Anti-Fucosyl GM1 5B1 VH

V-segment: VH 3-48
D-segment: D1-1
J-segment: JH6b

```
        E   V   Q   L   V   E   S   G   G   G   L   V   Q   P   G   E   S   L
1       GAG GTG CAG CTG GTG GAG TCT GGG GGA GGC TTG GTG CAG CCT GGG GAG TCC CTG

                                                           CDR 1
                                                        ~~~~~~~~~~~~~~~~~~~~
        R   L   S   C   V   A   S   G   F   T   F   S   R   Y   K   M   N   W
55      AGA CTC TCC TGT GTA GCC TCT GGA TTT ACT TTC AGT AGA TAT AAG ATG AAC TGG

                                                               CDR 2
                                                            ~~~~~~~~~~~~~~~~~~~
        V   R   Q   A   P   G   K   G   L   E   W   V   S   Y   I   S   R   S
109     GTT CGC CAG GCT CCA GGG AAG GGA CTG GAA TGG GTT TCA TAC ATC AGT CGT AGT

                   CDR 2
        ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
        G   R   D   I   Y   Y   A   D   S   V   K   G   R   F   T   I   S   R
163     GGC CGT GAC ATT TAC TAC GCA GAC TCT GTG AAG GGC CGA TTC ACC ATC TCC AGA

        D   N   A   K   N   S   L   Y   L   Q   M   N   S   L   R   D   E   D
217     GAT AAT GCC AAG AAC TCA CTG TAT CTG CAA ATG AAC AGC CTG AGA GAC GAG GAC

                                                    CDR 3
                                            ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
        T   A   V   Y   Y   C   A   G   T   V   T   T   Y   Y   Y   Y   F   G
271     ACG GCT GTA TAT TAC TGT GCG GGA ACT GTA ACG ACA TAC TAC TAC TAC TTC GGT
                                       |     D1-1     | |->
                                                             JH6b
         CDR 3
        ~~~~~~~~~~~~
        M   D   V   W   G   H   G   T   T   V   T   V   S   S
325     ATG GAC GTC TGG GGC CAC GGG ACC ACG GTC ACC GTC TCC TCA
```

*Figure 1A*

V-segment: L15
J-segment: JK4

```
        D   I   Q   M   T   Q   S   P   S   S   L   S   A   S   V   G   D   R
  1     GAC ATC CAG ATG ACC CAG TCT CCA TCC TCA CTG TCT GCA TCT GTA GGA GAC AGA

                                    CDR 1
                                ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
        V   T   I   T   C   R   A   S   Q   G   I   S   S   W   L   A   W   Y
 55     GTC ACC ATC ACT TGT CGG GCG AGT CAG GGT ATT AGC AGC TGG TTA GCC TGG TAT

                                                                CDR 2
                                                            ~~~~~~~~~~~~~~~~~~
        Q   Q   K   P   E   K   A   P   K   S   L   I   Y   A   A   S   S   L
109     CAG CAG AAA CCA GAG AAA GCC CCT AAG TCC CTG ATC TAT GCT GCA TCC AGT TTG

        CDR 2
        ~~~~~~~~
        Q   S   G   V   P   S   R   F   S   G   S   G   S   G   T   D   F   T
163     CAA AGT GGG GTC CCA TCA AGG TTC AGC GGC AGT GGA TCT GGG ACA GAT TTC ACT

                                                                        CDR 3
                                                                        ~~~~~~~
        L   T   I   S   S   L   Q   P   E   D   F   A   T   Y   Y   C   Q   Q
217     CTC ACC ATC AGC AGC CTG CAG CCT GAA GAT TTT GCA ACT TAT TAC TGC CAA CAG

                CDR 3
        ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
        Y   N   S   Y   P   P   T   F   G   G   G   T   K   V   E   I   K
271     TAT AAT AGT TAC CCT CCC ACT TTC GGC GGA GGG ACC AAG GTG GAG ATC AAA
                                  |
                                  └──► JK4
```

