

Figure 1a

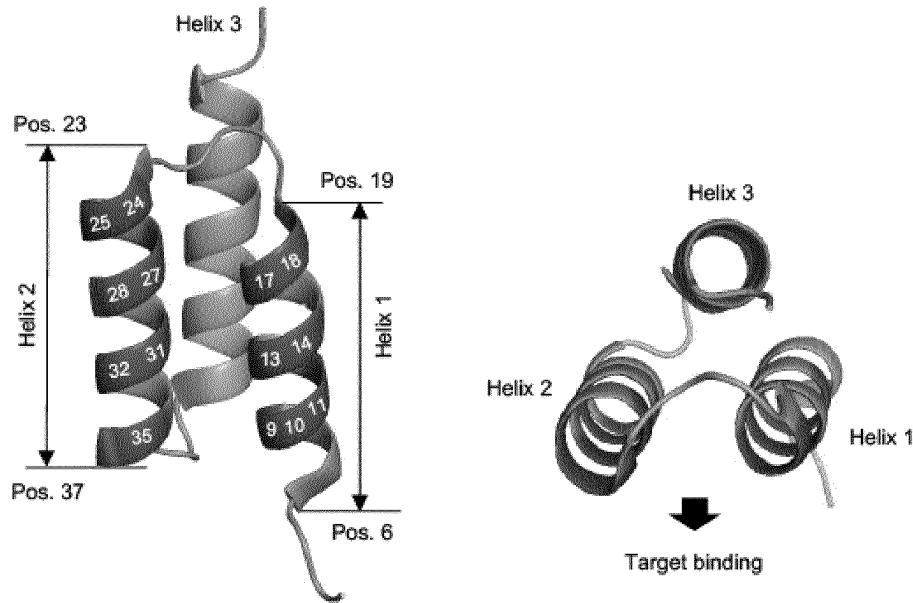
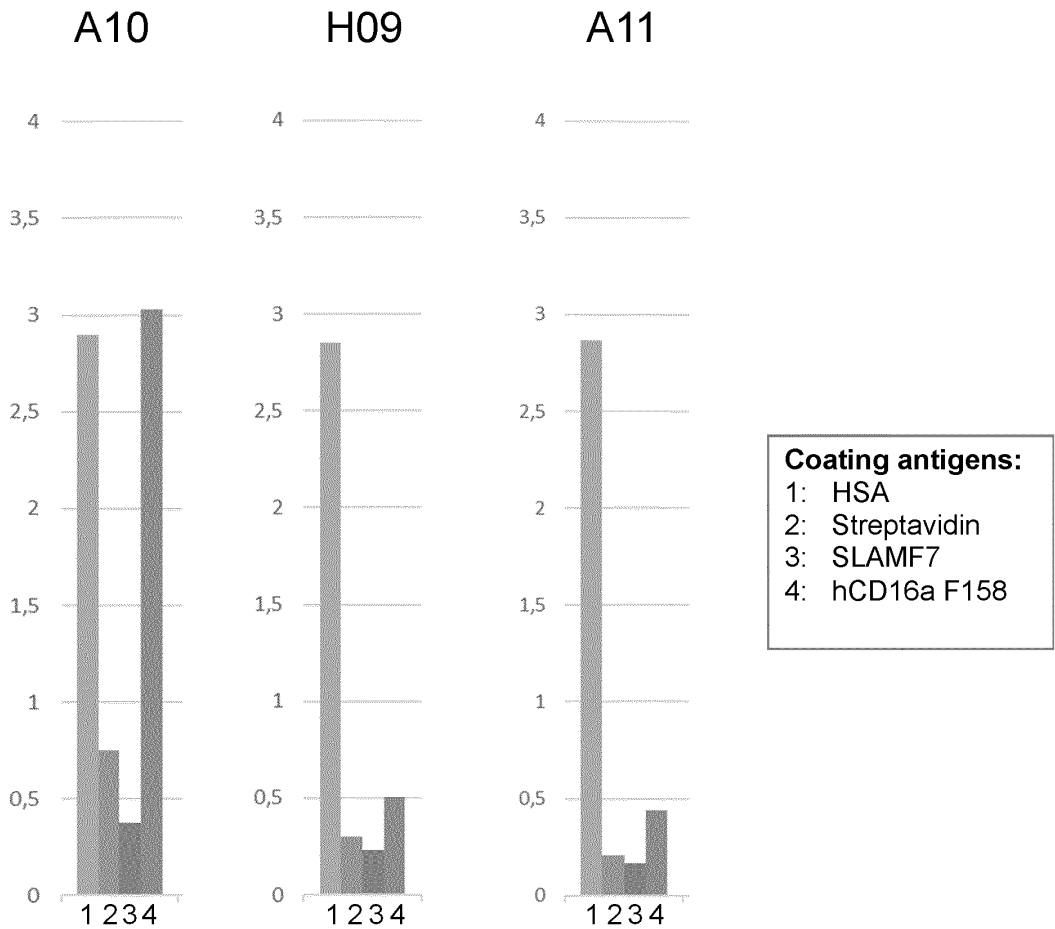


Figure 1b



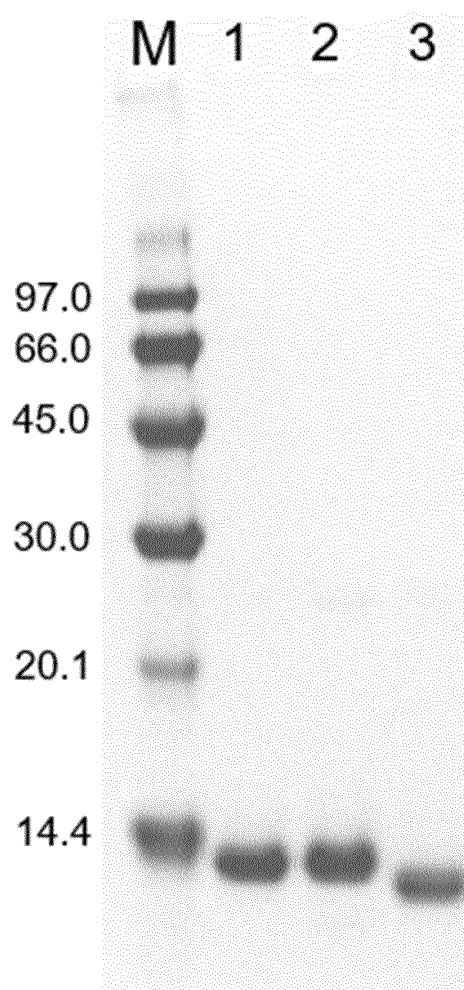
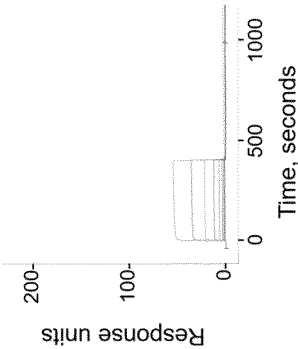
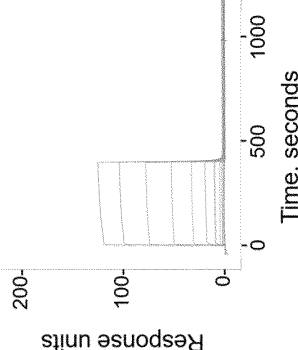
**Figure 2**

Figure 3

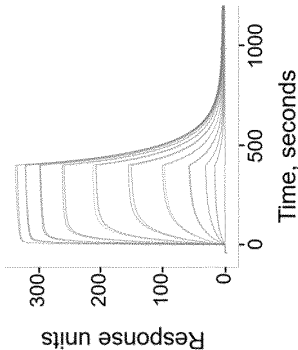
SEQ ID 77



SEQ ID 78



SEQ ID 76



CD16a F158

CD16a V158

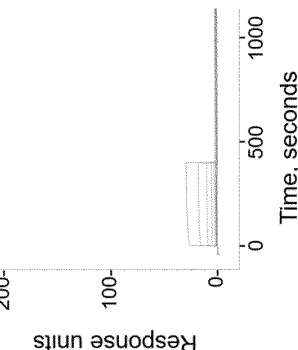
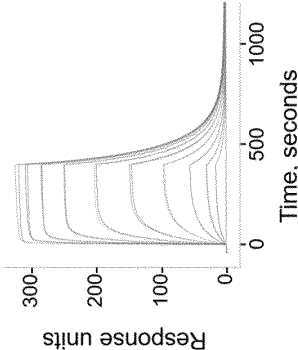
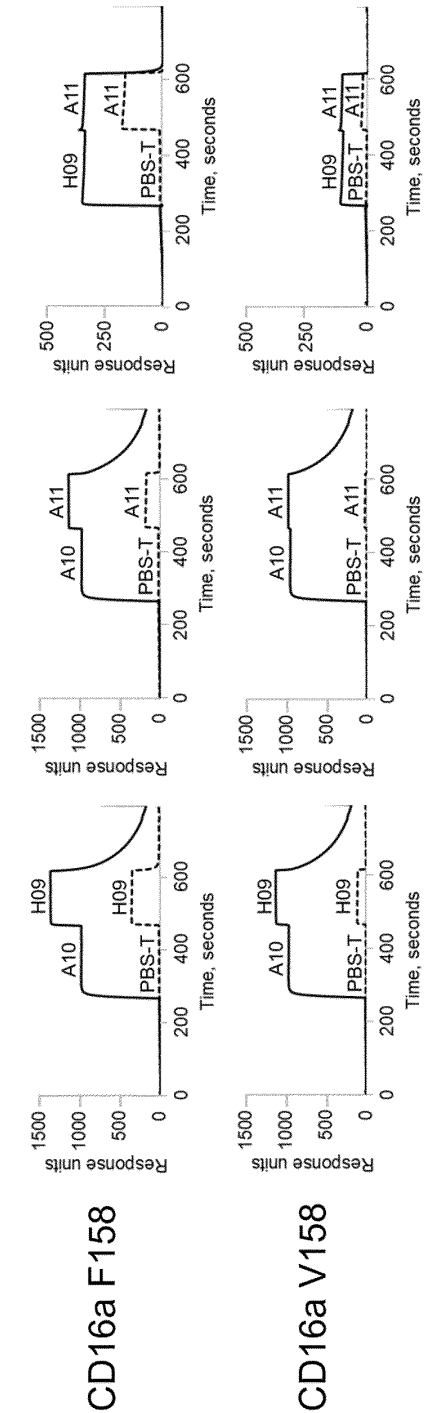
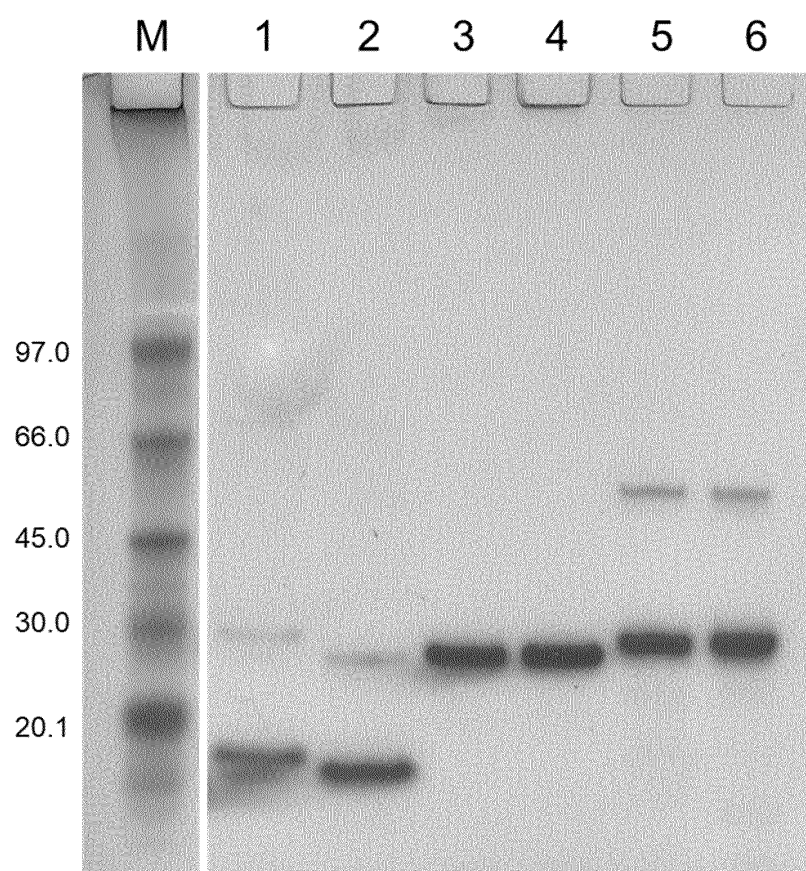


