FIG. 1 Anti-Cadherin-17 PTA001_A1 VH

```
1   tgactgggaaaaccctggcgttacccacgctttgtacatggagaaaataaagtgaaacaa
     -  L  G  K  P  W  R  Y  P  R  F  V  H  G  E  N  K  V  K  Q

61  agcactattgcactggcactcttaccgctcttatttacccctgtggcaaaagccgaagtg
    S  T  I  A  L  A  L  L  P  L  L  F  T  P  V  A  K  A  E  V

121 cagctgttggagactgggggaggcgtagtgaagcccggagggtcccttaaactctcctgt
    Q  L  L  E  T  G  G  G  V  V  K  P  G  G  S  L  K  L  S  C

                    CDR1
            ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
181 gcagcctctggattcactttcagtaactatggcatgtcttgggttcgccagactccggag
    A  A  S  G  F  T  F  S  N  Y  G  M  S  W  V  R  Q  T  P  E

                                          CDR2
                          ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
241 aagaggctggagtgggtcgcagccattaatcgtgatggtggtaccacctactatacagac
    K  R  L  E  W  V  A  A  I  N  R  D  G  G  T  T  Y  Y  T  D

    ~~~~~~~~~~~~
301 aatgtgaagggccgattcaccatctccagagacaatgccaagaacagcctgtacctgcaa
    N  V  K  G  R  F  T  I  S  R  D  N  A  K  N  S  L  Y  L  Q

                                                        ~~~~~~~~~
361 atgagcagtctgaggtctgaggacacagccttgtattactgtgcaagacagttccttctc
    M  S  S  L  R  S  E  D  T  A  L  Y  Y  C  A  R  Q  F  L  L

            CDR3
    ~~~~~~~~~~~~~~~~~~~~~~~~
421 tgggacggctggtacttcgatgtctggggcgcagggaccacggtcaccgtctcctcagcc
    W  D  G  W  Y  F  D  V  W  G  A  G  T  T  V  T  V  S  S  A

481 aaaacgacacccccatctgtctatccactggcccctggatctgctgcccaaactaactcc
    K  T  T  P  P  S  V  Y  P  L  A  P  G  S  A  A  Q  T  N  S

541 atggtgaccctgggatgcctggtcaagggctatttccctgagccagtgacagtgacctgg
    M  V  T  L  G  C  L  V  K  G  Y  F  P  E  P  V  T  V  T  W

601 aactctggatccctgtccagcggtgtgcacaccttcccagctgtcctgcagtctgacctc
    N  S  G  S  L  S  S  G  V  H  T  F  P  A  V  L  Q  S  D  L

661 tacactctgagcagctcagtgactgtcccctccagcacctggcccagcgagaccgtcacc
    Y  T  L  S  S  S  V  T  V  P  S  S  T  W  P  S  E  T  V  T

721 tgcaacgttgcccacccggccagcagcaccaaggtggacaagaaaattgtgcccagggat
    C  N  V  A  H  P  A  S  S  T  K  V  D  K  K  I  V  P  R  D

781 tgt
    C
```

FIG. 2 Anti-Cadherin-17 PTA001_A2 VH

```
1   tgactgggaaaaccctggcgttacccacgctttgtacatggagaaaataaagtgaaacaa
     -  L  G  K  P  W  R  Y  P  R  F  V  H  G  E  N  K  V  K  Q

61  agcactattgcactggcactcttaccgctcttatttacccctgtggcaaaagcccaggtt
     S  T  I  A  L  A  L  L  P  L  L  F  T  P  V  A  K  A  Q  V

121 cagctgcaacagtctgacgctgagttggtgaaacctggagcttcagtgaagatatcctgc
     Q  L  Q  Q  S  D  A  E  L  V  K  P  G  A  S  V  K  I  S  C

                          CDR1
               ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
181 aaggtttctggctacaccttcagtgaccatgctattcactggatgagtcagagacctgga
     K  V  S  G  Y  T  F  S  D  H  A  I  H  W  M  S  Q  R  P  G

                                                CDR2
                            ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
241 cagggcctgaaatggattggatatatttatcctagacatgggactactaactacaatgag
     Q  G  L  K  W  I  G  Y  I  Y  P  R  H  G  T  T  N  Y  N  E