*Figure 1B*

Anti-FucosylGM 5B1a VH

V-segment: VH 3-48
D-segment: D1-1
J-segment: JH6b

```
                                                                    CDR 1
       E   V   Q   L   V   E   S   G   G   G   L   V   Q   P   G   E   S   L
  1    GAG GTG CAG CTG GTG GAG TCT GGG GGA GGC TTG GTG CAG CCT GGG GAG TCC CTG

                                                         ~~~~~~~~~~~~~~~~~~~
       R   L   S   C   V   A   S   G   F   T   F   S   R   Y   K   M   N   W
 55    AGA CTC TCC TGT GTA GCC TCT GGA TTT ACT TTC AGT AGA TAT AAG ATG AAC TGG

                                                                 CDR 2
                                                             ~~~~~~~~~~~~~~~
       V   R   Q   A   P   G   K   G   L   E   W   V   S   Y   I   S   R   S
109    GTT CGC CAG GCT CCA GGG AAG GGA CTG GAA TGG GTT TCA TAC ATC AGT CGT AGT

                   CDR 2
       ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
       G   R   D   I   Y   Y   A   D   S   V   K   G   R   F   T   I   S   R
163    GGC CGT GAC ATT TAC TAC GCA GAC TCT GTG AAG GGC CGA TTC ACC ATC TCC AGA

       D   N   A   K   N   S   L   Y   L   Q   M   N   S   L   R   D   E   D
217    GAT AAT GCC AAG AAC TCA CTG TAT CTG CAA ATG AAC AGC CTG AGA GAC GAG GAC

                                                    CDR 3
                                           ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
       T   A   V   Y   Y   C   A   G   T   V   T   T   Y   Y   Y   F   G   M
271    ACG GCT GTA TAT TAC TGT GCG GGA ACT GTA ACG ACA TAC TAC TAC TTC GGT ATG
                                     |_____D1-1_____|  |->  JH6b

       CDR 3
       ~~~~~~~
       D   V   W   G   H   G   T   T   V   T   V   S   S
325    GAC GTC TGG GGC CAC GGG ACC ACG GTC ACC GTC TCC TCA
```

*Figure 2A*

V-segment: L15
J-segment: JK4

```
      D   I   Q   M   T   Q   S   P   S   S   L   S   A   S   V   G   D   R
2     GAC ATC CAG ATG ACC CAG TCT CCA TCC TCA CTG TCT GCA TCT GTA GGA GAC AGA

                                CDR 1
                    ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
      V   T   I   T   C   R   A   S   Q   G   I   S   S   W   L   A   W   Y
56    GTC ACC ATC ACT TGT CGG GCG AGT CAG GGT ATT AGC AGC TGG TTA GCC TGG TAT

                                                            CDR 2
                                                    ~~~~~~~~~~~~~~~~~~~~
      Q   Q   K   P   E   K   A   P   K   S   L   I   Y   A   A   S   S   L
110   CAG CAG AAA CCA GAG AAA GCC CCT AAG TCC CTG ATC TAT GCT GCA TCC AGT TTG

      CDR 2
      ~~~~~~~~
      Q   S   G   V   P   S   R   F   S   G   S   G   S   G   T   D   F   T
164   CAA AGT GGG GTC CCA TCA AGG TTC AGC GGC AGT GGA TCT GGG ACA GAT TTC ACT

                                                                CDR 3
                                                                ~~~~~~~~
      L   T   I   S   S   L   Q   P   E   D   F   A   T   Y   Y   C   Q   Q
218   CTC ACC ATC AGC AGC CTG CAG CCT GAA GAT TTT GCA ACT TAT TAC TGC CAA CAG

            CDR 3
      ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
      Y   N   S   Y   P   P   T   F   G   G   G   T   K   V   E   I   K
272   TAT AAT AGT TAC CCT CCC ACT TTC GGC GGA GGG ACC AAG GTG GAG ATC AAA
                                  |
                                  └──► JK4
```