Figure 4



**Figure 5a**

**Figure 5b**

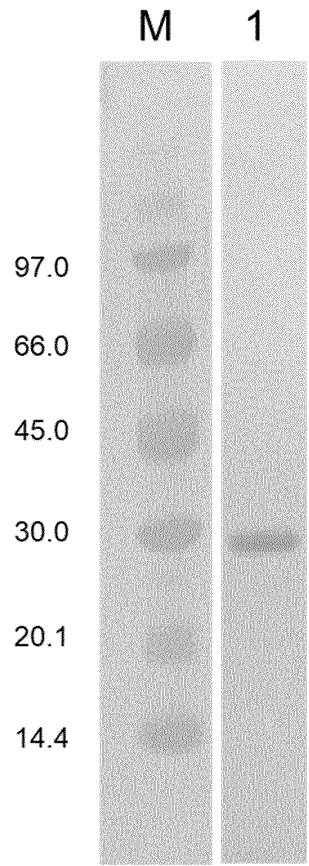


Figure 6

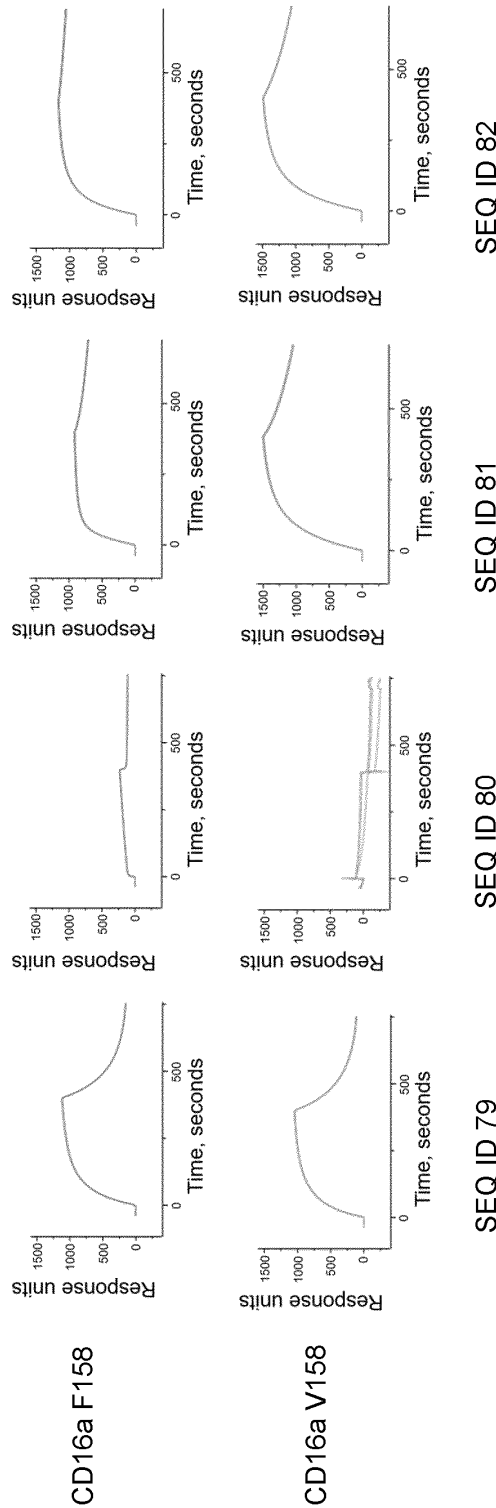
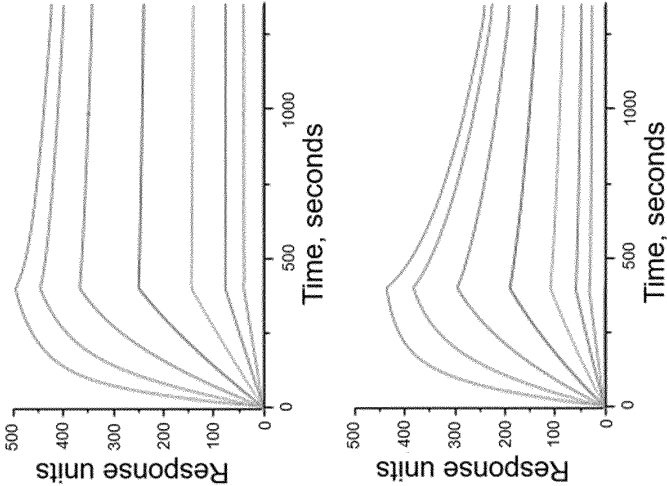
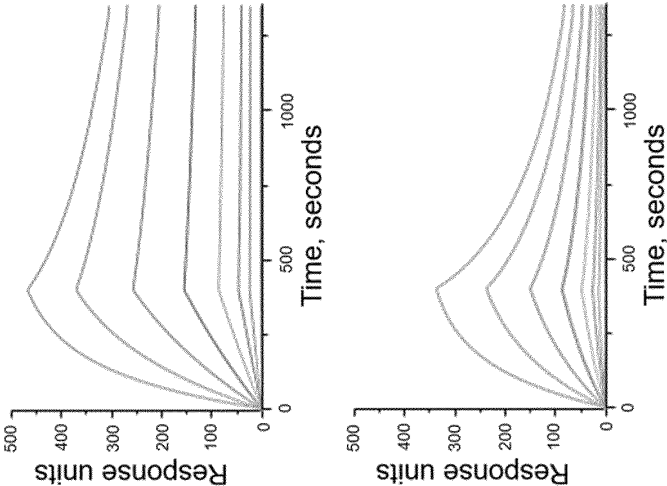