    ~~~~~~~~~~~~
301 aacttcaagggcaaggccacactgactgcagacacatcctccagcacagcctacatgcag
     N  F  K  G  K  A  T  L  T  A  D  T  S  S  S  T  A  Y  M  Q

                                                          ~~~~~~~~~
361 ctcaacagcctgacatctgaagattctgccgtctatttctgtgcaagaatgagaaactac
     L  N  S  L  T  S  E  D  S  A  V  Y  F  C  A  R  M  R  N  Y

      CDR3
    ~~~~~~~~~~~~~~~~~~
421 ttctatgttatggactactggggtcaaggaacctcagtcaccgtctcctcagccaaaacg
     F  Y  V  M  D  Y  W  G  Q  G  T  S  V  T  V  S  S  A  K  T

481 acacccccatctgtctatccactggcccctggatctgctgcccaaactaactccatggtg
     T  P  P  S  V  Y  P  L  A  P  G  S  A  A  Q  T  N  S  M  V

541 accctgggatgcctggtcaagggctatttccctgagccagtgacagtgacctggaactct
     T  L  G  C  L  V  K  G  Y  F  P  E  P  V  T  V  T  W  N  S

601 ggatccctgtccagcggtgtgcacaccttcccagctgtcctgcagtctgacctctacact
     G  S  L  S  S  G  V  H  T  F  P  A  V  L  Q  S  D  L  Y  T

661 ctgagcagctcagtgactgtcccctccagcacctggcccagcgagaccgtcacctgcaac
     L  S  S  S  V  T  V  P  S  S  T  W  P  S  E  T  V  T  C  N

721 gttgcccacccggccagcagcaccaaggtggacaagaaaattgtgcccagggattgt
     V  A  H  P  A  S  S  T  K  V  D  K  K  I  V  P  R  D  C
```

FIG. 3 Anti-Cadherin-17 PTA001_A3 VH

```
1   tgactgggaaaaccctggcgttacccacgctttgtacatggagaaaataaagtgaaacaa
     -  L  G  K  P  W  R  Y  P  R  F  V  H  G  E  N  K  V  K  Q

61  agcactattgcactggcactcttaccgctcttatttacccctgtggcaaaagcccaggtt
     S  T  I  A  L  A  L  L  P  L  L  F  T  P  V  A  K  A  Q  V

121 ctgctgcaacagtctgacgctgagttggtgaaacctggggcttcagtgaagatatcctgc
     L  L  Q  Q  S  D  A  E  L  V  K  P  G  A  S  V  K  I  S  C

                        CDR1
               ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
181 aaggcttctggctacaccttcactgaccatgctattcactgggtgaagcagaggcctgaa
     K  A  S  G  Y  T  F  T  D  H  A  I  H  W  V  K  Q  R  P  E

                                                CDR2
                           ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
241 cagggcctggaatggattggatatatttatcctgaacatggaactattaagtataatgag
     Q  G  L  E  W  I  G  Y  I  Y  P  E  H  G  T  I  K  Y  N  E

    ~~~~~~~~~~~~
301 aagttcaagggcaaggccacattgactgcagataaatcctccagcactgcctatatgcag
     K  F  K  G  K  A  T  L  T  A  D  K  S  S  S  T  A  Y  M  Q

                                                          ~~~~~~~~~~
361 ctcaacagcctgacatctgaggattcagcagtgtatttctgttcaagactcactaactac
     L  N  S  L  T  S  E  D  S  A  V  Y  F  C  S  R  L  T  N  Y

       CDR3
    ~~~~~~~~~~~~~~~~~~~
421 ttctatgttatggagtattggggtcaaggaacctcagtcaccgtctcctcagccaaaacg
     F  Y  V  M  E  Y  W  G  Q  G  T  S  V  T  V  S  S  A  K  T

481 acacccccatctgtctatccactggcccctggatctgctgcccaaactaactccatggtg
     T  P  P  S  V  Y  P  L  A  P  G  S  A  A  Q  T  N  S  M  V

541 accctgggatgcctggtcaagggctatttccctgagccagtgacagtgacctggaactct
     T  L  G  C  L  V  K  G  Y  F  P  E  P  V  T  V  T  W  N  S

601 ggatccctgtccagcggtgtgcacaccttcccagctgtcctgcagtctgacctctacact
     G  S  L  S  S  G  V  H  T  F  P  A  V  L  Q  S  D  L  Y  T

