2a + T3p + K4me3 + K9ac + K14ac + K18ac |
| 43 | 845 | 1086 | H3K4ac + K9me3 + K14ac + K18ac |
| 343 | 837 | 853 | H4K12acK16acK20me3 (1-25) |
| 18 | 728 | 531 | H3K4me3 |
| 65 | 710 | 1004 | H3K4N3 |
| 335 | 683 | 735 | H3K36ac (21-44) |
| 361 | 665 | 790 | H4K5ac + K20ac |
| 614 | 642 | 411 | cnp1 (1-23) |
| 331 | 632 | 825 | H3 (21-44) |
| 178 | 582 | 340 | H3R8me1 + K9me3 |
| 302 | 559 | 790 | H2AK5ac |
| 30 | 513 | 726 | H3R2me2a + K4me3 |
| 332 | 512 | 724 | H3K36me1 (21-44) |
| 55 | 486 | 648 | H3Cit2 + K4me3 + K9ac + K14ac + K18ac |
| 408 | 483 | 249 | H2BK12ac |
| 195 | 481 | 622 | H3K27me3 |

| | | | |
|---|---|---|---|
| 51 | 480 | 679 | H3R2me1 + K4me3 |
| 68 | 467 | 661 | H4K12ac |
| 376 | 459 | 433 | H4K5me1 + K8me1 + K12me1 |
| 140 | 454 | 643 | H3R8me1 |
| 242 | 428 | 606 | H3K27ac + S28p |
| 174 | 428 | 100 | H3R2me2s + K4me3 + K9ac + K14ac + K18ac |
| 135 | 427 | 493 | K3K4me1 + K18ac |
| 402 | 416 | 588 | H2BK5me2 |
| 44 | 407 | 575 | H3K4me2 + K9ac + K18ac |
| 340 | 406 | 575 | H2B (108-125) |
| 357 | 385 | 544 | H4S1p (1-23) |
| 258 | 356 | 235 | H3K9me2 (1-15) |
| 50 | 349 | 432 | H3R2me2a + K4me3 + K9ac + K14ac + K18ac |
| 208 | 348 | 492 | H3 105-124 |
| 330 | 348 | 64 | H3Cit8 (1-21) |
| 166 | 345 | 488 | H3K4me3 + T6p + K9ac + K14ac + K18ac |
| 62 | 341 | 483 | H3R2me1 + K4me2 |
| 180 | 340 | 422 | H3R8me2a + K9me3 |
| 134 | 330 | 29 | H3K9me1 |
| 104 | 329 | 465 | H3 (74-84) |
| 255 | 327 | 416 | H3K56me3 (52-61) |
| 360 | 323 | 247 | H4K5ac + K16ac |
| 77 | 318 | 450 | H4S1p + R3me2s |
| 26 | 314 | 443 | H3T3p + K4me3 + K9ac + K14ac + K18ac |
| 359 | 308 | 435 | H4K5ac + K8ac |
| 211 | 296 | 418 | H3.3 75-94 |
| 197 | 291 | 223 | H3K27me1 |
| 123 | 290 | 410 | H3K36ac (27-45) |
| 150 | 287 | 111 | H3R17me2s |
| 790 | 283 | 400 | H3S31p + K36me3 |
| 215 | 280 | 395 | H3K23me1 15-34 |
| 198 | 276 | 391 | H3R26me2a + K27me3 |
| 88 | 274 | 193 | H4K12ac + K16ac |
| 162 | 270 | 382 | H3T6p |
| 307 | 263 | 372 | H2AS1p + Cit3 + K5ac |
| 259 | 262 | 51 | H3K4me2 + K9me2 |
| 63 | 258 | 365 | H3Cit2 + K4me2 |
| 181 | 248 | 296 | H3R8me2a + K9me2 |
| 126 | 248 | 221 | H3.3K36me1 |
| 381 | 241 | 341 | H4K5me1 + K8ac + K12ac + K16ac |
| 350 | 230 | 325 | H4R3me2a + K5ac |
| 185 | 230 | 316 | H3R8me2s + K9me1 |
| 352 | 228 | 322 | H4K20ac |