Figure 7

SEQ ID 84

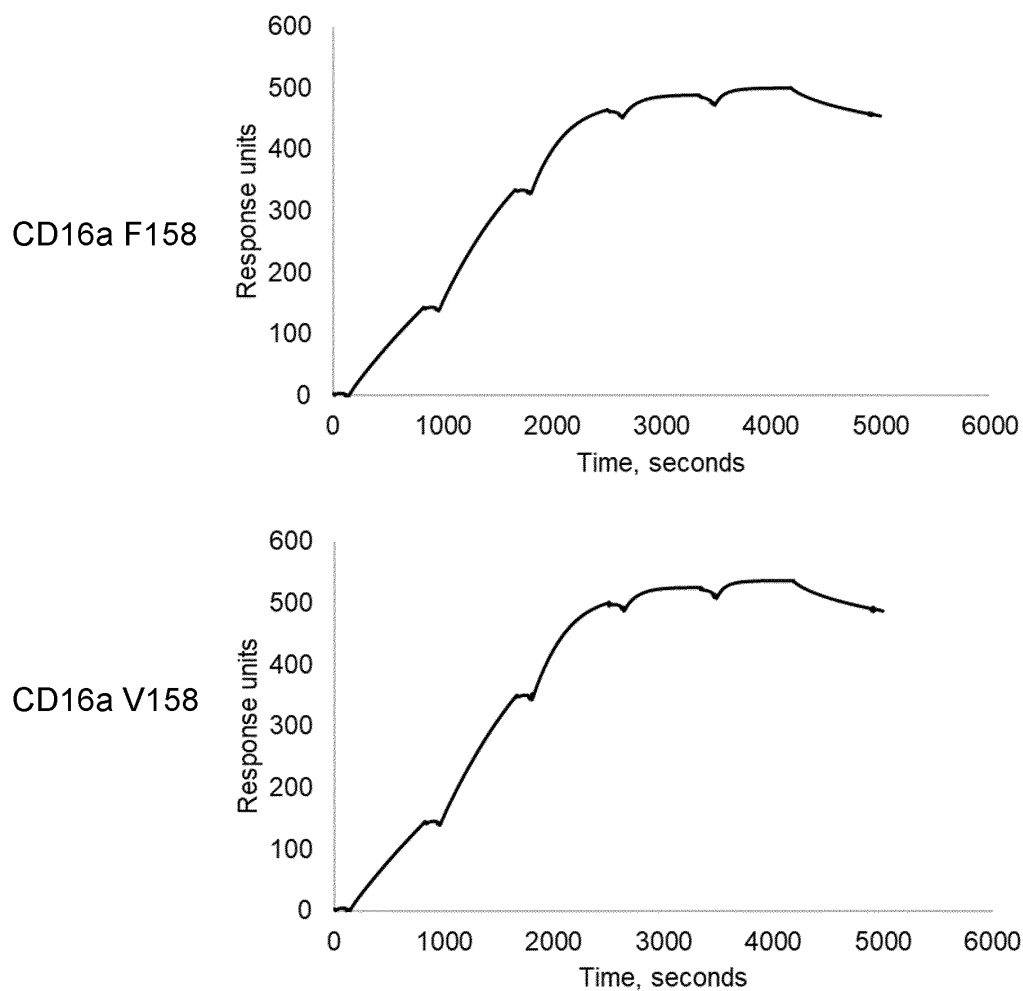


SEQ ID 83

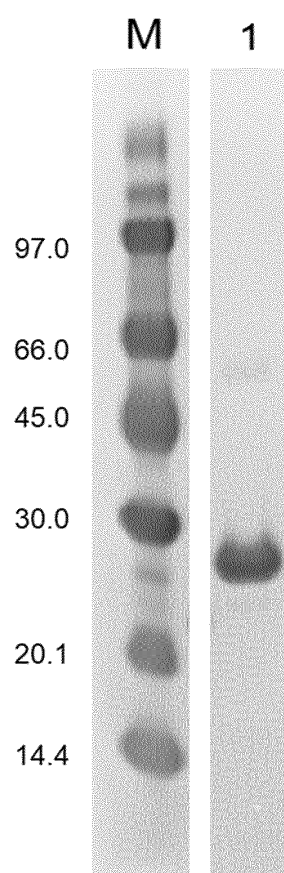


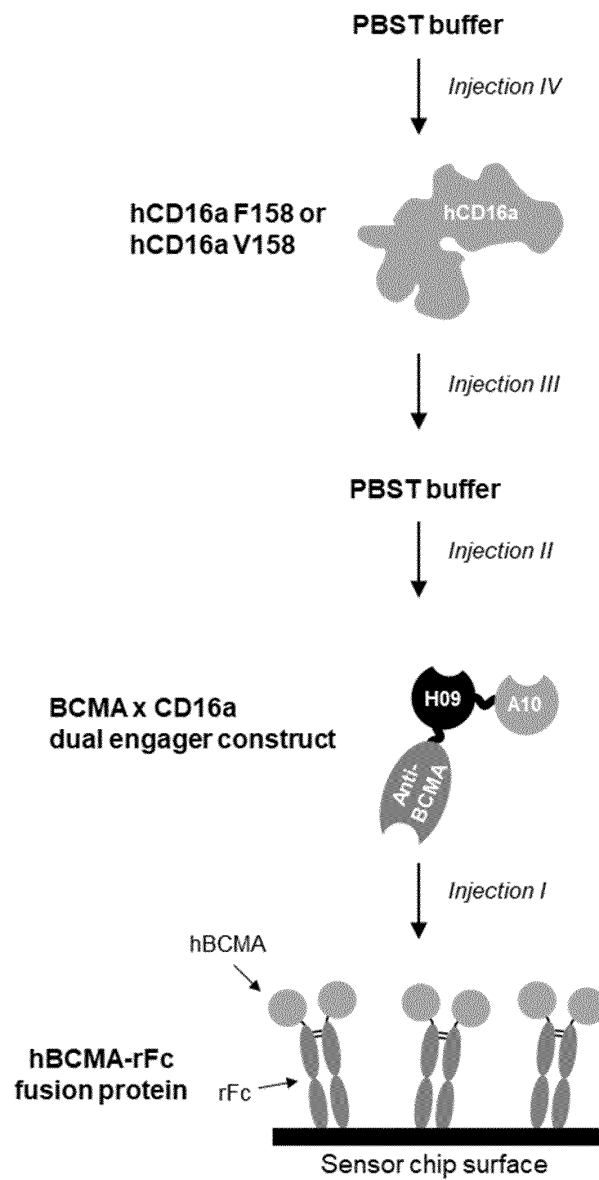
CD16a F158

CD16a V158

**Figure 8****SEQ ID No 86**

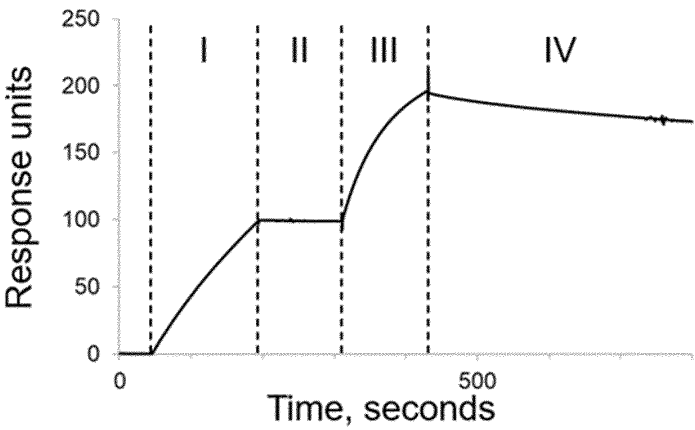
10/35

**Figure 9**

**Figure 10a**

**Figure 10b**

**CD16a F158**



**CD16a V158**

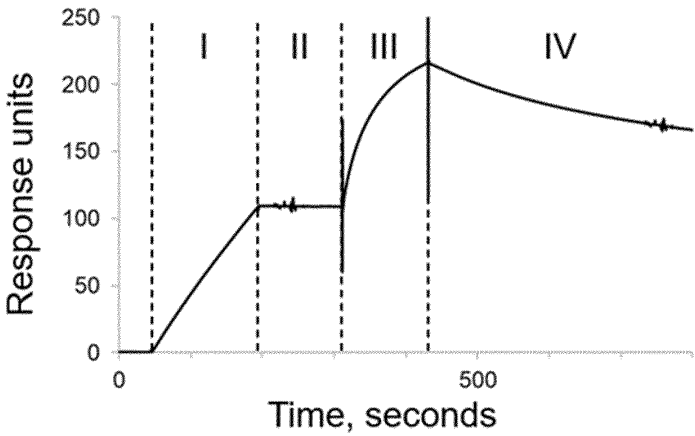
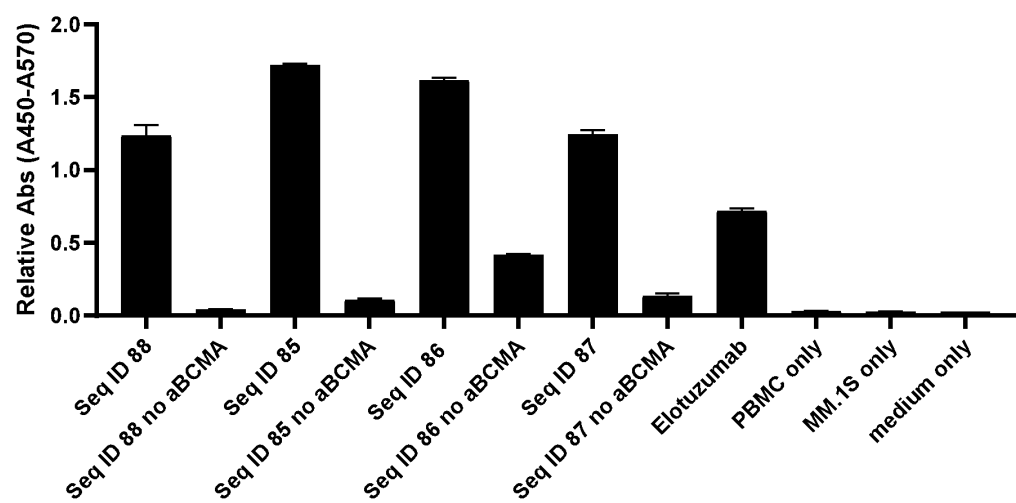