661 ctgagcagctcagtgactgtcccctccagcacctggcccagcgagaccgtcacctgcaac
     L  S  S  S  V  T  V  P  S  S  T  W  P  S  E  T  V  T  C  N

721 gttgcccacccggccagcagcaccaaggtggacaagaaaattgtgcccagggattgt
     V  A  H  P  A  S  S  T  K  V  D  K  K  I  V  P  R  D  C
```

FIG. 4 Anti-Cadherin-17 PTA001_A4 VH

```
1   tgactgggaaaaccctggcgttacccacgctttgtacatggagaaaataaagtgaaacaa
     -  L  G  K  P  W  R  Y  P  R  F  V  H  G  E  N  K  V  K  Q

61  agcactattgcactggcactcttaccgctcttatttacccctgtggcaaaagccgaggtt
     S  T  I  A  L  A  L  L  P  L  L  F  T  P  V  A  K  A  E  V

121 cagctgcagcagtctgtcgctgagttggtgaaacctggagcttcagtgaagatgtcatgc
     Q  L  Q  Q  S  V  A  E  L  V  K  P  G  A  S  V  K  M  S  C

                        CDR1
              ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
181 aaggtttctggctacaccctcactgaccatactattcactggatgaagcagaggcctgaa
     K  V  S  G  Y  T  L  T  D  H  T  I  H  W  M  K  Q  R  P  E

                                                CDR2
                           ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
241 cagggcctggaatggattggatatatttaccctagagatggaataactgggtacaatgag
     Q  G  L  E  W  I  G  Y  I  Y  P  R  D  G  I  T  G  Y  N  E

    ~~~~~~~~~~~~
301 aagttcaagggcaaggccacactgactgcagacacttcttccagcacagcctacatgcag
     K  F  K  G  K  A  T  L  T  A  D  T  S  S  S  T  A  Y  M  Q

                                                          ~~~~~~~~~~
361 ctcaacagcctgacatctgaggattctgcagtctatttctgtgccagatggggctatagt
     L  N  S  L  T  S  E  D  S  A  V  Y  F  C  A  R  W  G  Y  S

           CDR3
    ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
421 tacaggaattacgcgtactactatgactactggggccaaggcaccactctcacagtctcc
     Y  R  N  Y  A  Y  Y  Y  D  Y  W  G  Q  G  T  T  L  T  V  S

481 tcagccaaaacgacaccccatctgtctatccactggcccctggatctgctgcccaaact
     S  A  K  T  T  P  P  S  V  Y  P  L  A  P  G  S  A  A  Q  T

541 aactccatggtgaccctgggatgcctggtcaagggctatttccctgagccagtgacagtg
     N  S  M  V  T  L  G  C  L  V  K  G  Y  F  P  E  P  V  T  V

601 acctggaactctggatccctgtccagcggtgtgcacaccttcccagctgtcctgcagtct
     T  W  N  S  G  S  L  S  S  G  V  H  T  F  P  A  V  L  Q  S

661 gacctctacactctgagcagctcagtgactgtcccctccagcacctggcccagcgagacc
     D  L  Y  T  L  S  S  S  V  T  V  P  S  S  T  W  P  S  E  T

721 gtcacctgcaacgttgcccacccggccagcagcaccaaggtggacaagaaaattgtgccc
     V  T  C  N  V  A  H  P  A  S  S  T  K  V  D  K  K  I  V  P

781 agggattgt
     R  D  C
```

FIG. 5 Anti-Cadherin-17 PTA001_A5 VH

```
1   tgactgggaaaaccctggcgttacccacgctttgtacatggagaaaataaagtgaaacaa
     - L G K P W R Y P R F V H G E N K V K Q

61  agcactattgcactggcactcttaccgctcttatttacccctgtggcaaaagcccaggtt
     S T I A L A L L P L L F T P V A K A Q V

121 cagctgcaacagtctgacgctgacttggtgaaacctggggcttcagtgaagatatcctgc
     Q L Q Q S D A D L V K P G A S V K I S C

                        CDR1
              ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
181 aaggcttctggctacaccttcactgaccatgctattcactgggtgaaacagaggcctgaa
     K A S G Y T F T D H A I H W V K Q R P E

