

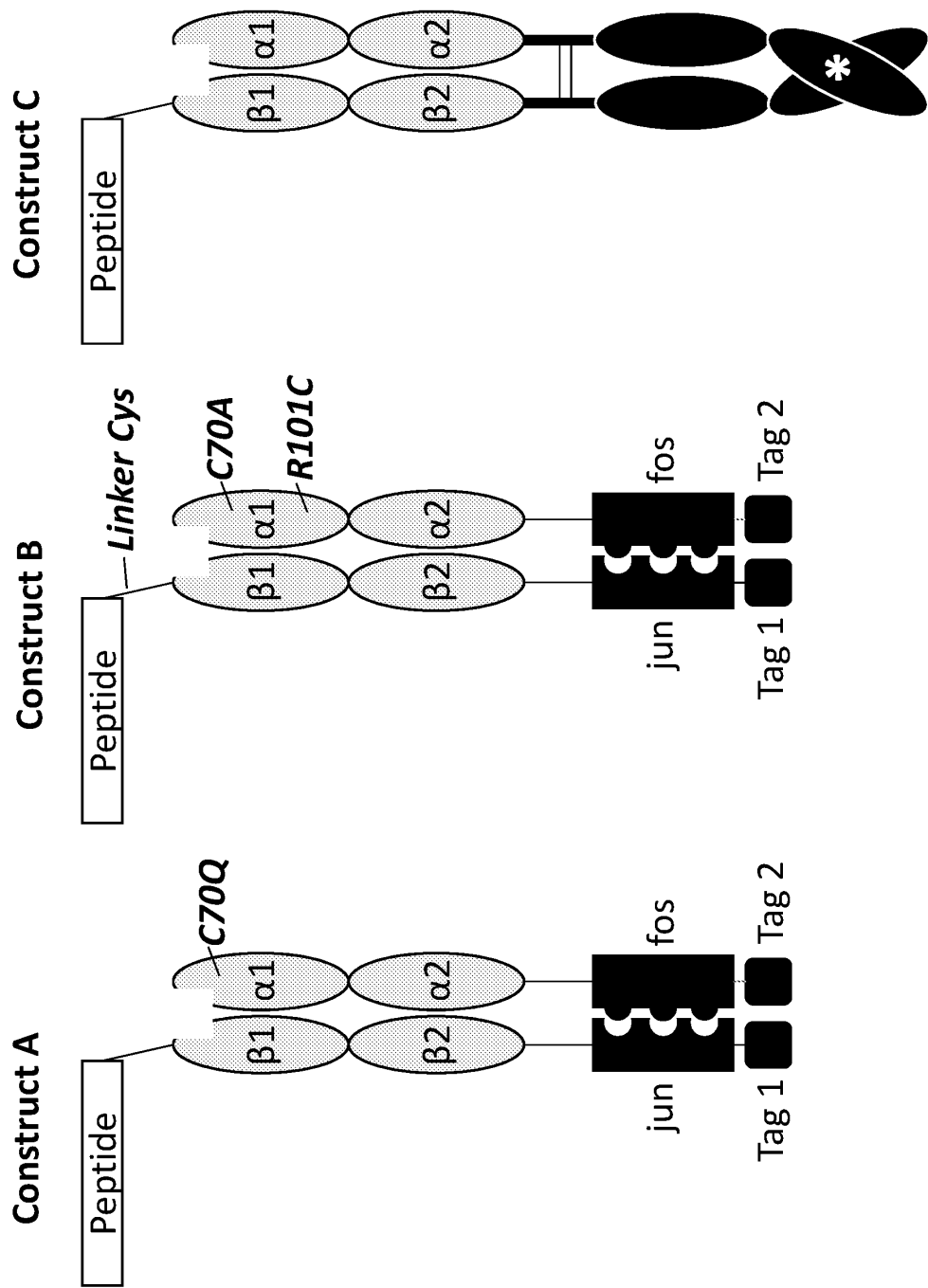


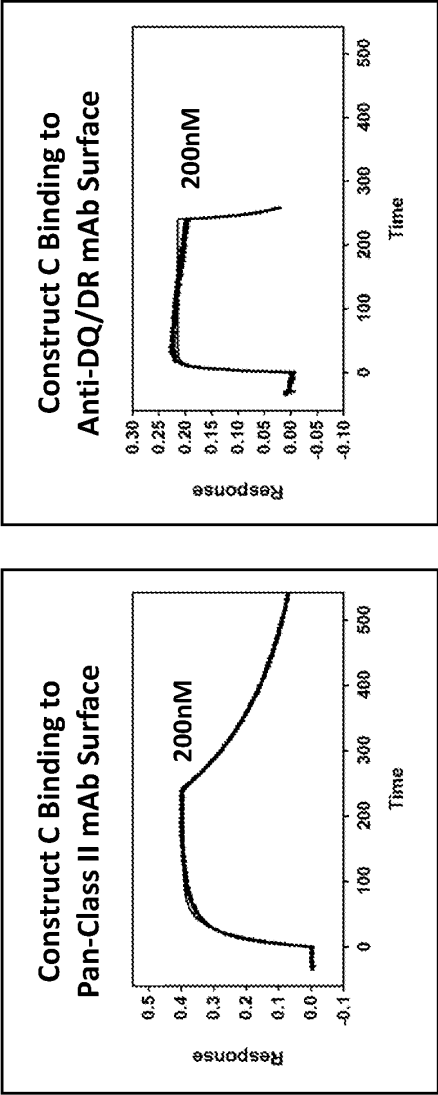
FIG. 1

| Signal Peptide                                     |                         |     |
|----------------------------------------------------|-------------------------|-----|
| HLA DQA1*0501 FL 1<br>C70Q 1<br>C70A_R101C 1       | MILNKALMLGALALT         | 59  |
|                                                    | MILNKALMLGALALT         | 59  |
|                                                    | MILNKALMLGALALT         | 59  |
| HLA DQA1*0501 FL 60<br>C70Q 60<br>C70A_R101C 60    | R101C                   |     |
|                                                    | VDLGRKETVW              | 118 |
|                                                    | VDLGRKETVW              | 118 |
| HLA DQA1*0501 FL 119<br>C70Q 119<br>C70A_R101C 119 | C70A/C70Q               |     |
|                                                    | KSPVTLGQPNILICLVDNIFPPV | 177 |
|                                                    | KSPVTLGQPNILICLVDNIFPPV | 177 |
| HLA DQA1*0501 FL 178<br>C70Q 178<br>C70A_R101C 178 | Transmembrane           |     |
|                                                    | LLPSAEESYDCKVEHWGLDKP   | 236 |
|                                                    | LLPSAEESYDCKVEHWGLDKP   | 236 |
| HLA DQA1*0501 FL 237<br>C70Q 237<br>C70A_R101C 237 | FIIIRGLR                | 236 |
|                                                    | FIIIRGLR                | 236 |
|                                                    | FIIIRGLR                | 236 |