Figure 11



**Figure 12**

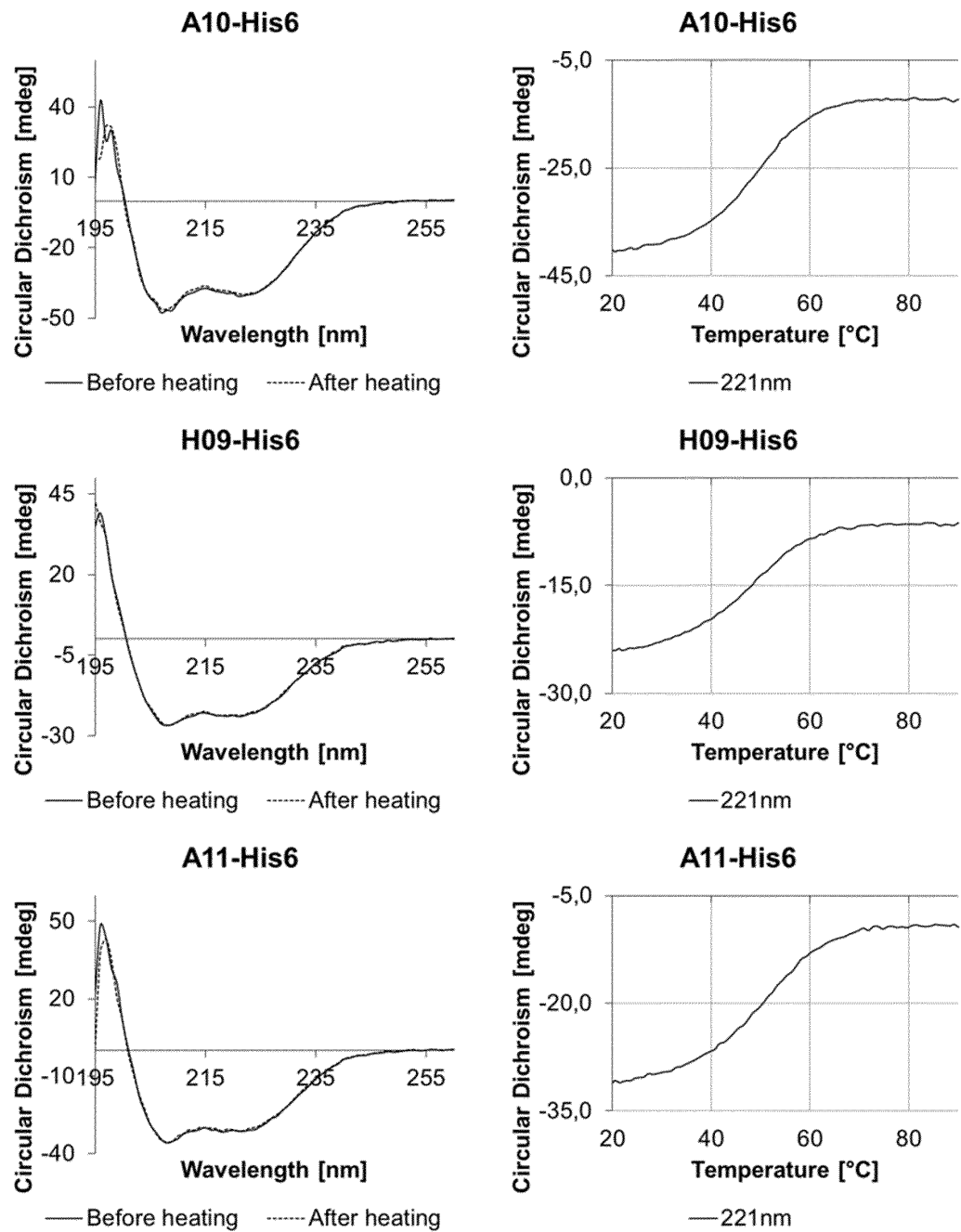


Figure 13

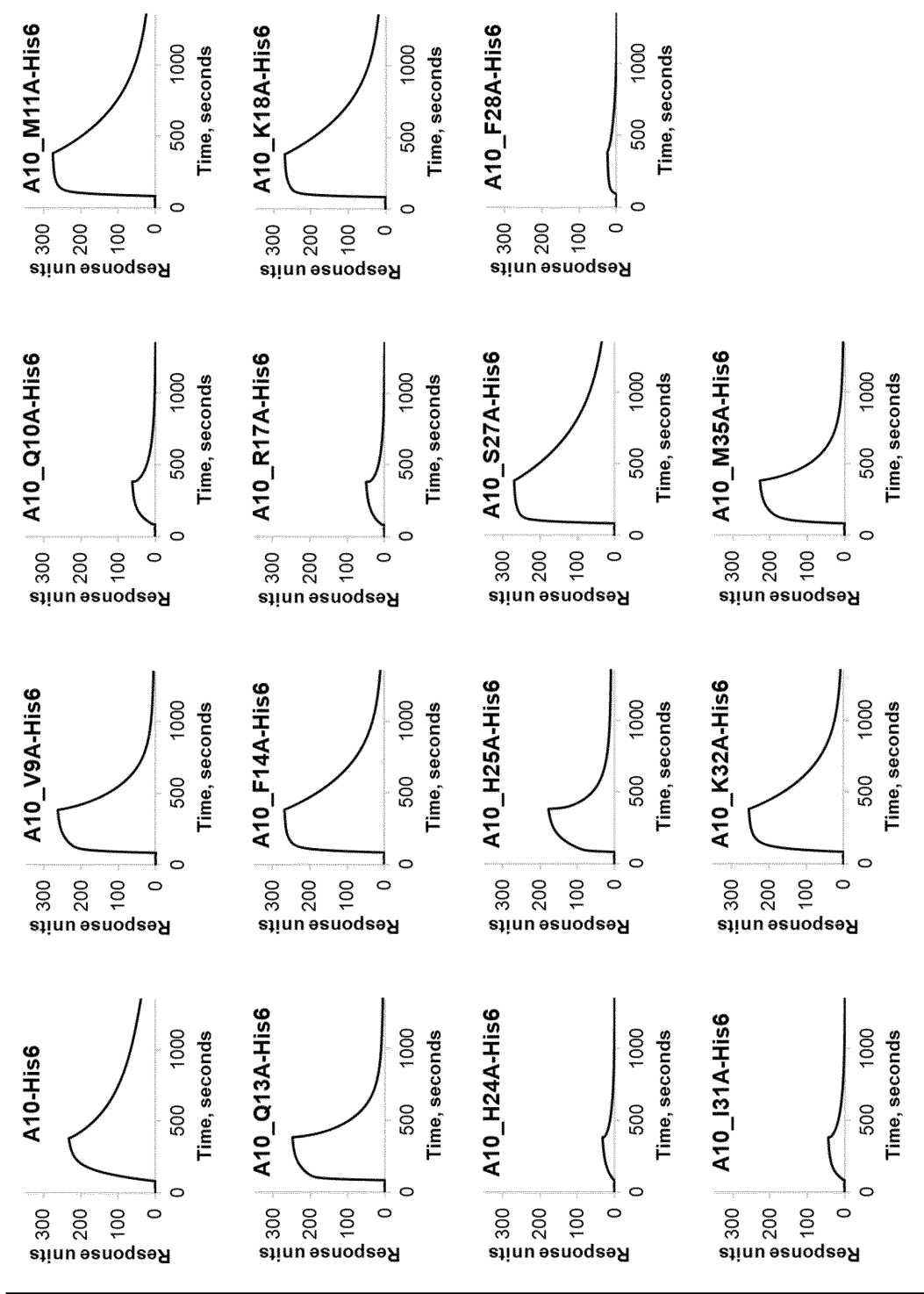


Figure 14

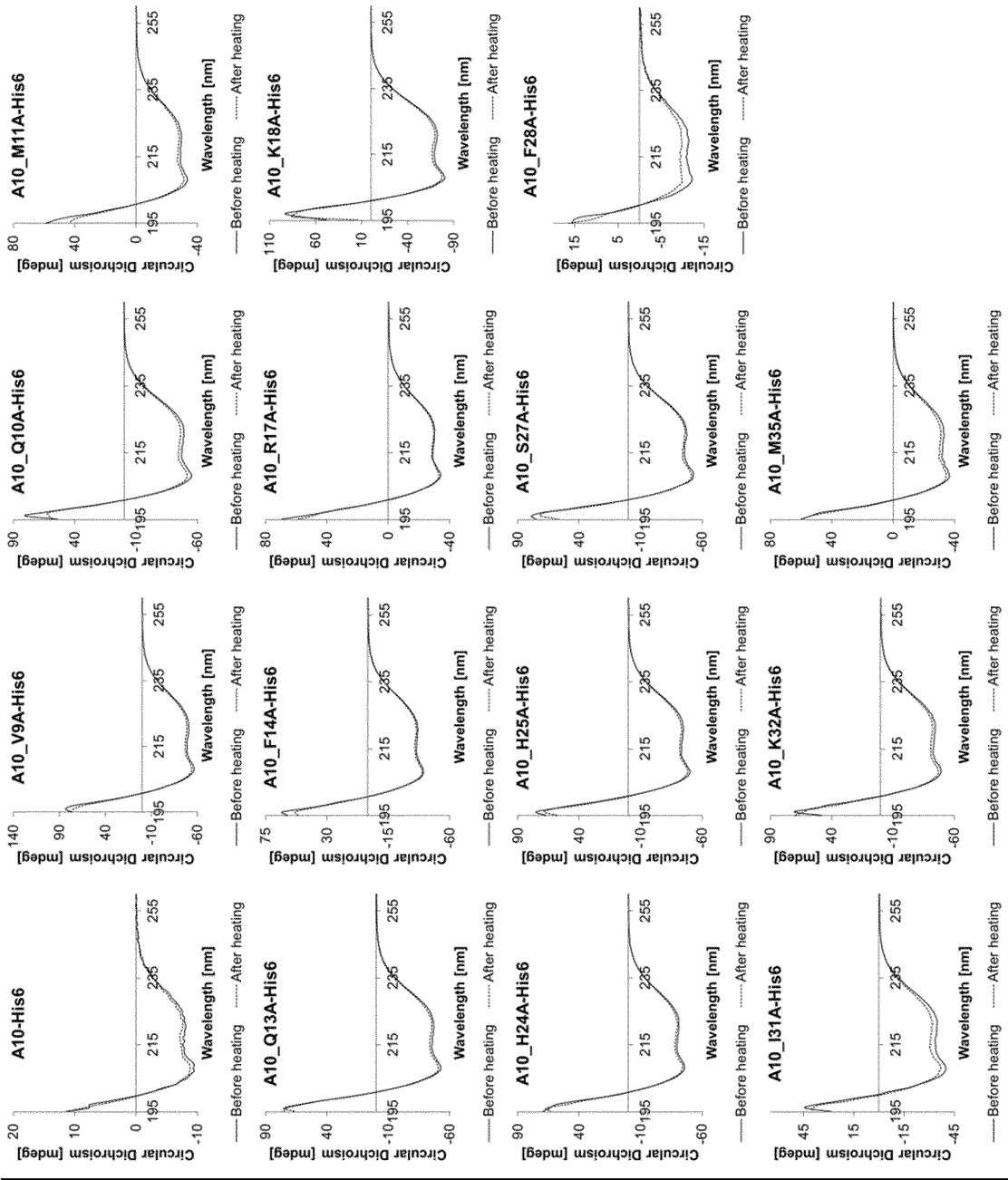


Figure 15a

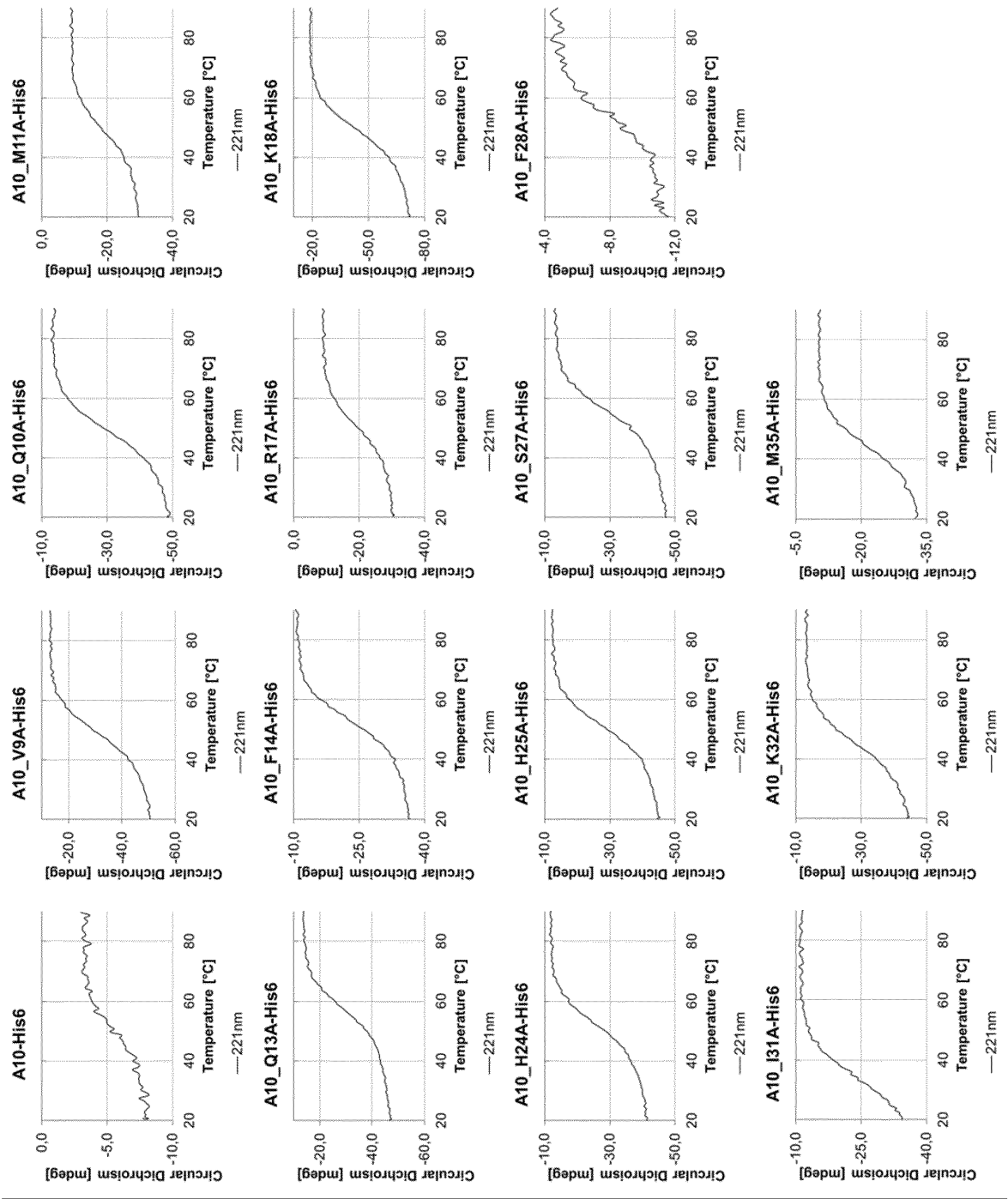


Figure 15b

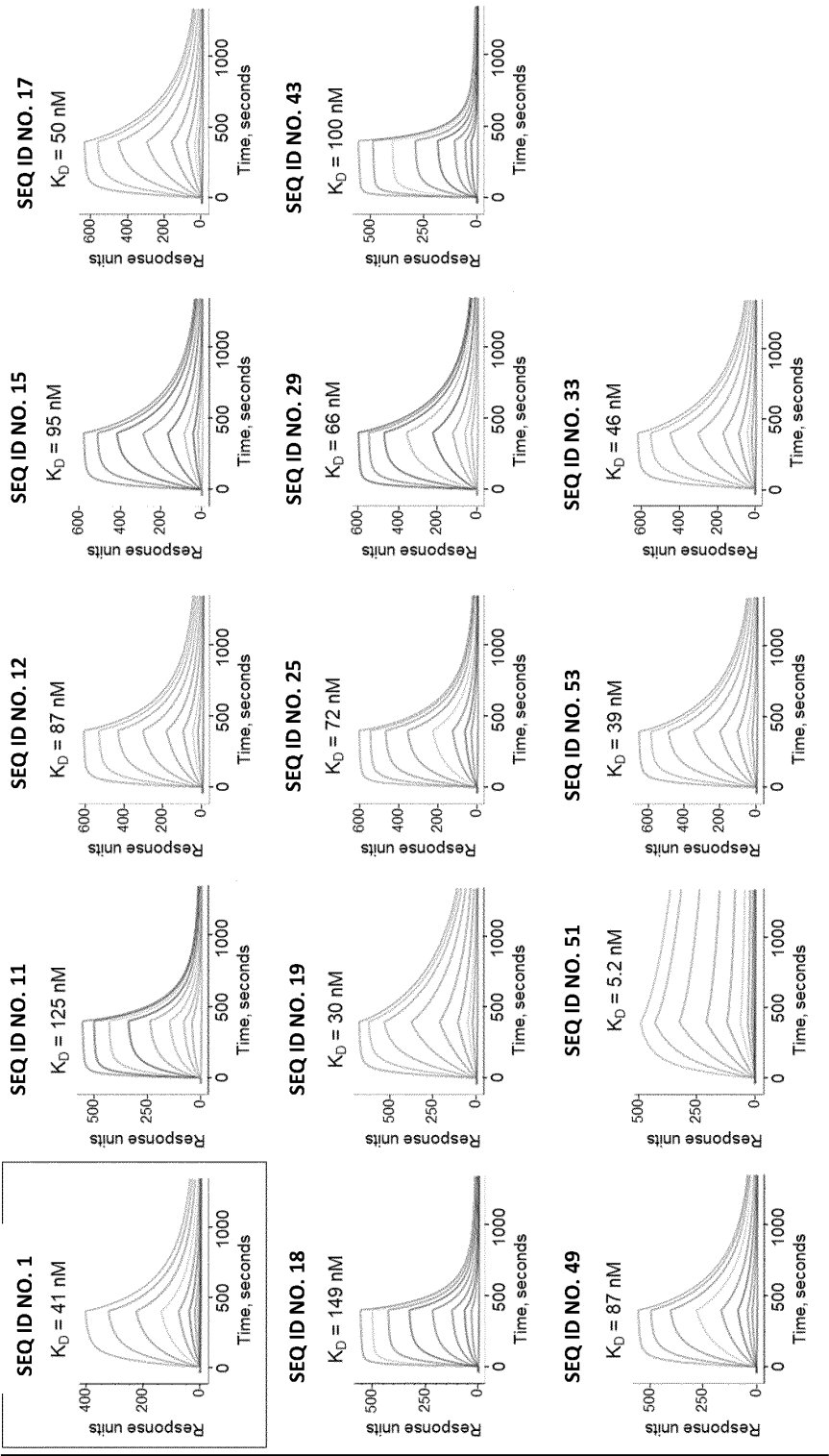


Figure 15c

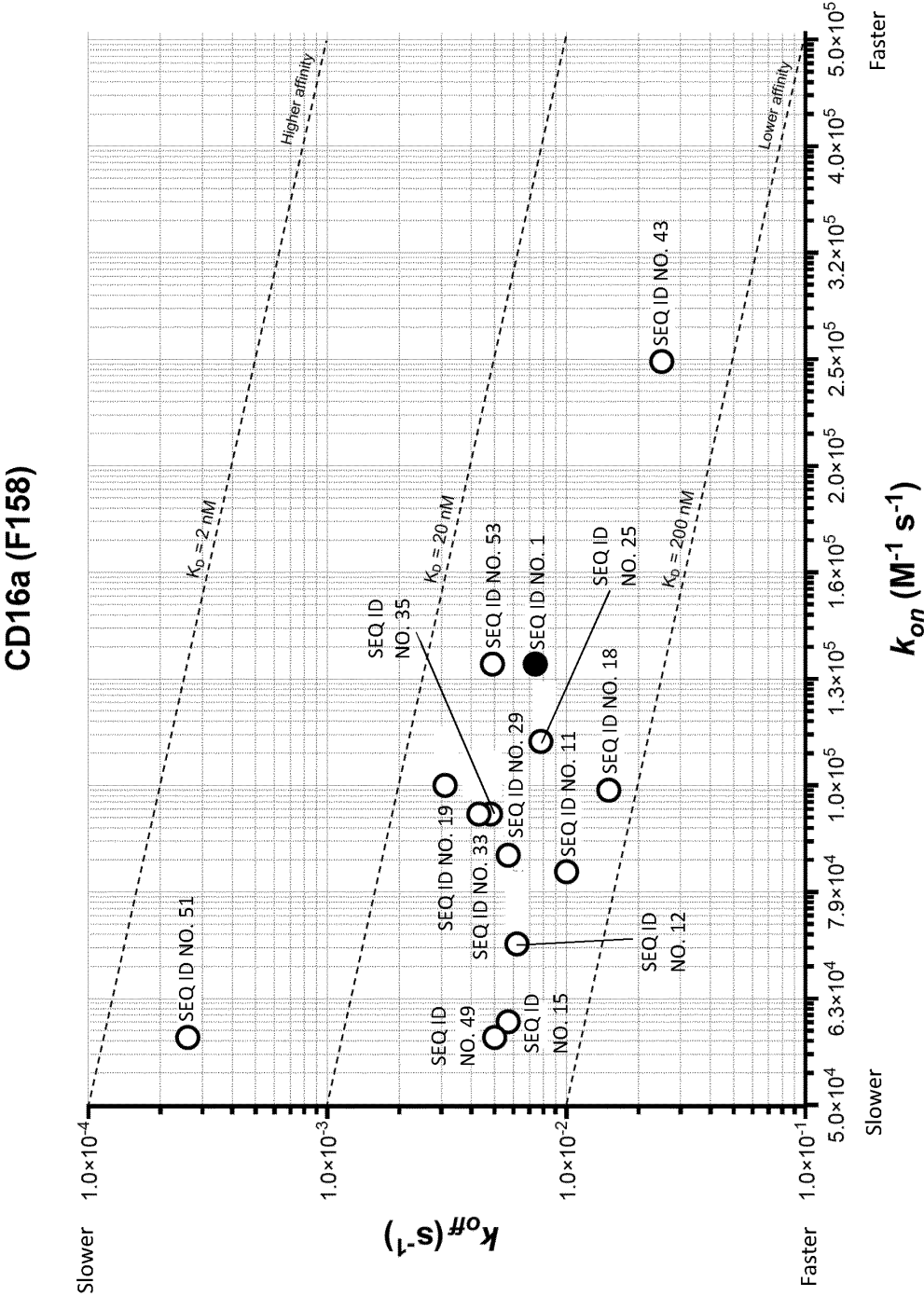


Figure 16a

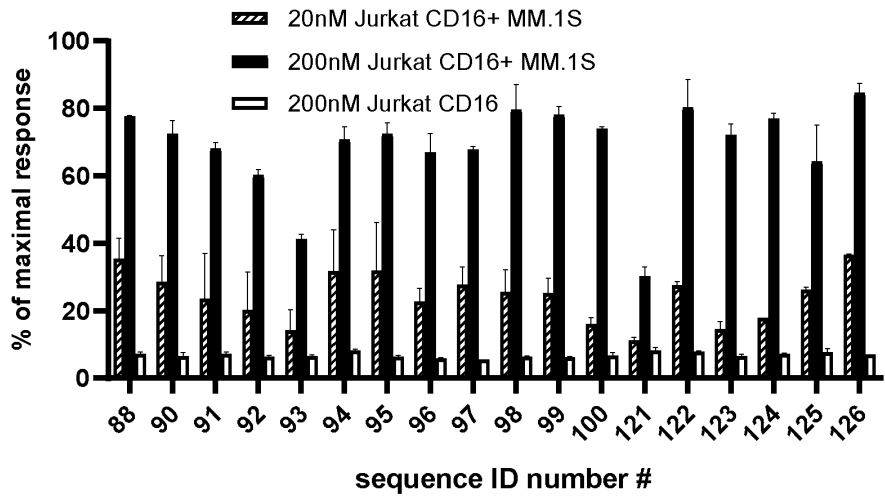
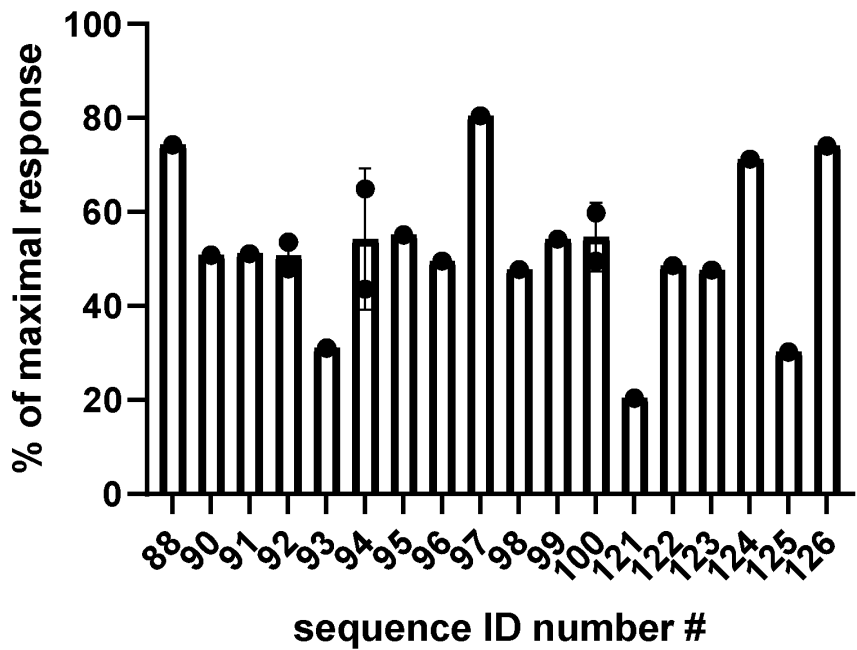