                                                CDR2
                          ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
241 cagggcctggaatggattggatatatttatcctgaacatggaactattaagtataatgag
     Q G L E W I G Y I Y P E H G T I K Y N E

    ~~~~~~~~~~~~
301 aagttcaagggcaaggccacattgactgcagataaatcctccagcactgcctatatgcag
     K F K G K A T L T A D K S S S T A Y M Q

                                                        ~~~~~~~~~~
361 ctcaacagcctgacatctgaggattcagcagtgtatttctgtgcaagactcaggaactat
     L N S L T S E D S A V Y F C A R L R N Y

      CDR3
    ~~~~~~~~~~~~~~~~~~~
421 ttgtatattatggactactggggtcaaggaacctcagtcaccgtctcctcagccaaaacg
     L Y I M D Y W G Q G T S V T V S S A K T

481 acacccccatctgtctatccactggcccctggatctgctgcccaaactaactccatggtg
     T P P S V Y P L A P G S A A Q T N S M V

541 accctgggatgcctggtcaagggctatttccctgagccagtgacagtgacctggaactct
     T L G C L V K G Y F P E P V T V T W N S

601 ggatccctgtccagcggtgtgcacaccttcccagctgtcctgcagtctgacctctacact
     G S L S S G V H T F P A V L Q S D L Y T

661 ctgagcagctcagtgactgtcccctccagcacctggcccagcgagaccgtcacctgcaac
     L S S S V T V P S S T W P S E T V T C N

721 gttgcccacccggccagcagcaccaaggtggacaagaaaattgtgcccagggattgt
     V A H P A S S T K V D K K I V P R D C
```

FIG. 6 Anti-Cadherin-17 PTA001_A6, PTA001_A9 and PTA001_A10 VH

```
1   tgactgggaaaaccctggcgttacccacgctttgtacatggagaaaataaagtgaaacaa
     -  L  G  K  P  W  R  Y  P  R  F  V  H  G  E  N  K  V  K  Q

61  agcactattgcactggcactcttaccgctcttatttacccctgtggcaaaagcccaggtt
     S  T  I  A  L  A  L  L  P  L  L  F  T  P  V  A  K  A  Q  V

121 cagctgcaacagtctgacgctgagttggtgaaacctggggcttcagtgaagatatcctgc
     Q  L  Q  Q  S  D  A  E  L  V  K  P  G  A  S  V  K  I  S  C

                          CDR1
               ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
181 aaggcttctggctacaccttcactgaccatgctattcactgggtgaagcagaggcctgaa
     K  A  S  G  Y  T  F  T  D  H  A  I  H  W  V  K  Q  R  P  E

                                                  CDR2
                            ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
241 cagggcctggaatggattggatatatttatcctgaacatggaactattaagtataatgag
     Q  G  L  E  W  I  G  Y  I  Y  P  E  H  G  T  I  K  Y  N  E

    ~~~~~~~~~~~~~~~~
301 aagttcaagggcaaggccacattgactgcagataaatcctccagcactgcctatatgcag
     K  F  K  G  K  A  T  L  T  A  D  K  S  S  S  T  A  Y  M  Q

                                                           ~~~~~~~~~~
361 ctcaacagcctgacatctgaggattcagcagtgtatttctgttcaagactcactaactac
     L  N  S  L  T  S  E  D  S  A  V  Y  F  C  S  R  L  T  N  Y

       CDR3
    ~~~~~~~~~~~~~~~~~~~
421 ttctatgttatggagtattggggtcaaggaacctcagtcaccgtctcctcagccaaaacg
     F  Y  V  M  E  Y  W  G  Q  G  T  S  V  T  V  S  S  A  K  T

481 acacccccatctgtctatccactggcccctggatctgctgcccaaactaactccatggtg
     T  P  P  S  V  Y  P  L  A  P  G  S  A  A  Q  T  N  S  M  V

541 accctgggatgcctggtcaagggctatttccctgagccagtgacagtgacctggaactct
     T  L  G  C  L  V  K  G  Y  F  P  E  P  V  T  V  T  W  N  S