| | | | |
|---|---|---|---|
| 254 | 222 | 313 | H3K56ac (52-61) |
| 187 | 216 | 134 | H3K4ac + K9me1 + K14ac + K18ac |
| 626 | 212 | 300 | H2A.X K5ac |
| 13 | 211 | 299 | H3K4ac + K18ac |
| 90 | 207 | 120 | H3 (15-41) |
| 85 | 206 | 291 | H4K12ac + K16ac + K20me3 |
| 210 | 196 | 277 | H3.3 30-49 |
| 52 | 195 | 276 | H3R2me1 + K4me3 + K9ac + K14ac + K18ac |
| 138 | 194 | 274 | H3K18me2 |
| 220 | 188 | 265 | H3T6p + K9me3 |
| 42 | 184 | 261 | H3K9me3 |
| 35 | 184 | 260 | H3K4me1 + K9ac + K14ac + K18ac |
| 4 | 179 | 253 | H3K4ac |
| 38 | 173 | 244 | H3K4me3 + S10p |
| 80 | 168 | 238 | H4R3me2s + K5ac + K8ac + K12ac + K16ac + K20ac |
| 370 | 168 | 64 | H4K12ac + KQ5,8,16,20 |
| 86 | 164 | 232 | H4K12ac + K16ac + K20me2 |
| 382 | 163 | 68 | H4K5ac + K8me1 + K12ac + K16ac |
| 136 | 162 | 230 | H3T11p |
| 322 | 157 | 99 | H2A.Z K4ac + K8ac + K12ac (1-19) |
| 89 | 151 | 214 | H3K4me3 + R8me2s + K9me3 |
| 156 | 147 | 208 | H3K14me3 |
| 364 | 145 | 205 | H4K12ac + K16ac |
| 305 | 142 | 201 | H2AS1p + R3me2a + K5ac |
| 401 | 141 | 181 | H2BK5me3 |
| 306 | 140 | 198 | H2ACit3 + K5ac |
| 146 | 140 | 56 | H3K9me2 + S10p |
| 341 | 132 | 187 | H4 (1-25) |
| 53 | 132 | 153 | H3Cit2 |
| 661 | 130 | 184 | H3K4me3 (1-11) |
| 171 | 129 | 183 | H3K23ac |
| 17 | 129 | 183 | H3K4ac + K9ac + K14ac + K18ac |
| 336 | 127 | 179 | H3K27acK36me1 (21-44) |
| 54 | 124 | 176 | H3Cit2 + K4me3 |
| 338 | 123 | 174 | H3K27acK36me3 (21-44) |
| 84 | 115 | 163 | H4K20me1 |
| 184 | 115 | 163 | H3R8me2s + K9me2 |
| 36 | 113 | 160 | H3S10p |
| 40 | 112 | 158 | H3R2me2a + K4me3 + S10p |
| 56 | 110 | 155 | H3Cit2 + K4ac + K9ac + K14ac + K18ac |
| 93 | 109 | 154 | H3K36me3 |
| 1 | 108 | 153 | H3 (1-20) |
| 125 | 102 | 144 | H3T3p |

| | | | |
|---|---|---|---|
| 209 | 100 | 142 | H3.3 15-34 |
| 27 | 97 | 44 | H3T3p + K4me3 |
| 70 | 94 | 134 | H4K5ac + K12ac |
| 23 | 92 | 130 | H3K4me3 + K9ac + K18ac |
| 789 | 88 | 124 | H3K36me3 |
| 165 | 87 | 124 | H3T6p + K9ac + K14ac + K18ac |
| 155 | 87 | 106 | H3K14me2 |
| 95 | 83 | 75 | H3K18me3 + K36me3 |
| 225 | 80 | 2 | H3K27me3 + S28p |
| 121 | 80 | 113 | H3K36me2 (27-45) |
| 342 | 79 | 112 | H4K20me3 (1-23) |
| 120 | 77 | 109 | H3K36me3 (27-45) |
| 15 | 75 | 2 | H3K4ac + K14ac + K18ac |
| 301 | 74 | 104 | H2AK5ac + K9ac + K13ac + K15ac |
| 300 | 68 | 96 | H2A (1-17) |
| 304 | 64 | 91 | H2AR3me2a + K5ac |
| 45 | 63 | 89 | H3K4me1 + K9ac + K18ac |
| 362 | 57 | 81 | H4K8ac + K12ac |
| 61 | 56 | 80 | H3R2me2s + K4me2 |
| 124 | 56 | 80 | H3 (27-45) |
| 144 | 48 | 68 | H3K9ac + S10p |
| 99 | 44 | 62 | H4 (11-27) |
| 186 | 42 | 43 | H3K4ac + K9me2 + K14ac + K18ac |
| 7 | 42 | 59 | H3K4ac + K9ac |
| 145 | 40 | 57 | H3K9me3 + S10p |
| 353 | 37 | 52 | H4S1p + K5ac + K8ac + K12ac + K16ac |
| 87 | 34 | 48 | H4K12ac + K16ac + K20me1 |
| 8 | 33 | 47 | H3K4ac + K9ac + K14ac |
| 303 | 33 | 4 | H2AS1p + K5ac |
| 71 | 30 | 42 | H4K8ac + K16ac |
| 323 | 29 | 41 | H2A.Z K4ac + K8ac + K12ac (1-19) N-ac |
| 5 | 27 | 39 | H3K4ac + K14ac |
| 372 | 27 | 39 | H4K8me1 |
| 237 | 27 | 38 | H3K9me2 (1-32) |
| 58 | 20 | 28 | H4 (1-23) |
| 400 | 20 | 28 | H2B (1-24) |
| 321 | 20 | 28 | H2A.Z (1-19) N-ac |
| 196 | 17 | 12 | H3K27me2 |
| 6 | 16 | 23 | H3K9ac + K14ac |
| 164 | 16 | 9 | H3K4me2 + T6p |
| 308 | 16 | 23 | H2AS1p + K5ac + K9ac + K13ac + K15ac |
| 182 | 10 | 14 | H3R8me2a + K9me1 |
| 625 | 10 | 14 | H2A.X (1-17) |

| | | | |
|---|---|---|---|
| 34 | 7 | 10 | H3K4me1 |
| 253 | 7 | 10 | H3 (52-61) |
| 83 | 7 | 9 | H4K20me2 |
| 20 | 5 | 7 | H3K4me3 + K14ac |
| 67 | 1 | 1 | H4K8ac |