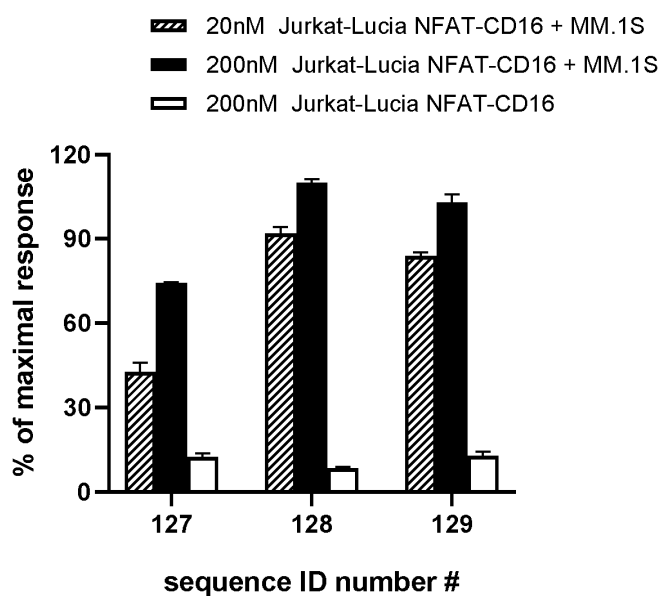
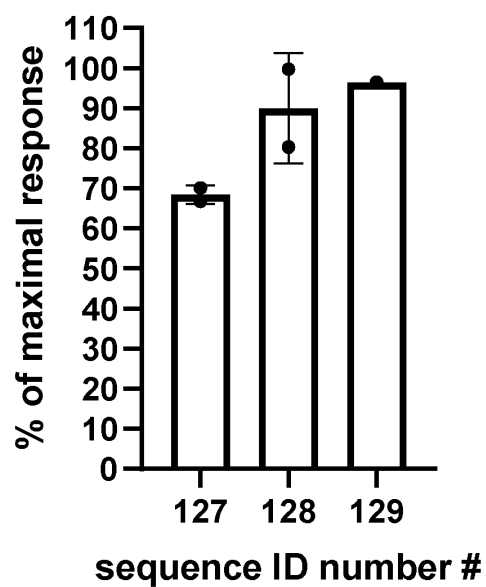


Figure 16b



**Figure 17a****Figure 17b**

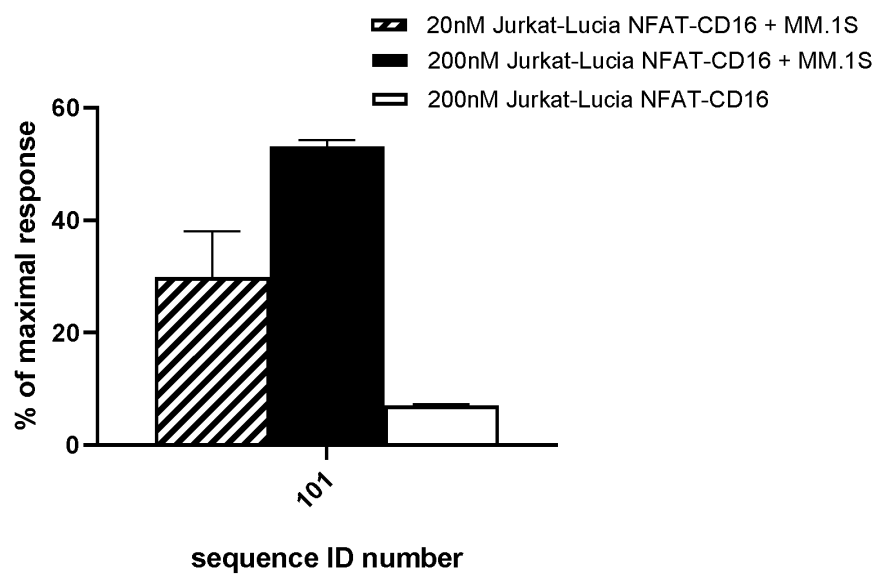
**Figure 18**

Figure 19a

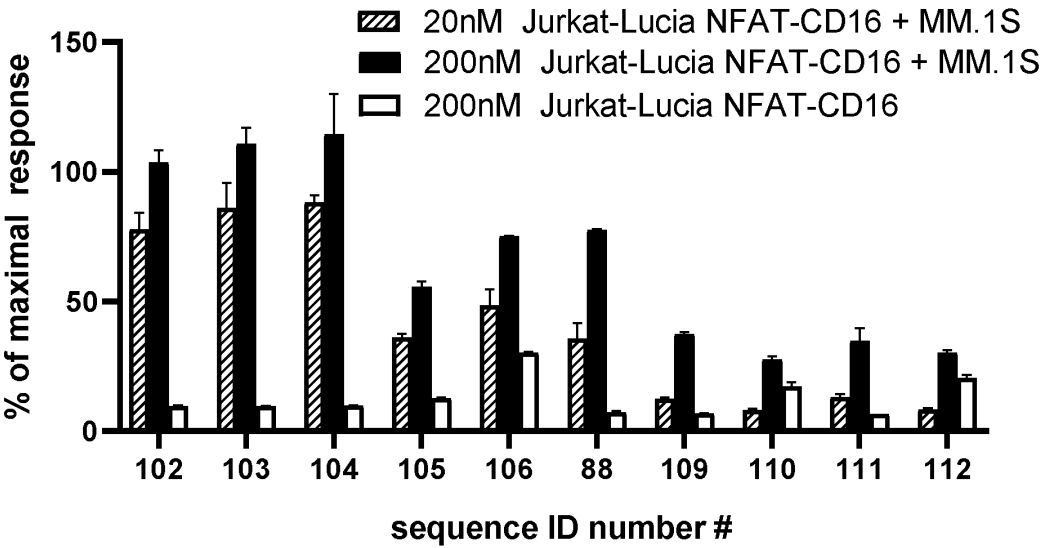


Figure 19b

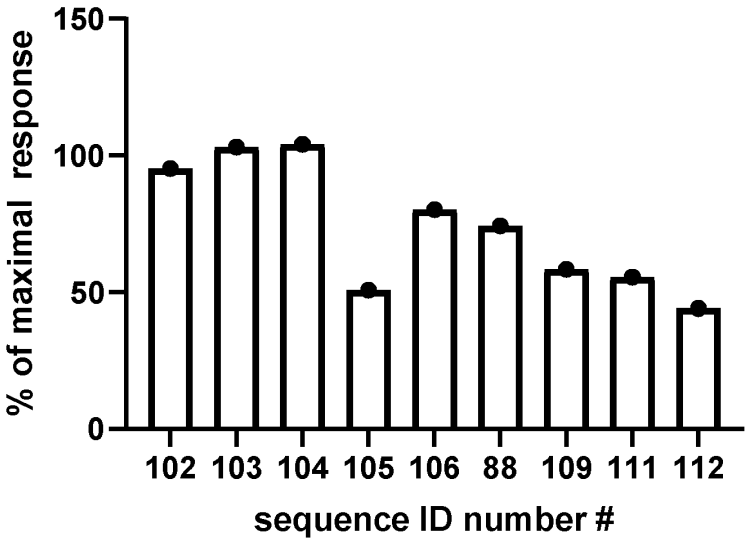


Figure 20a

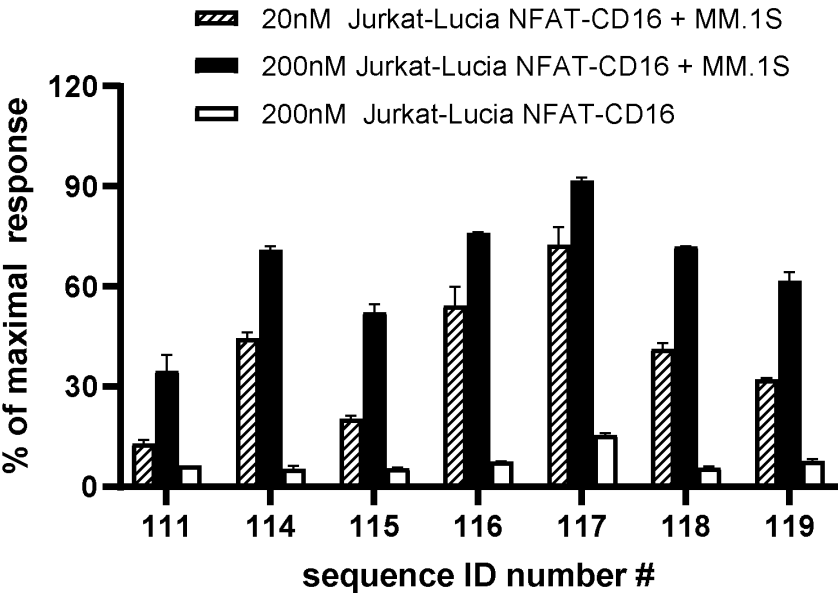
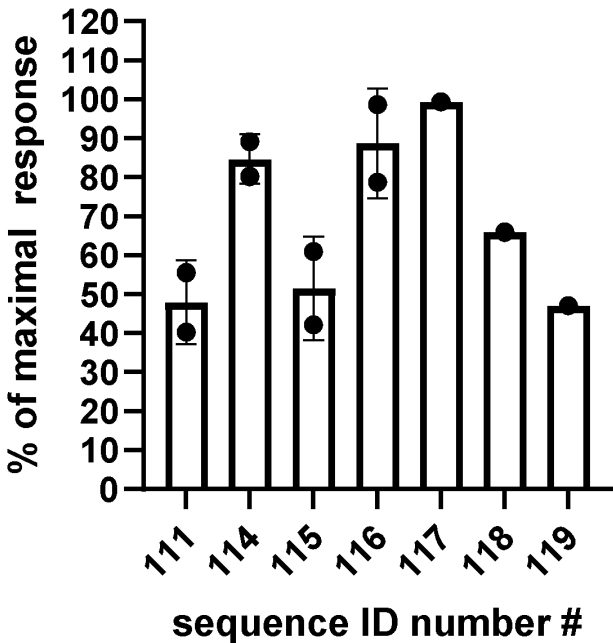
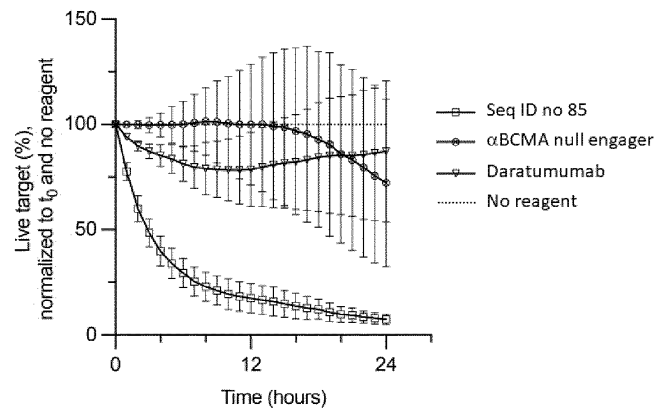