601 ggatccctgtccagcggtgtgcacaccttcccagctgtcctgcagtctgacctctacact
     G  S  L  S  S  G  V  H  T  F  P  A  V  L  Q  S  D  L  Y  T

661 ctgagcagctcagtgactgtcccctccagcacctggcccagcgagaccgtcacctgcaac
     L  S  S  S  V  T  V  P  S  S  T  W  P  S  E  T  V  T  C  N

721 gttgcccacccggccagcagcaccaaggtggacaagaaaattgtgcccagggattgt
     V  A  H  P  A  S  S  T  K  V  D  K  K  I  V  P  R  D  C
```

FIG. 7 Anti-Cadherin-17 PTA001_A7 VH

```
1   tgactgggaaaaccctggcgttacccacgctttgtacatggagaaaataaagtgaaacaa
     -  L  G  K  P  W  R  Y  P  R  F  V  H  G  E  N  K  V  K  Q

61  agcactattgcactggcactcttaccgctcttatttacccctgtggcaaaagcccaggtt
     S  T  I  A  L  A  L  L  P  L  L  F  T  P  V  A  K  A  Q  V

121 cagctgcaacagtctgacgctgagttggtgaaacctggagcctcagtgaagatatcctgc
     Q  L  Q  Q  S  D  A  E  L  V  K  P  G  A  S  V  K  I  S  C

                          CDR1
               ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
181 aaggtttctggctacaccttcactgaccatgctattcactggatgaaacagaggcctgaa
     K  V  S  G  Y  T  F  T  D  H  A  I  H  W  M  K  Q  R  P  E

                                                    CDR2
                            ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
241 cagggcctggaatggattggatatatttatcctagagatggttttactaagtacaatgag
     Q  G  L  E  W  I  G  Y  I  Y  P  R  D  G  F  T  K  Y  N  E

    ~~~~~~~~~~~~
301 aagttcaagggcaaggccacactgactgcagacacatcctccagcacagcctacatgcag
     K  F  K  G  K  A  T  L  T  A  D  T  S  S  S  T  A  Y  M  Q

                                                          ~~~~~~~~~~
361 ctcaacagcctgacatctgaggattctacagtctatttctgtgcaagaatgactaactac
     L  N  S  L  T  S  E  D  S  T  V  Y  F  C  A  R  M  T  N  Y

       CDR3
    ~~~~~~~~~~~~~~~~~~~
421 ttctatactatggactactggggtcaaggaacctcagtcaccgtctcctcagccaaaacg
     F  Y  T  M  D  Y  W  G  Q  G  T  S  V  T  V  S  S  A  K  T

481 acacccccatctgtctatccactggcccctggatctgctgcccaaactaactccatggtg
     T  P  P  S  V  Y  P  L  A  P  G  S  A  A  Q  T  N  S  M  V

541 accctgggatgcctggtcaagggctatttccctgagccagtgacagtgacctggaactct
     T  L  G  C  L  V  K  G  Y  F  P  E  P  V  T  V  T  W  N  S

601 ggatccctgtccagcggtgtgcacaccttcccagctgtcctgcagtctgacctctacact
     G  S  L  S  S  G  V  H  T  F  P  A  V  L  Q  S  D  L  Y  T

661 ctgagcagctcagtgactgtcccctccagcacctggcccagcgagaccgtcacctgcaac
     L  S  S  S  V  T  V  P  S  S  T  W  P  S  E  T  V  T  C  N

721 gttgcccacccggccagcagcaccaaggtggacaagaaaattgtgcccagggattgt
     V  A  H  P  A  S  S  T  K  V  D  K  K  I  V  P  R  D  C
```

FIG. 8 Anti-Cadherin-17 PTA001_A8 VH

```
1   tgactgggaaaaccctggcgttacccacgctttgtacatggagaaaataaagtgaaacaa
     - L G K P W R Y P R F V H G E N K V K Q

61  agcactattgcactggcactcttaccgctcttatttacccctgtggcaaaagcccaggtt
     S T I A L A L L P L L F T P V A K A Q V

121 cagctgcaacagtctgacgctgacttggtgaaacctggggcttcagtgaagatatcctgc
     Q L Q Q S D A D L V K P G A S V K I S C

                          CDR1
              ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
181 aaggcttctggctacaccttcactgaccatgctattcactgggtgaaacagaggcctgaa