*Figure 2B*

V-segment: VH 3-48
D-segment: D1-1
J-segment: JH6b

```
        E   V   Q   L   V   E   S   G   G   G   L   V   Q   P   G   E   S   L
  1    GAG GTG CAG CTG GTG GAG TCT GGG GGA GGC TTG GTA CAG CCT GGG GAG TCC CTG

                                                               CDR1
                                                        ~~~~~~~~~~~~~~~~~~~~
        R   L   S   C   V   V   S   G   F   T   F   S   R   Y   K   M   N   W
 55    AGA CTC TCC TGT GTA GTC TCT GGA TTC ACC TTC AGT AGG TAT AAG ATG AAC TGG

                                                                   CDR2
                                                            ~~~~~~~~~~~~~~~~
        V   R   Q   A   P   G   K   G   L   E   W   I   S   Y   I   S   R   S
109    GTC CGC CAG GCT CCA GGG AAG GGA CTG GAA TGG ATT TCA TAC ATT AGT CGT AGT

                   CDR2
       ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
        G   R   D   I   Y   Y   A   D   S   V   K   G   R   F   T   I   S   R
163    GGT CGT GAC ATA TAC TAC GCA GAC TCT GTG AAG GGC CGA TTC ACC ATC TCC AGA

        D   N   A   K   N   S   L   Y   L   Q   M   S   S   L   R   D   E   D
217    GAC AAT GCC AAG AAC TCA CTG TAT CTG CAA ATG AGC AGC CTG AGA GAC GAG GAC

                                                     CDR3
                                        ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
        T   A   V   Y   Y   C   A   G   T   V   T   T   Y   Y   Y   Y   F   G
271    ACG GCT GTG TAT TAC TGT GCG GGA ACT GTA ACG ACA TAT TAT TAT TAC TTC GGT
                                       |               |                  |
        CDR3                           |     D1-1      |                  |-->
       JH6b                            |_______________|
       ~~~~~~~~~~
        M   D   V   W   G   L   G   T   T   V   T   V   S   S
325    ATG GAC GTC TGG GGC CTA GGG ACC ACG GTC ACC GTC TCC TCA
```

*Figure 3A*

V-segment: L15
J-segment: JK4

```
      D  I  Q  M  T  Q  S  P  S  S  L  S  A  S  V  G  D  R
1     GAC ATC CAG ATG ACC CAG TCT CCA TCC TCA CTG TCT GCA TCT GTA GGA GAC AGA

                              CDR1
                  ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
      V  T  I  T  C  R  A  S  Q  G  I  S  S  W  L  A  W  Y
55    GTC ACC ATC ACT TGT CGG GCG AGT CAG GGT ATT AGC AGC TGG TTA GCC TGG TAT

                                                      CDR2
                                                ~~~~~~~~~~~~~~~~~~~
      Q  Q  K  P  E  K  A  P  K  S  L  I  Y  A  A  S  S  L
109   CAG CAG AAA CCA GAG AAA GCC CCT AAG TCC CTG ATC TAT GCT GCA TCC AGT TTG

      CDR2
      ~~~~~~~~
      Q  S  G  V  P  S  R  F  S  G  S  G  S  G  T  D  F  T
163   CAA AGT GGG GTC CCA TCA AGG TTC AGC GGC AGT GGA TCT GGG ACA GAT TTC ACT

                                                         CDR3
                                                         ~~~~~~~
      L  T  I  S  C  L  Q  P  E  D  F  A  T  Y  Y  C  Q  Q
217   CTC ACC ATC AGC TGC CTG CAG CCT GAA GAT TTT GCG ACT TAT TAC TGC CAA CAG

            CDR3
      ~~~~~~~~~~~~~~~~~~~~~~~~~~~~
      Y  N  S  Y  P  P  T  F  G  G  G  T  K  V  E  I  K
271   TAT AAT AGT TAC CCT CCC ACT TTC GGC GGA GGG ACC AAG GTG GAG ATC AAA
                              |
                              └──► JK4
```