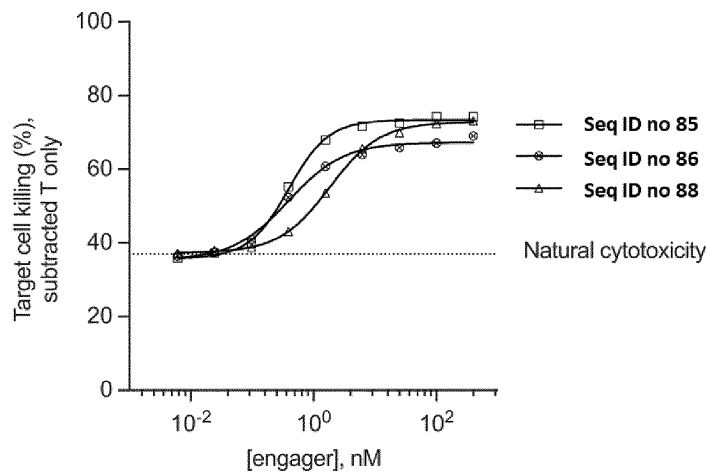
Figure 20b

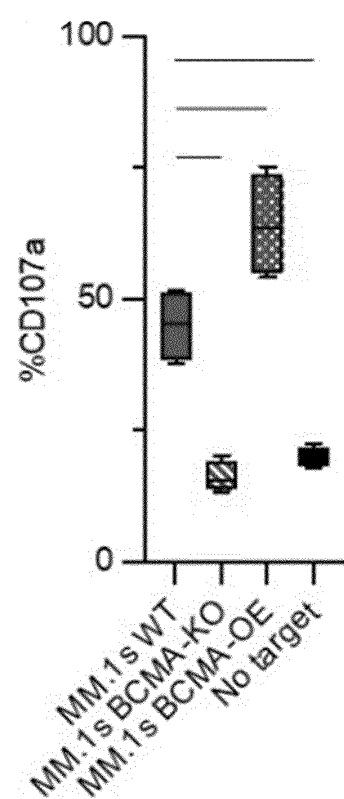


**Figure 21a**



**Figure 21b**



**Figure 22**

**Figure 23(a)**

| Ex.<br>SEQ ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |   |
|---------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|
| 1             | V | D | N | K | F | N | K | E | V | Q  | M  | A  | Q  | F  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | S  | F  | A  | F  |   |
| 2             | V | D | N | K | F | N | K | E | A | Q  | M  | A  | Q  | F  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | S  | F  | A  | F  |   |
| 3             | V | D | N | K | F | N | K | E | V | Q  | A  | A  | Q  | F  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | S  | F  | A  | F  |   |
| 4             | V | D | N | K | F | N | K | E | V | Q  | M  | A  | A  | F  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | S  | F  | A  | F  |   |
| 5             | V | D | N | K | F | N | K | E | V | Q  | M  | A  | A  | Q  | F  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | S  | F  | A  | F |
| 6             | V | D | N | K | F | N | K | E | V | Q  | M  | A  | Q  | F  | E  | I  | R  | A  | L  | P  | N  | L  | N  | H  | H  | Q  | S  | F  | A  | F  |   |
| 7             | V | D | N | K | F | N | K | E | V | Q  | M  | A  | Q  | F  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | A  | Q  | S  | F  | A  | F  |   |
| 8             | V | D | N | K | F | N | K | E | V | Q  | M  | A  | Q  | F  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | S  | F  | A  | F  |   |
| 9             | V | D | N | K | F | N | K | E | V | Q  | M  | A  | Q  | F  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | S  | F  | A  | F  |   |
| 10            | V | D | N | K | F | N | K | E | V | Q  | M  | A  | Q  | F  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | S  | F  | A  | F  |   |
| 11            | V | D | N | K | F | N | K | E | L | Q  | S  | A  | Q  | W  | E  | I  | R  | A  | L  | T  | N  | L  | N  | H  | H  | Q  | K  | F  | A  | F  |   |
| 12            | V | D | N | K | F | N | K | E | I | Q  | H  | A  | Q  | W  | E  | I  | R  | H  | L  | P  | N  | L  | N  | H  | H  | Q  | Q  | F  | A  | F  |   |
| 13            | V | D | N | K | F | N | K | E | L | Q  | T  | A  | Q  | L  | E  | I  | R  | T  | L  | P  | N  | L  | N  | H  | H  | Q  | I  | F  | A  | F  |   |
| 14            | V | D | N | K | F | N | K | E | F | Q  | L  | A  | Q  | R  | E  | I  | R  | E  | L  | P  | N  | L  | N  | H  | H  | Q  | Q  | F  | A  | F  |   |
| 15            | V | D | N | K | F | N | K | E | T | Q  | V  | A  | Q  | K  | E  | I  | R  | T  | L  | P  | N  | L  | N  | H  | H  | Q  | I  | F  | A  | F  |   |
| 16            | V | D | N | K | F | N | K | E | V | Q  | W  | A  | Q  | K  | E  | I  | R  | S  | L  | P  | N  | L  | N  | H  | H  | Q  | V  | F  | A  | F  |   |
| 17            | V | D | N | K | F | N | K | E | L | Q  | Y  | A  | Q  | K  | E  | I  | R  | R  | L  | P  | N  | L  | N  | H  | H  | Q  | V  | F  | A  | F  |   |
| 18            | V | D | N | K | F | N | K | E | I | Q  | V  | A  | Q  | S  | E  | I  | R  | A  | L  | P  | N  | L  | N  | H  | H  | Q  | I  | F  | A  | F  |   |
| 19            | V | D | N | K | F | N | K | E | V | Q  | I  | A  | Q  | R  | E  | I  | R  | S  | L  | P  | N  | L  | N  | H  | H  | Q  | V  | F  | A  | F  |   |
| 20            | V | D | N | K | F | N | K | E | R | Q  | Y  | A  | V  | N  | E  | I  | R  | Q  | L  | P  | N  | L  | N  | H  | H  | Q  | I  | F  | A  | F  |   |
| 21            | V | D | N | K | F | N | K | E | V | Q  | Y  | A  | Q  | R  | E  | I  | R  | N  | L  | P  | N  | L  | N  | H  | H  | Q  | A  | F  | A  | F  |   |
| 22            | V | D | N | K | F | N | K | E | I | Q  | S  | A  | Q  | V  | E  | I  | R  | A  | L  | P  | N  | L  | N  | H  | H  | Q  | K  | F  | A  | F  |   |
| 23            | V | D | N | K | F | N | K | E | L | Q  | H  | A  | Q  | I  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | K  | F  | A  | F  |   |
| 24            | V | D | N | K | F | N | K | E | V | Q  | F  | A  | Q  | R  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | Q  | F  | A  | F  |   |
| 25            | V | D | N | K | F | N | K | E | L | Q  | S  | A  | Q  | K  | E  | I  | R  | A  | L  | P  | N  | L  | N  | H  | H  | Q  | R  | F  | A  | F  |   |
| 26            | V | D | N | K | F | N | K | E | V | Q  | I  | A  | Q  | K  | E  | I  | R  | E  | L  | P  | N  | L  | N  | H  | H  | Q  | K  | F  | A  | F  |   |
| 27            | V | D | N | K | F | N | K | E | L | Q  | H  | A  | Q  | K  | E  | I  | R  | Q  | L  | P  | N  | L  | N  | H  | H  | Q  | V  | F  | A  | F  |   |
| 28            | V | D | N | K | F | N | K | E | I | Q  | D  | A  | Q  | K  | E  | I  | R  | T  | L  | P  | N  | L  | N  | H  | H  | Q  | K  | F  | A  | F  |   |
| 29            | V | D | N | K | F | N | K | E | L | Q  | A  | A  | Q  | K  | E  | I  | R  | T  | L  | P  | N  | L  | N  | H  | H  | Q  | V  | F  | A  | F  |   |
| 30            | V | D | N | K | F | N | K | E | K | Q  | R  | A  | Q  | W  | E  | I  | R  | Q  | L  | P  | N  | L  | N  | H  | H  | Q  | K  | F  | A  | F  |   |
| 31            | V | D | N | K | F | N | K | E | R | Q  | Q  | A  | A  | Y  | E  | I  | R  | H  | L  | P  | N  | L  | N  | H  | H  | Q  | V  | F  | A  | F  |   |
| 32            | V | D | N | K | F | N | K | E | K | Q  | A  | A  | Q  | R  | E  | I  | R  | A  | L  | P  | N  | L  | N  | H  | H  | Q  | I  | F  | A  | F  |   |
| 33            | V | D | N | K | F | N | K | E | L | Q  | S  | A  | Q  | R  | E  | I  | R  | Q  | L  | P  | N  | L  | N  | H  | H  | Q  | K  | F  | A  | F  |   |
| 34            | V | D | N | K | F | N | K | E | Y | Q  | I  | A  | Q  | W  | E  | I  | R  | R  | L  | P  | N  | L  | N  | H  | H  | Q  | K  | F  | A  | F  |   |
| 35            | V | D | N | K | F | N | K | E | L | Q  | N  | A  | Q  | R  | E  | I  | R  | A  | L  | P  | N  | L  | N  | H  | H  | Q  | Q  | F  | A  | F  |   |
| 36            | V | D | N | K | F | N | K | E | D | Q  | R  | A  | Q  | R  | E  | I  | R  | A  | L  | P  | N  | L  | N  | H  | H  | Q  | K  | F  | A  | F  |   |
| 37            | V | D | N | K | F | N | K | E | T | Q  | I  | A  | A  | Q  | E  | I  | R  | H  | L  | P  | N  | L  | N  | H  | H  | Q  | R  | F  | A  | F  |   |

**Figure 23(b)**

Figure 23(c)