     K A S G Y T F T D H A I H W V K Q R P E

                                                CDR2
                          ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
241 cagggcctggaatggattggatatatttatcctgaacatggaactattaagtataatgag
     Q G L E W I G Y I Y P E H G T I K Y N E

    ~~~~~~~~~~~~
301 aagttcaagggcaaggccacattgactgcagataaatcctccagcactgcctatatgcag
     K F K G K A T L T A D K S S S T A Y M Q

                                                      ~~~~~~~~~~
361 ctcaacagcctgacatctgaggattcagcagtgtatttctgttcaagactcactaactac
     L N S L T S E D S A V Y F C S R L T N Y

      CDR3
    ~~~~~~~~~~~~~~~~~~~
421 ttctatgttatggagtattggggtcaaggaacctcagtcaccgtctcctcagccaaaacg
     F Y V M E Y W G Q G T S V T V S S A K T

481 acacccccatctgtctatccactggcccctggatctgctgcccaaactaactccatggtg
     T P P S V Y P L A P G S A A Q T N S M V

541 accctgggatgcctggtcaagggctatttccctgagccagtgacagtgacctggaactct
     T L G C L V K G Y F P E P V T V T W N S

601 ggatccctgtccagcggtgtgcacaccttcccagctgtcctgcagtctgacctctacact
     G S L S S G V H T F P A V L Q S D L Y T

661 ctgagcagctcagtgactgtcccctccagcacctggcccagcgagaccgtcacctgcaac
     L S S S V T V P S S T W P S E T V T C N

721 gttgcccacccggccagcagcaccaaggtggacaagaaaattgtgcccagggattgt
     V A H P A S S T K V D K K I V P R D C
```

FIG. 9 Anti-Cadherin-17 PTA001_A11 VH

```
1   tgactgggaaaaccctggcgttacccacgctttgtacatggagaaaataaagtgaaacaa
     -  L  G  K  P  W  R  Y  P  R  F  V  H  G  E  N  K  V  K  Q

61  agcactattgcactggcactcttaccgctcttatttacccctgtggcaaaagcccaggtt
     S  T  I  A  L  A  L  L  P  L  L  F  T  P  V  A  K  A  Q  V

121 cagctgcaacagtctgacgctgagttggtgaaacctggggcttcagtgaagatatcctgc
     Q  L  Q  Q  S  D  A  E  L  V  K  P  G  A  S  V  K  I  S  C

                          CDR1
               ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
181 aaggcttctggctacaccttcactgaccatgctattcactgggtgaagcagaggcctgaa
     K  A  S  G  Y  T  F  T  D  H  A  I  H  W  V  K  Q  R  P  E

                                                      CDR2
                            ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
241 cagggcctggaatggattggatatatttatcctgaacatggtagtattacgtataatgag
     Q  G  L  E  W  I  G  Y  I  Y  P  E  H  G  S  I  T  Y  N  E

    ~~~~~~~~~~~~
301 aagttcaagggcaaggccacattgactgcagataaatcctccagtactgtctatatgcac
     K  F  K  G  K  A  T  L  T  A  D  K  S  S  S  T  V  Y  M  H

                                                          ~~~~~~~~~~
361 ctcaatagcctgacatctgaggattcagcagtgtatttctgtgcaagactcaggaactac
     L  N  S  L  T  S  E  D  S  A  V  Y  F  C  A  R  L  R  N  Y

       CDR3
    ~~~~~~~~~~~~~~~~~~~
421 ttgtatgttatggactactggggtcaaggaacctcagtcaccgtctcctcagccaaaacg
     L  Y  V  M  D  Y  W  G  Q  G  T  S  V  T  V  S  S  A  K  T

481 acacccccatctgtctatccactggcccctggatctgctgcccaaactaactccatggtg
     T  P  P  S  V  Y  P  L  A  P  G  S  A  A  Q  T  N  S  M  V

541 accctgggatgcctggtcaagggctatttccctgagccagtgacagtgacctggaactct
     T  L  G  C  L  V  K  G  Y  F  P  E  P  V  T  V  T  W  N  S