*Figure 3B*

V-segment: VH3-48
D-segment: D1-1
J-segment: JH6b

```
          E   V   Q   L   V   E   S   G   G   G   S   V   Q   P   G   E   S   L
    1     GAA GTG CAG CTG GTG GAG TCT GGG GGA GGC TCG GTA CAG CCT GGG GAG TCC CTG

                                                        CDR 1
                                                        ~~~~~~~~~~~~~~~~~~~~
          R   L   S   C   V   A   S   G   F   T   F   S   R   Y   K   M   N   W
   55     AGA CTC TCC TGT GTA GCC TCT GGA TTC ACC TTC AGT AGG TAC AAG ATG AAC TGG

                                                            CDR 2
                                                            ~~~~~~~~~~~~~~~~~~
          V   R   Q   A   P   G   K   G   L   E   W   V   S   Y   I   S   R   S
  109     GTC CGC CAG GCT CCA GGG AAG GGA CTG GAA TGG GTT TCA TAC ATT AGT CGT AGT

                    CDR 2
                    ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
          G   R   D   I   Y   Y   A   D   S   V   K   G   R   F   T   I   S   R
  163     GGT CGT GAC ATA TAC TAC GCA GAC TCT GTG AAG GGC CGA TTC ACC ATC TCC AGA

          D   N   A   K   N   S   L   Y   L   Q   M   N   S   L   R   D   E   D
  217     GAC AAT GCC AAG AAC TCA CTG TAT CTG CAA ATG AAC AGC CTG AGA GAC GAG GAC

                                                    CDR 3
                                                    ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
          T   A   V   Y   Y   C   A   G   T   V   T   T   Y   Y   Y   D   F   G
  271     ACG GCT GTG TAT TAC TGT GCG GGA ACT GTA ACG ACA TAC TAC TAC GAC TTC GGT

            CDR 3                       |     D1-1     |   |-> JH6b
            ~~~~~~~~~~~~~               |_______________|
          M   D   V   W   G   Q   G   T   T   V   T   V   S   S
  325     ATG GAC GTC TGG GGC CAA GGG ACC ACG GTC ACC GTC TCC TCA
```

*Figure 4A*

V-segment: L15
J-segment: JK4

```
        D   I   Q   M   T   Q   S   P   S   S   L   S   A   S   V   G   D   R
3       GAC ATC CAG ATG ACC CAG TCT CCA TCC TCA CTG TCT GCA TCT GTA GGA GAC AGA

                                CDR 1
                            ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
        V   T   I   T   C   R   A   S   Q   G   I   S   S   W   L   A   W   Y
57      GTC ACC ATC ACT TGT CGG GCG AGT CAG GGT ATT AGC AGC TGG TTA GCC TGG TAT

                                                            CDR 2
                                                        ~~~~~~~~~~~~~~~~~~~
        Q   Q   K   P   E   K   A   P   K   S   L   I   Y   A   A   S   S   L
111     CAG CAG AAA CCA GAG AAA GCC CCT AAG TCC CTG ATC TAT GCT GCA TCC AGT TTG

        CDR 2
        ~~~~~~~~
        Q   S   G   V   P   S   R   F   S   G   S   G   S   G   T   D   F   T
165     CAA AGT GGG GTC CCA TCA AGG TTC AGC GGC AGT GGA TCT GGG ACA GAT TTC ACT

                                                                CDR 3
                                                            ~~~~~~~~
        L   T   I   S   S   L   Q   P   E   D   F   A   T   Y   Y   C   Q   Q
219     CTC ACC ATC AGC AGC CTG CAG CCT GAA GAT TTT GCA ACT TAT TAC TGC CAA CAG

                CDR 3
        ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
        Y   N   S   Y   P   P   T   F   G   G   G   T   K   V   E   I   K
273     TAT AAT AGT TAC CCT CCC ACT TTC GGC GGA GGG ACC AAG GTG GAG ATC AAA
                                  |
                                  └→ JK4
```