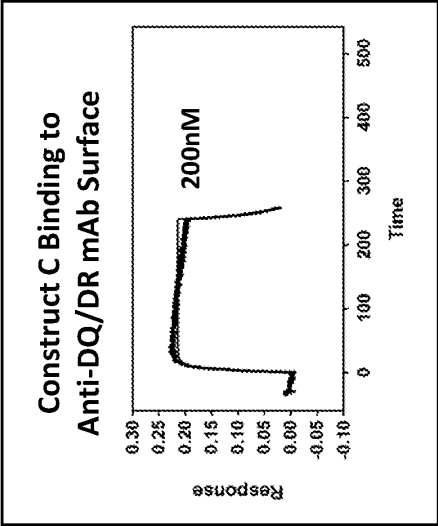
FIG. 2

|          |     |                                                                |                                     |
|----------|-----|----------------------------------------------------------------|-------------------------------------|
| HLA-DPA1 | 1   | MRPEDRMFHIRAVIIRALSLAFLLSLRGAGAIKADHVSTY--AAFVQTHRPTGEFFMEFEDE | 59                                  |
| HLA-DQA1 | 1   | -----MILNKALMLGALALTVMSPCGGEDIVADHVASYGVNLYQSYGSPSGQYTHEFDG    | 54                                  |
| HLA-DRA1 | 1   | -----MAISGVPVLGFFIIAIVLMSAQESWAIKEEHVIIQ-AEFYLNPDQSGEFMFDFDG   | 53                                  |
|          |     | DQA1 C70 DRA1 F79 DQA1 R101                                    |                                     |
| HLA-DPA1 | 60  | DEMFYVDLDKKETVWHLLEEFGQAFSFEAQGGLANIAIINNLTLIQRSNHTQATNDPPE    | 119                                 |
| HLA-DQA1 | 55  | DEQFYVDLGRKETVWCLPVLRQ-FRFDPOFALTNIAVLKHNLSLIKRSNSTAATNEVPE    | 113                                 |
| HLA-DRA1 | 54  | DEIFHVDMAKKETVWRLLEEFGRFASFEAQGALANIAVDKANLEIMTKRSNYTPI TNVPPE | 113                                 |
| HLA-DPA1 | 120 | VTVPKEPVELGQPNTLICHIDKFFPPVLNVTWLNCGELVTEGVAESLFLPRTDYSFHKF    | 179                                 |
| HLA-DQA1 | 114 | VTVFSKSPVTLGQPNILICLVDNIFPPVVNI TWLSNGHSVTEGVSETSFLSKSDHSFFKI  | 173                                 |
| HLA-DRA1 | 114 | VTVL TNSPVELREPVLICFIDKFTPPVVNVTLRNGKPVTTGVSETVFLPREDHHLFRKF   | 173                                 |
| HLA-DPA1 | 180 | HYLTFVPSAEDFYDCRVEHWGLDQPLLKHWEAQEPIQMPETTETVLCAGLGLVGLVGIIIV  | 239                                 |
| HLA-DQA1 | 174 | SYLTLLPSAEESYDCKVEHWGLDKPLLKHWEPEI PAPMSELTETVVCAALGLSVGLVGIVV | 233                                 |
| HLA-DRA1 | 174 | HYLPFLPSTEDVYDCRVEHWGLDEPLLKHWEFDAPSPLPETTENVVCAALGLTVGLVGIIII | 233                                 |
| HLA-DPA1 | 240 | GTVLI IKSLSRSGHDPRAQGTL                                        | 260 (SEQ ID NO: 51; UniProt P20036) |
| HLA-DQA1 | 234 | GTVFIIIRGLRSVGASRHQGPL                                         | 254 (SEQ ID NO: 49; UniProt P01909) |
| HLA-DRA1 | 234 | GTIFIIKGVKRKSNAAEERRGPL                                        | 254 (SEQ ID NO: 52; UniProt P01903) |