| Ex. SEQ ID | SPR binding to CD16a F158 His                              |                                              | K <sub>D</sub> (nM) | SPR binding to CD16a V158 His |  | KD (nM) | SPR binding to CD16b NA1 |  | KD (nM) | SPR binding to CD16b NA2 |  | Ratio (KdCD16b NA1/KdCD NA2/KdCD 16aF158) | Ratio (KdCD16b NA1/KdCD NA2/KdCD 16aF158) |
|------------|------------------------------------------------------------|----------------------------------------------|---------------------|-------------------------------|--|---------|--------------------------|--|---------|--------------------------|--|-------------------------------------------|-------------------------------------------|
|            | On-rate k <sub>on</sub> (M <sup>-1</sup> s <sup>-1</sup> ) | Off-rate k <sub>off</sub> (s <sup>-1</sup> ) |                     |                               |  |         |                          |  |         |                          |  |                                           |                                           |
| 1          |                                                            |                                              |                     |                               |  |         |                          |  |         |                          |  |                                           |                                           |
| 2          |                                                            |                                              |                     |                               |  |         |                          |  |         |                          |  |                                           |                                           |
| 3          |                                                            |                                              |                     |                               |  |         |                          |  |         |                          |  |                                           |                                           |
| 4          |                                                            |                                              |                     |                               |  |         |                          |  |         |                          |  |                                           |                                           |
| 5          |                                                            |                                              |                     |                               |  |         |                          |  |         |                          |  |                                           |                                           |
| 6          |                                                            |                                              |                     |                               |  |         |                          |  |         |                          |  |                                           |                                           |
| 7          |                                                            |                                              |                     |                               |  |         |                          |  |         |                          |  |                                           |                                           |
| 8          |                                                            |                                              |                     |                               |  |         |                          |  |         |                          |  |                                           |                                           |
| 9          |                                                            |                                              |                     |                               |  |         |                          |  |         |                          |  |                                           |                                           |
| 10         |                                                            |                                              |                     |                               |  |         |                          |  |         |                          |  |                                           |                                           |
| 11         | 8.3E+04                                                    | 1.0E-02                                      | 125                 |                               |  | 123     |                          |  | 79      |                          |  | 315                                       | 0.6                                       |
| 12         | 7.1E+04                                                    | 6.2E-03                                      | 87                  |                               |  | 85      |                          |  | 46      |                          |  | 192                                       | 0.5                                       |
| 13         | 5.9E+05                                                    | 1.7E-01                                      | 282                 |                               |  | 256     |                          |  | 195     |                          |  | 692                                       | 0.7                                       |
| 14         | 7.9E+07                                                    | 2.3E+01                                      | 297                 |                               |  | 258     |                          |  | 114     |                          |  | 374                                       | 0.4                                       |
| 15         | 6.0E+04                                                    | 5.7E-03                                      | 95                  |                               |  | 98      |                          |  | 26      |                          |  | 175                                       | 0.3                                       |
| 16         | 5.8E+05                                                    | 4.1E-02                                      | 70                  |                               |  | 71      |                          |  | 24      |                          |  | 96                                        | 0.3                                       |
| 17         | 9.4E+04                                                    | 4.8E-03                                      | 50                  |                               |  | 53      |                          |  | 13      |                          |  | 94                                        | 0.3                                       |
| 18         | 9.9E+04                                                    | 1.5E-02                                      | 149                 |                               |  | 155     |                          |  | 65      |                          |  | 334                                       | 0.4                                       |
| 19         | 1.0E+05                                                    | 3.1E-03                                      | 30                  |                               |  | 31      |                          |  | 9       |                          |  | 59                                        | 0.3                                       |
| 20         | 2.4E+05                                                    | 1.4E-01                                      | 605                 |                               |  | 502     |                          |  | 369     |                          |  | 676                                       | 0.6                                       |
| 21         | 8.1E+04                                                    | 1.5E-02                                      | 190                 |                               |  | 182     |                          |  | 51      |                          |  | 286                                       | 0.3                                       |
| 22         | 9.4E+06                                                    | 2.7E+00                                      | 283                 |                               |  | 256     |                          |  | 143     |                          |  | 362                                       | 0.5                                       |
| 23         | 3.4E+07                                                    | 1.8E+01                                      | 532                 |                               |  | 560     |                          |  | 209     |                          |  | 1140                                      | 0.4                                       |
| 24         | 1.6E+05                                                    | 1.9E-02                                      | 124                 |                               |  | 114     |                          |  | 41      |                          |  | 169                                       | 0.3                                       |
| 25         | 1.1E+05                                                    | 7.8E-03                                      | 72                  |                               |  | 73      |                          |  | 24      |                          |  | 145                                       | 0.3                                       |
| 26         | 9.4E+06                                                    | 2.7E+00                                      | 283                 |                               |  | 127     |                          |  | 107     |                          |  | 163                                       | 0.4                                       |
| 27         | 3.4E+07                                                    | 1.8E+01                                      | 532                 |                               |  | 173     |                          |  | 66      |                          |  | 274                                       | 0.1                                       |
| 28         | 1.6E+05                                                    | 1.9E-02                                      | 124                 |                               |  | 148     |                          |  | 48      |                          |  | 238                                       | 0.4                                       |
| 29         | 8.6E+04                                                    | 5.7E-03                                      | 66                  |                               |  | 67      |                          |  | 19      |                          |  | 135                                       | 0.3                                       |
| 30         | 2.9E+05                                                    | 2.6E-02                                      | 89                  |                               |  | 79      |                          |  | 102     |                          |  | 176                                       | 1.2                                       |
| 31         | 4.1E+05                                                    | 7.5E-02                                      | 182                 |                               |  | 162     |                          |  | 160     |                          |  | 270                                       | 0.9                                       |
| 32         | 3.6E+05                                                    | 5.1E-02                                      | 142                 |                               |  | 129     |                          |  | 59      |                          |  | 193                                       | 0.4                                       |
| 33         | 9.4E+04                                                    | 4.3E-03                                      | 46                  |                               |  | 48      |                          |  | 12      |                          |  | 85                                        | 0.3                                       |
| 34         | 3.8E+04                                                    | 1.0E-02                                      | 260                 |                               |  | 228     |                          |  | 760     |                          |  | 561                                       | 2.9                                       |
| 35         | 1.1E+08                                                    | 1.6E+01                                      | 153                 |                               |  | 133     |                          |  | 71      |                          |  | 141                                       | 0.5                                       |
| 36         | 6.2E+05                                                    | 1.1E-01                                      | 179                 |                               |  | 163     |                          |  | 37      |                          |  | 253                                       | 0.2                                       |
| 37         | 7.9E+07                                                    | 3.6E+01                                      | 458                 |                               |  | 370     |                          |  | 427     |                          |  | 454                                       | 0.9                                       |

**Figure 23(d)**

| Ex.<br>SEQ ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |   |
|---------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|
| 38            | V | D | N | K | F | N | K | E | V | Q  | I  | A  | Q  | T  | E  | I  | R  | S  | L  | P  | N  | L  | N  | H  | H  | Q  | V  | F  | A  | F  |   |
| 39            | V | D | N | K | F | N | K | E | I | Q  | N  | A  | Q  | W  | E  | I  | R  | H  | L  | P  | N  | L  | N  | H  | H  | Q  | T  | F  | A  | F  |   |
| 40            | V | D | N | K | F | N | K | E | V | Q  | T  | A  | Q  | W  | E  | I  | R  | H  | L  | P  | N  | L  | N  | H  | H  | Q  | K  | F  | A  | F  |   |
| 41            | V | D | N | K | F | N | K | E | Q | F  | A  | Q  | Q  | V  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | R  | F  | A  | F  |   |
| 42            | V | D | N | K | F | N | K | E | L | Q  | A  | A  | Q  | Q  | V  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | T  | F  | A  |   |
| 43            | V | D | N | K | F | N | K | E | V | Q  | I  | A  | Q  | L  | E  | I  | R  | R  | L  | P  | N  | L  | N  | H  | H  | Q  | K  | Y  | A  | F  |   |
| 44            | V | D | N | K | F | N | K | E | F | Q  | S  | A  | Q  | V  | E  | I  | R  | H  | L  | P  | N  | L  | N  | H  | H  | Q  | K  | F  | A  | F  |   |
| 45            | V | D | N | K | F | N | K | E | K | Q  | Q  | A  | Q  | Y  | E  | I  | R  | H  | L  | P  | N  | L  | N  | H  | H  | Q  | A  | F  | A  | F  |   |
| 46            | V | D | N | K | F | N | K | E | Y | Q  | Y  | A  | Q  | K  | E  | I  | R  | T  | L  | P  | N  | L  | N  | H  | H  | Q  | R  | F  | A  | F  |   |
| 47            | V | D | N | K | F | N | K | E | Y | Q  | Q  | A  | Q  | Q  | E  | I  | R  | V  | L  | P  | N  | L  | N  | H  | H  | Q  | K  | F  | A  | F  |   |
| 48            | V | D | N | K | F | N | K | E | Q | Q  | Y  | A  | Q  | I  | E  | I  | R  | Q  | L  | P  | N  | L  | N  | H  | H  | Q  | K  | F  | A  | F  |   |
| 49            | V | D | N | K | F | N | K | E | Q | Q  | E  | A  | Q  | L  | E  | I  | R  | R  | L  | P  | N  | L  | N  | H  | H  | Q  | V  | F  | A  | F  |   |
| 50            | V | D | N | K | F | N | K | E | F | Q  | I  | A  | Q  | R  | E  | I  | R  | D  | L  | P  | N  | L  | N  | H  | H  | Q  | I  | F  | A  | F  |   |
| 51            | V | D | N | K | F | N | K | E | Q | I  | A  | Q  | Q  | Y  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | T  | F  | A  | F  |   |
| 52            | V | D | N | K | F | N | K | E | Q | W  | A  | Q  | Q  | R  | E  | I  | R  | S  | L  | P  | N  | L  | N  | H  | H  | Q  | V  | F  | A  | F  |   |
| 53            | V | D | N | K | F | N | K | E | L | Q  | Y  | A  | Q  | V  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | R  | F  | A  | F  |   |
| 54            | V | D | N | K | F | N | K | E | Y | Q  | E  | A  | Q  | L  | E  | I  | R  | N  | L  | P  | N  | L  | N  | H  | H  | Q  | I  | F  | A  | F  |   |
| 55            | V | D | N | K | F | N | K | E | L | Q  | K  | A  | Q  | Q  | E  | I  | R  | H  | L  | P  | N  | L  | N  | H  | H  | Q  | T  | F  | A  | F  |   |
| 56            | V | D | N | K | F | N | K | E | H | Q  | V  | A  | Q  | R  | E  | I  | R  | A  | L  | P  | N  | L  | N  | H  | H  | Q  | K  | F  | A  | F  |   |
| 57            | V | D | N | K | F | N | K | E | F | Q  | Q  | A  | A  | R  | E  | I  | R  | V  | L  | P  | N  | L  | N  | H  | H  | Q  | I  | F  | A  | F  |   |
| 58            | V | D | N | K | F | N | K | E | L | Q  | A  | A  | Q  | V  | E  | I  | R  | T  | L  | P  | N  | L  | N  | H  | H  | Q  | V  | F  | A  | F  |   |
| 59            | V | D | N | K | F | N | K | E | L | Q  | F  | A  | Q  | R  | E  | I  | R  | A  | L  | P  | N  | L  | N  | H  | H  | Q  | I  | F  | A  | F  |   |
| 60            | V | D | N | K | F | N | K | E | V | Q  | H  | A  | Q  | K  | E  | I  | R  | A  | L  | P  | N  | L  | N  | H  | H  | Q  | A  | F  | A  | F  |   |
| 61            | V | D | N | K | F | N | K | E | L | Q  | V  | A  | Q  | H  | E  | I  | R  | F  | L  | P  | N  | L  | N  | H  | H  | Q  | K  | F  | A  | F  |   |
| 62            | V | D | N | K | F | N | K | E | V | Q  | I  | A  | Q  | L  | E  | I  | R  | A  | L  | P  | N  | L  | N  | H  | H  | Q  | I  | F  | A  | F  |   |
| 63            | V | D | N | K | F | N | K | E | F | Q  | A  | A  | Q  | Q  | E  | I  | R  | R  | L  | P  | N  | L  | N  | H  | H  | Q  | A  | F  | A  | F  |   |
| 64            | V | D | N | K | F | N | K | E | T | Q  | Q  | A  | Q  | R  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | Q  | F  | A  | F  |   |
| 65            | V | D | N | K | F | N | K | E | L | Q  | S  | A  | Q  | T  | E  | I  | Q  | H  | L  | P  | N  | L  | N  | H  | H  | Q  | Q  | F  | A  | F  |   |
| 66            | V | D | N | K | F | N | K | E | L | Q  | S  | A  | Q  | Q  | R  | E  | I  | R  | I  | L  | P  | N  | L  | N  | H  | H  | Q  | R  | F  | A  | F |
| 67            | V | D | N | K | F | N | K | E | L | Q  | S  | A  | Q  | W  | E  | I  | R  | A  | L  | P  | N  | L  | N  | H  | H  | Q  | K  | F  | A  | F  |   |
| 68            | V | D | N | K | F | N | K | E | V | Q  | M  | A  | Q  | F  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | S  | F  | A  | F  |   |
| 69            |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |
| 70            |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |
| 71            |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |
| 72            |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |
| 73            |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |
| 74            | V | D | N | K | F | N | K | E | V | Q  | I  | A  | Q  | T  | E  | I  | R  | H  | L  | P  | N  | L  | N  | H  | H  | Q  | Q  | F  | A  | F  |   |
| 75            | V | D | N | K | F | N | K | E | F | W  | I  | A  | E  | S  | E  | I  | E  | S  | L  | P  | N  | L  | N  | I  | Y  | Q  | K  | W  | A  | F  |   |