*Figure 4B*

Anti-Fucosyl GM1 13B8 VH

V-segment: VH3-48
D-segment: D1-1
J-segment: JH6b

```
                                                                    CDR1
      E   V   Q   L   V   E   S   G   G   G   L   V   Q   P   G   E   S   L
1     GAG GTG CAG CTG GTG GAG TCT GGG GGA GGC TTG GTA CAG CCT GGG GAG TCC CTG

                                                            CDR1
                                                    ~~~~~~~~~~~~~~~~~~~~
      R   L   S   C   V   A   S   G   F   T   L   S   R   Y   K   M   N   W
55    AGA CTC TCG TGT GTA GCC TCT GGA TTC ACC CTC AGT AGG TAT AAG ATG AAC TGG

                                                                CDR2
                                                        ~~~~~~~~~~~~~~~~~~~
      V   R   Q   A   P   G   K   G   L   E   W   I   S   Y   I   S   R   S
109   GTC CGC CAG GCT CCA GGG AAG GGA CTG GAA TGG ATT TCA TAC ATC AGT CGT AGT

                      CDR2
      ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
      G   R   D   I   Y   Y   A   D   S   V   K   G   R   F   T   I   S   R
163   GGT CGT GAC ATA TAC TAC GCA GAC TCT GTG AAG GGC CGA TTC ACC ATC TCC AGA

      D   N   A   K   N   S   L   Y   L   Q   M   N   S   L   R   D   E   D
217   GAC AAT GCC AAG AAC TCA CTG TAT CTG CAA ATG AAC AGC CTG CGA GAC GAG GAC

                                                     CDR3
                                      ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
      S   A   V   Y   Y   C   A   G   T   V   T   T   Y   Y   Y   Y   F   G
271   TCG GCT GTG TAT TAC TGT GCG GGA ACT GTA ACG ACA TAC TAC TAC TAC TTC GGT
                                    |    D1-1     | |→ JH6b
      CDR3
      ~~~~~~~~~~~
      M   D   V   W   G   Q   G   T   T   V   T   V   S   S
325   ATG GAC GTC TGG GGC CAA GGG ACC ACG GTC ACC GTC TCC TCA
```

*Figure 5A*

V-segment: L15
J-segment: JK4

```
      D   I   Q   M   T   Q   S   P   S   S   L   S   A   S   V   G   D   R
1     GAC ATC CAG ATG ACC CAG TCT CCA TCC TCA CTG TCT GCA TCT GTA GGA GAC AGA

                                CDR1
                    ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
      V   T   I   T   C   R   A   S   Q   G   I   S   S   W   L   A   W   Y
55    GTC ACC ATC ACT TGT CGG GCG AGT CAG GGT ATT AGC AGC TGG TTA GCC TGG TAT

                                                        CDR2
                                                    ~~~~~~~~~~~~~~~~~~~~
      Q   Q   K   P   E   K   A   P   K   S   L   I   Y   A   A   S   S   L
109   CAG CAG AAA CCA GAG AAA GCC CCT AAG TCC CTG ATC TAT GCT GCA TCC AGT TTG

      CDR2
      ~~~~~~~~
      Q   S   G   V   P   S   R   F   S   G   S   G   S   G   T   D   F   T
163   CAA AGT GGG GTC CCA TCA AGG TTC AGC GGC AGT GGA TCT GGG ACA GAT TTC ACT

                                                                CDR3
                                                            ~~~~~~~~
      L   T   I   S   S   L   Q   P   E   D   F   A   T   Y   Y   C   Q   Q
217   CTC ACC ATC AGC AGC CTG CAG CCT GAA GAT TTT GCA ACT TAT TAC TGC CAA CAG

              CDR3
      ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
      Y   N   S   Y   P   P   T   F   G   G   G   T   K   V   E   I   K
271   TAT AAT AGT TAC CCT CCC ACT TTC GGC GGA GGG ACC AAG GTG GAG ATC AAA
                          ↳
                          JK4
```