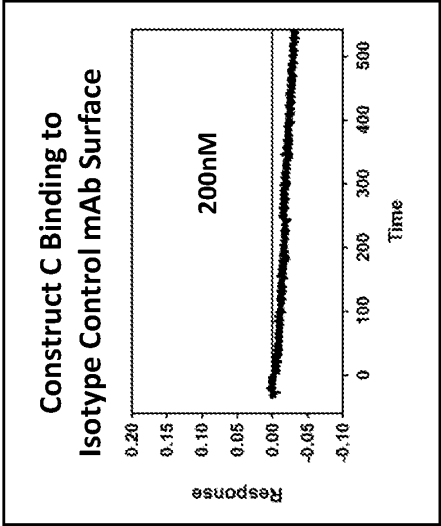
FIG. 3



Commercial Pan-II mAb



Anti-DQ/DR mAb



Isotype Control mAb

FIG. 4

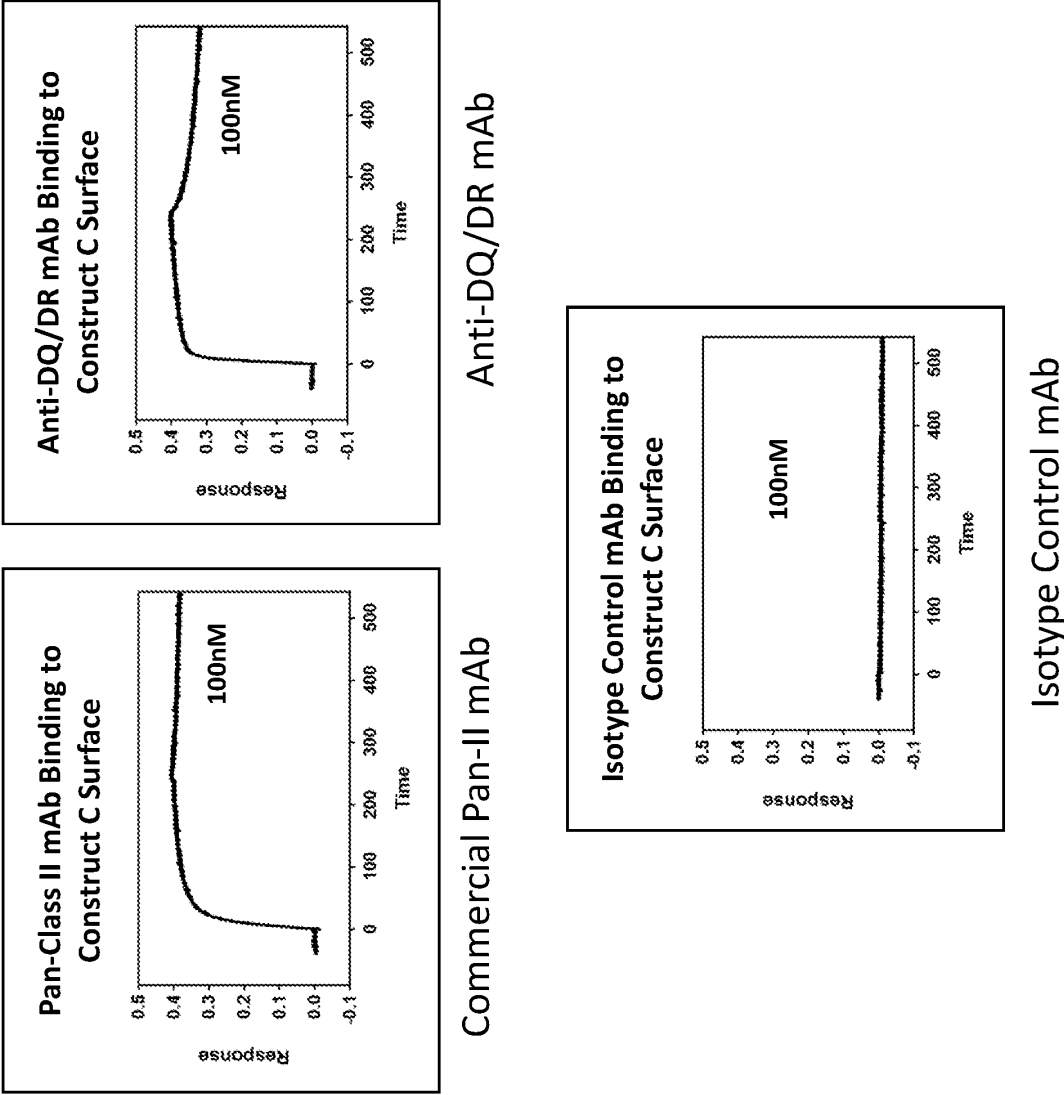


FIG. 5

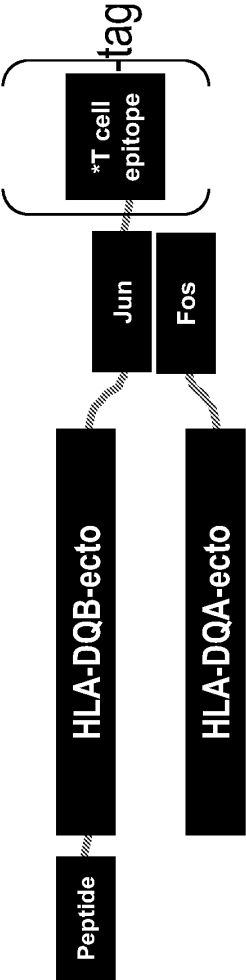


FIG. 6A

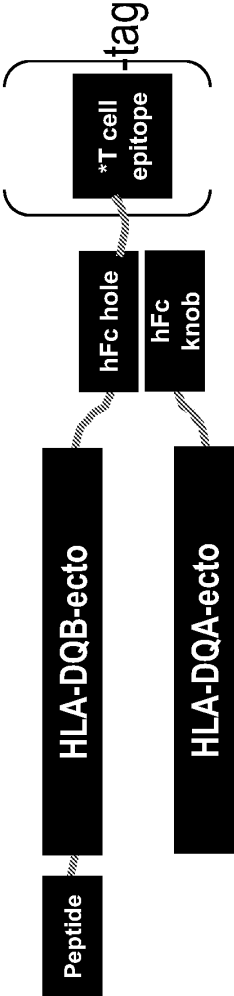


FIG. 6B

\*Additional T cell epitopes may be added