**Figure 23(e)**



Figure 24(a)

| Motif No | SEQ ID | Motif is in SEQ ID | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
|----------|--------|--------------------|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| M1       | 150    | 1, 68, 69          | V | Q  | M  | A  | Q  | F  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | S  | F  | A  | F  | I  | K  | S  | L  | M  |
| M2       | 151    | 2                  | A | Q  | M  | A  | Q  | F  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | S  | F  | A  | F  | I  | K  | S  | L  | M  |
| M3       | 152    | 3                  | V | Q  | A  | A  | Q  | F  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | S  | F  | A  | F  | I  | K  | S  | L  | M  |
| M4       | 153    | 4                  | V | Q  | M  | A  | A  | F  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | S  | F  | A  | F  | I  | K  | S  | L  | M  |
| M5       | 154    | 5                  | V | Q  | M  | A  | Q  | A  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | S  | F  | A  | F  | I  | K  | S  | L  | M  |
| M6       | 155    | 6                  | V | Q  | M  | A  | Q  | F  | E  | I  | R  | A  | L  | P  | N  | L  | N  | H  | H  | Q  | S  | F  | A  | F  | I  | K  | S  | L  | M  |
| M7       | 156    | 7                  | V | Q  | M  | A  | Q  | F  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | A  | A  | Q  | S  | F  | A  | F  | I  | K  | S  | L  |
| M8       | 157    | 8                  | V | Q  | M  | A  | Q  | F  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | A  | F  | A  | F  | I  | K  | S  | L  | M  |
| M9       | 158    | 9                  | V | Q  | M  | A  | Q  | F  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | S  | F  | A  | F  | I  | A  | S  | L  | M  |
| M10      | 159    | 10                 | V | Q  | M  | A  | Q  | F  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | S  | F  | A  | F  | I  | K  | S  | L  | A  |
| M11      | 160    | 11                 | L | Q  | S  | A  | Q  | W  | E  | I  | R  | A  | L  | T  | N  | L  | N  | H  | H  | Q  | K  | F  | A  | F  | I  | E  | S  | L  | R  |
| M12      | 161    | 12                 | I | Q  | H  | A  | Q  | W  | E  | I  | R  | H  | L  | P  | N  | L  | N  | H  | H  | Q  | Q  | F  | A  | F  | I  | K  | S  | L  | I  |
| M13      | 162    | 13                 | L | Q  | T  | A  | Q  | L  | E  | I  | R  | T  | L  | P  | N  | L  | N  | H  | H  | Q  | I  | F  | A  | F  | I  | A  | K  | L  | R  |
| M14      | 163    | 14                 | F | Q  | L  | A  | Q  | R  | E  | I  | R  | E  | L  | P  | N  | L  | N  | H  | H  | Q  | Q  | F  | A  | F  | I  | H  | K  | L  | L  |
| M15      | 164    | 15                 | T | Q  | V  | A  | Q  | K  | E  | I  | R  | T  | L  | P  | N  | L  | N  | H  | H  | Q  | I  | F  | A  | F  | I  | N  | K  | L  | I  |
| M16      | 165    | 16                 | V | Q  | W  | A  | Q  | K  | E  | I  | R  | S  | L  | P  | N  | L  | N  | H  | H  | Q  | V  | F  | A  | F  | I  | R  | S  | L  | L  |
| M17      | 166    | 17                 | L | Q  | Y  | A  | Q  | K  | E  | I  | R  | R  | L  | P  | N  | L  | N  | H  | H  | Q  | V  | F  | A  | F  | I  | N  | K  | L  | I  |
| M18      | 167    | 18                 | I | Q  | V  | A  | Q  | S  | E  | I  | R  | A  | L  | P  | N  | L  | N  | H  | H  | Q  | I  | F  | A  | F  | I  | K  | K  | L  | L  |
| M19      | 168    | 19                 | V | Q  | I  | A  | Q  | R  | E  | I  | R  | S  | L  | P  | N  | L  | N  | H  | H  | Q  | V  | F  | A  | F  | I  | K  | K  | L  | L  |
| M20      | 169    | 20                 | R | Q  | Y  | A  | V  | N  | E  | I  | R  | Q  | L  | P  | N  | L  | N  | H  | H  | Q  | I  | F  | A  | F  | I  | K  | S  | L  | L  |
| M21      | 170    | 21                 | V | Q  | Y  | A  | Q  | R  | E  | I  | R  | N  | L  | P  | N  | L  | N  | H  | H  | Q  | A  | F  | A  | F  | I  | K  | S  | L  | I  |
| M22      | 171    | 22                 | I | Q  | S  | A  | Q  | V  | E  | I  | R  | A  | L  | P  | N  | L  | N  | H  | H  | Q  | K  | F  | A  | F  | I  | N  | S  | L  | L  |
| M23      | 172    | 23                 | L | Q  | H  | A  | Q  | I  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | K  | F  | A  | F  | I  | N  | K  | L  | H  |
| M24      | 173    | 24                 | V | Q  | F  | A  | Q  | R  | E  | I  | R  | K  | L  | P  | N  | L  | N  | H  | H  | Q  | Q  | F  | A  | F  | I  | H  | S  | L  | L  |
| M25      | 174    | 25                 | L | Q  | S  | A  | Q  | K  | E  | I  | R  | A  | L  | P  | N  | L  | N  | H  | H  | Q  | R  | F  | A  | F  | I  | N  | S  | L  | L  |
| M26      | 175    | 26                 | V | Q  | I  | A  | Q  | K  | E  | I  | R  | E  | L  | P  | N  | L  | N  | H  | H  | Q  | K  | F  | A  | F  | I  | K  | S  | L  | L  |
| M27      | 176    | 27                 | L | Q  | H  | A  | Q  | R  | E  | I  | R  | Q  | L  | P  | N  | L  | N  | H  | H  | Q  | V  | F  | A  | F  | I  | A  | S  | L  | I  |
| M28      | 177    | 28                 | I | Q  | D  | A  | Q  | K  | E  | I  | R  | T  | L  | P  | N  | L  | N  | H  | H  | Q  | K  | F  | A  | F  | I  | Q  | S  | L  | I  |

Figure 24(b)

|     |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----|-----|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M29 | 178 | 29 | L | Q | A | A | Q | K | E | I | R | T | L | P | N | L | N | H | H | Q | V | F | A | F | I | N | K | L | I |
| M30 | 179 | 30 | K | Q | R | A | Q | W | E | I | R | Q | L | P | N | L | N | H | H | Q | K | F | A | F | I | Q | S | L | I |
| M31 | 180 | 31 | R | Q | Q | A | A | Y | E | I | R | H | L | P | N | L | N | H | H | Q | V | F | A | F | I | K | K | L | L |
| M32 | 181 | 32 | K | Q | A | A | Q | R | E | I | R | A | L | P | N | L | N | H | H | Q | I | F | A | F | I | H | K | L | L |
| M33 | 182 | 33 | L | Q | S | A | Q | R | E | I | R | Q | L | P | N | L | N | H | H | Q | K | F | A | F | I | N | S | L | L |
| M34 | 183 | 34 | Y | Q | I | A | Q | W | E | I | R | R | L | P | N | L | N | H | H | Q | K | F | A | F | I | A | S | L | L |
| M35 | 184 | 35 | L | Q | N | A | Q | R | E | I | R | A | L | P | N | L | N | H | H | Q | Q | F | A | F | I | H | K | L | I |
| M36 | 185 | 36 | D | Q | R | A | Q | R | E | I | R | A | L | P | N | L | N | H | H | Q | K | F | A | F | I | N | K | L | L |
| M37 | 186 | 37 | T | Q | I | A | A | Q | E | I | R | H | L | P | N | L | N | H | H | Q | R | F | A | F | I | K | S | L | L |
| M38 | 187 | 38 | V | Q | I | A | Q | T | E | I | R | S | L | P | N | L | N | H | H | Q | V | F | A | F | I | Q | S | L | I |
| M39 | 188 | 39 | I | Q | N | A | Q | W | E | I | R | H | L | P | N | L | N | H | H | Q | T | F | A | F | I | Q | K | L | I |
| M40 | 189 | 40 | V | Q | T | A | Q | W | E | I | R | H | L | P | N | L | N | H | H | Q | K | F | A | F | I | R | S | L | S |
| M41 | 190 | 41 | Q | Q | F | A | Q | Q | E | I | R | K | L | P | N | L | N | H | H | Q | R | F | A | F | I | R | S | L | I |
| M42 | 191 | 42 | L | Q | A | A | Q | V | E | I | R | K | L | P | N | L | N | H | H | Q | T | F | A | F | I | K | S | L | I |
| M43 | 192 | 43 | V | Q | I | A | Q | L | E | I | R | R | L | P | N | L | N | H | H | Q | K | Y | A | F | I | K | S | L | A |
| M44 | 193 | 44 | F | Q | S | A | Q | V | E | I | R | H | L | P | N | L | N | H | H | Q | K | F | A | F | I | Q | S | L | I |
| M45 | 194 | 45 | K | Q | Q | A | Q | Y | E | I | R | H | L | P | N | L | N | H | H | Q | R | F | A | F | I | Q | K | L | I |
| M46 | 195 | 46 | Y | Q | Y | A | Q | K | E | I | R | T | L | P | N | L | N | H | H | Q | R | F | A | F | I | K | S | L | L |
| M47 | 196 | 47 | Y | Q | Q | A | Q | Q | E | I | R | V | L | P | N | L | N | H | H | Q | K | F | A | F | I | Q | K | L | I |
| M48 | 197 | 48 | Q | Q | Y | A | Q | I | E | I | R | Q | L | P | N | L | N | H | H | Q | K | F | A | F | I | K | S | L | I |
| M49 | 198 | 49 | Q | Q | E | A | Q | L | E | I | R | R | L | P | N | L | N | H | H | Q | V | F | A | F | I | K | S | L | L |
| M50 | 199 | 50 | F | Q | I | A | Q | R | E | I | R | D | L | P | N | L | N | H | H | Q | I | F | A | F | I | Q | S | L | I |
| M51 | 200 | 51 | Q | Q | I | A | Q | Y | E | I | R | K | L | P | N | L | N | H | H | Q | T | F | A | F | I | K | S | L | L |
| M52 | 201 | 52 | Q | Q | W | A | Q | R | E | I | R | S | L | P | N | L | N | H | H | Q | V | F | A | F | I | N | S | L | L |
| M53 | 202 | 53 | L | Q | Y | A | Q | V | E | I | R | K | L | P | N | L | N | H | H | Q | R | F | A | F | I | K | S | L | L |
| M54 | 203 | 54 | Y | Q | E | A | Q | L | E | I | R | N | L | P | N | L | N | H | H | Q | I | F | A | F | I | N | K | L | I |
| M55 | 204 | 55 | L | Q | K | A | Q | Q | E | I | R | H | L | P | N | L | N | H | H | Q | T | F | A | F | I | K | K | L | L |
| M56 | 205 | 56 | H | Q | V | A | Q | R | E | I | R | A | L | P | N | L | N | H | H | Q | K | F | A | F | I | Q | S | L | I |
| M57 | 206 | 57 | F | Q | Q | A | A | R | E | I | R | V | L | P | N | L | N | H | H | Q | I | F | A | F | I | K | S | L | L |
| M58 | 207 | 58 | L | Q | A | A | Q | V | E | I | R | T | L | P | N | L | N | H | H | Q | V | F | A | F | I | Q | K | L | I |
| M59 | 208 | 59 | L | Q | F | A | Q | R | E | I | R | A | L | P | N | L | N | H | H | Q | I | F | A | F | I | R | S | L | L |
| M60 | 209 | 60 | V | Q | H | A | Q | K | E | I | R | A | L | P | N | L | N | H | H | Q | A | F | A | F | I | A | K | L | L |
| M61 | 210 | 61 | L | Q | V | A | Q | H | E | I | R | F | L | P | N | L | N | H | H | Q | K | F | A | F | I | N | K | L | I |

Figure 24(c)

|     |     |    |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----|-----|----|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M62 | 211 | 62 |  | V | Q | I | A | Q | L | E | I | R | A | L | P | N | L | N | H | H | Q | I | F | A | F | I | K | K | L | H |
| M63 | 212 | 63 |  | F | Q | A | A | Q | Q | E | I | R | R | L | P | N | L | N | H | H | Q | A | F | A | F | I | R | S | L | L |
| M64 | 213 | 64 |  | T | Q | Q | A | Q | R | E | I | R | K | L | P | N | L | N | H | H | Q | Q | F | A | F | I | K | S | L | L |
| M65 | 214 | 65 |  | L | Q | S | A | Q | T | E | I | Q | H | L | P | N | L | N | H | A | Q | Q | F | A | F | I | L | S | L | I |
| M66 | 215 | 66 |  | L | Q | S | A | Q | R | E | I | R | I | L | P | N | L | N | H | H | Q | R | F | A | F | I | N | S | L | L |
| M67 | 216 | 67 |  | L | Q | S | A | Q | W | E | I | R | A | L | P | N | L | N | H | H | Q | K | F | A | F | I | E | S | L | R |
| M68 | 217 | 70 |  | L | Q | S | A | Q | T | E | I | Q | H | L | P | N | L | N | H | A | Q | Q | F | A | F | I | L | S | L | I |
| M69 | 218 | 71 |  | I | Q | H | A | Q | W | E | I | R | H | L | P | N | L | N | H | H | Q | Q | F | A | F | I | K | S | L | I |
| M70 | 219 | 72 |  | V | Q | I | A | Q | T | E | I | R | S | L | P | N | L | N | H | H | Q | V | F | A | F | I | Q | S | L | I |
| M71 | 220 | 73 |  | Q | F | Y | A | R | D | E | I | D | L | L | P | N | L | N | E | D | Q | K | W | A | F | Y | M | S | L | I |
| M72 | 221 | 74 |  | F | W | I | A | E | S | E | I | E | S | L | P | N | L | N | I | Y | Q | K | W | A | F | K | Y | S | L | A |