*Figure 5B*

Anti-Fucosyl GM1 3C4 VH 

V-segment: VH3-48
D-segment: D1-1
J-segment: JH6b

```
         E   V   Q   L   V   E   S   G   G   G   L   V   Q   P   G   E   S   L
  1     GAG GTG CAG CTG GTG GAG TCT GGG GGA GGC TTG GTA CAG CCT GGG GAG TCC CTG

                                                        CDR1
                                                    ~~~~~~~~~~~~~~~~~~~~
         R   L   S   C   V   A   S   G   F   T   F   S   R   Y   K   M   N   W
 55     AGA CTC TCC TGT GTA GCC TCT GGA TTC ACC TTC AGT AGG TAT AAG ATG AAC TGG

                                                            CDR2
                                                        ~~~~~~~~~~~~~~~~~~~~
         V   R   Q   A   P   G   K   G   L   E   W   I   S   Y   I   S   R   S
109     GTC CGC CAG GCT CCA GGG AAG GGA CTG GAA TGG ATT TCA TAC ATT AGT CGT AGT

                     CDR2
        ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
         G   R   D   I   Y   Y   A   D   S   V   K   G   R   F   T   I   S   R
163     GGT CGT GAC ATA TAC TAC GCA GAC TCT GTG AAG GGC CGA TTC ACC ATC TCC AGA

         D   N   A   K   N   S   L   Y   L   Q   M   S   S   L   R   D   E   D
217     GAC AAT GCC AAG AAC TCA CTG TAT CTG CAA ATG AGC AGC CTG AGA GAC GAG GAC

                                                   CDR3
                                        ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
         T   A   V   Y   Y   C   A   G   T   V   T   T   Y   Y   Y   Y   F   G
271     ACG GCT GTG TAT TAC TGT GCG GGA ACT GTC ACG ACA TAT TAT TAT TAC TTC GGT
                                        └D1-1──────────┘ └→ JH6b
        CDR3
        ~~~~~~~~~~~~
         M   D   V   W   G   L   G   T   T   V   T   V   S   S
325     ATG GAC GTC TGG GGC CTA GGG ACC ACG GTC ACC GTC TCC TCA
```

*Figure 6A*

V-segment: L15
J-segment: JK4

```
      D   I   Q   M   T   Q   S   P   S   S   L   S   A   S   V   G   D   R
1     GAC ATC CAG ATG ACC CAG TCT CCA TCC TCA CTG TCT GCA TCT GTA GGA GAC AGA

                                CDR1
                    ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
      V   T   I   T   C   R   A   S   Q   G   I   S   S   W   L   A   W   Y
55    GTC ACC ATC ACT TGT CGG GCG AGT CAG GGT ATT AGC AGC TGG TTA GCC TGG TAT

                                                            CDR2
                                                    ~~~~~~~~~~~~~~~~~~~~
      Q   Q   K   P   E   K   A   P   K   S   L   I   Y   A   A   S   S   L
109   CAG CAG AAA CCA GAG AAA GCC CCT AAG TCC CTG ATC TAT GCT GCA TCC AGT TTG

      CDR2
      ~~~~~~~~
      Q   S   G   V   P   S   R   F   S   G   S   G   S   G   T   D   F   T
163   CAA AGT GGG GTC CCA TCA AGG TTC AGC GGC AGT GGA TCT GGG ACA GAT TTC ACT

                                                                    CDR3
                                                                ~~~~~~~~
      L   T   I   S   C   L   Q   P   E   D   F   A   T   Y   Y   C   Q   Q
217   CTC ACC ATC AGC TGC CTG CAG CCT GAA GAT TTT GCG ACT TAT TAC TGC CAA CAG

              CDR3
      ~~~~~~~~~~~~~~~~~~~~~~~~~~~~
      Y   N   S   Y   P   P   T   F   G   G   G   T   K   V   E   I   K
271   TAT AAT AGT TAC CCT CCC ACT TTC GGC GGA GGG ACC AAG GTG GAG ATC AAA
                          ↳ JK4
```

*Figure 6B*

Anti-Fucosyl GM1 13B8, 18D5, 5B1, 7D4, 7E4 VH regions

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3-48 germline | E | V | Q | L | V | E | S | G | G | G | L | V | Q | P | G | G | S | L | R | L | S | C | A | A | S | G | F | T | F | S |
| 13B8 VH | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | E | - | - | - | - | - | - | V | - | - | - | - | - | L | - |
| 18D5 VH | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | E | - | - | - | - | - | - | V | - | - | - | - | - | - | - |
| 5B1 VH | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | E | - | - | - | - | - | - | V | - | - | - | - | - | - | - |
| 5B1a VH | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | E | - | - | - | - | - | - | V | - | - | - | - | - | - | - |
| 7D4 VH | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | E | - | - | - | - | - | - | V | V | - | - | - | - | - | - |
| 7E4 VH | - | - | - | - | - | - | - | - | - | - | S | - | - | - | - | E | - | - | - | - | - | - | V | - | - | - | - | - | - | - |
| | | | CDR1 | | | | | | | | | | | | | | | | | | | | CDR2 | | | | | | | |
| 3-48 germline | S | Y | S | M | N | W | V | R | Q | A | P | G | K | G | L | E | W | V | S | Y | I | S | S | S | S | S | T | I | Y | Y |
| 13B8 VH | R | - | K | - | - | - | - | - | - | - | - | - | - | - | - | - | - | I | - | - | - | - | R | - | G | R | D | - | - | - |
| 18D5 VH | R | - | K | - | - | - | - | - | - | - | - | - | - | - | - | - | - | I | - | - | - | - | R | - | G | R | D | - | - | - |
| 5B1 VH | R | - | K | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | R | - | G | R | D | - | - | - |
| 5B1a VH | R | - | K | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | R | - | G | R | D | - | - | - |
| 7D4 VH | R | - | K | - | - | - | - | - | - | - | - | - | - | - | - | - | - | I | - | - | - | - | R | - | G | R | D | - | - | - |
| 7E4 VH | R | - | K | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | R | - | G | R | D | - | - | - |
| | | | CDR2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3-48 germline | A | D | S | V | K | G | R | F | T | I | S | R | D | N | A | K | N | S | L | Y | L | Q | M | N | S | L | R | D | E | D |
| 13B8 VH | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 18D5 VH | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | S | - | - | - | - | - | - |
| 5B1 VH | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 5B1a VH | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 7D4 VH | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | S | - | - | - | - | - | - |
| 7E4 VH | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | CDR3 | | | | | | | | | | | | | | | | | | | | | | |
| 3-48 germline | T | A | V | Y | Y | C | A | R | | | | | | | | | | | | | | | | | | | | | | |
| 13B8 VH | S | - | - | - | - | - | - | G | T | V | T | T | Y | Y | Y | Y | F | G | M | D | V | W | G | Q | G | T | T | V | T | V |
| 18D5 VH | - | - | - | - | - | - | - | G | T | V | T | T | Y | Y | Y | Y | F | G | M | D | V | W | G | L | G | T | T | V | T | V |
| 5B1 VH | - | - | - | - | - | - | - | G | T | V | T | T | Y | Y | Y | Y | F | G | M | D | V | W | G | H | G | T | T | V | T | V |
| 5B1a VH | - | - | - | - | - | - | - | G | T | V | T | T | * | Y | Y | Y | F | G | M | D | V | W | G | H | G | T | T | V | T | V |
| 7D4 VH | - | - | - | - | - | - | - | G | T | V | T | T | Y | Y | Y | Y | F | G | M | D | V | W | G | L | G | T | T | V | T | V |
| 7E4 VH | - | - | - | - | - | - | - | G | T | V | T | T | Y | Y | Y | D | F | G | M | D | V | W | G | Q | G | T | T | V | T | V |

| | | |
|---|---|---|
| 13B8 VH | S | S |
| 18D5 VH | S | S |
| 5B1 VH | S | S |
| 5B1a VH | S | S |
| 7D4 VH | S | S |
| 7E4 VH | S | S |

*Fig. 7*