601 ggatccctgtccagcggtgtgcacaccttcccagctgtcctgcagtctgacctctacact
     G  S  L  S  S  G  V  H  T  F  P  A  V  L  Q  S  D  L  Y  T

661 ctgagcagctcagtgactgtcccctccagcacctggcccagcgagaccgtcacctgcaac
     L  S  S  S  V  T  V  P  S  S  T  W  P  S  E  T  V  T  C  N

721 gttgcccacccggccagcagcaccaaggtggacaagaaaattgtgcccagggattgt
     V  A  H  P  A  S  S  T  K  V  D  K  K  I  V  P  R  D  C
```

FIG. 10 Anti-Cadherin-17 PTA001_A12 VH

```
1   tgactgggaaaaccctggcgttacccacgctttgtacatggagaaaataaagtgaaacaa
     -  L  G  K  P  W  R  Y  P  R  F  V  H  G  E  N  K  V  K  Q

61  agcactattgcactggcactcttaccgctcttatttacccctgtggcaaaagcccaggtt
     S  T  I  A  L  A  L  L  P  L  L  F  T  P  V  A  K  A  Q  V

121 cagctgcaacagtctgaggctgagcttgtgaagcctggggcttcagtgaagctgtcctgc
     Q  L  Q  Q  S  E  A  E  L  V  K  P  G  A  S  V  K  L  S  C

                        CDR1
               ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
181 aaggcttctggctacaccttcactgaccatgctattcactggatgaaacagaggcctgaa
     K  A  S  G  Y  T  F  T  D  H  A  I  H  W  M  K  Q  R  P  E

                                                      CDR2
                            ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
241 cagggcctggaatggattggatatatctaccccagagatgattttgctaaggtgaatgag
     Q  G  L  E  W  I  G  Y  I  Y  P  R  D  D  F  A  K  V  N  E

    ~~~~~~~~~~~
301 aagttcaagggcaaggccacactgacagcagacacatcctccagcacagcctacatgcag
     K  F  K  G  K  A  T  L  T  A  D  T  S  S  S  T  A  Y  M  Q

                                                          ~~~~~~~~~~
361 ctcaacagcctgacatctgaggattctgcagtctatttctgtgcaagaatgactaactac
     L  N  S  L  T  S  E  D  S  A  V  Y  F  C  A  R  M  T  N  Y

       CDR3
    ~~~~~~~~~~~~~~~~~~~
421 ctctatattatggactactggggtcaaggaacctcagtcaccgtctcctcagccaaaacg
     L  Y  I  M  D  Y  W  G  Q  G  T  S  V  T  V  S  S  A  K  T

481 acacccccatctgtctatccactggcccctggatctgctgcccaaactaactccatggtg
     T  P  P  S  V  Y  P  L  A  P  G  S  A  A  Q  T  N  S  M  V

541 accctgggatgcctggtcaagggctatttccctgagccagtgacagtgacctggaactct
     T  L  G  C  L  V  K  G  Y  F  P  E  P  V  T  V  T  W  N  S

601 ggatccctgtccagcggtgtgcacaccttcccagctgtcctgcagtctgacctctacact
     G  S  L  S  S  G  V  H  T  F  P  A  V  L  Q  S  D  L  Y  T

661 ctgagcagctcagtgactgtcccctccagcacctggcccagcgagaccgtcacctgcaac
     L  S  S  S  V  T  V  P  S  S  T  W  P  S  E  T  V  T  C  N

721 gttgcccacccggccagcagcaccaaggtggacaagaaaattgtgcccagggattgt
     V  A  H  P  A  S  S  T  K  V  D  K  K  I  V  P  R  D  C
```

FIG. 11 Anti-Cadherin-17 PTA001_A13 VH

```
1   tgactgggaaaaccctggcgttacccacgctttgtacatggagaaaataaagtgaaacaa
     - L G K P W R Y P R F V H G E N K V K Q

61  agcactattgcactggcactcttaccgctcttatttacccctgtggcaaaagcccaggtt
     S T I A L A L L P L L F T P V A K A Q V

121 cagctgcaacagtctgacgctgagttggtgaaacctggggcttcagtgaagatatcctgc
     Q L Q Q S D A E L V K P G A S V K I S C

                        CDR1
              ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
181 aaggcttctggctacaccttcactgaccatgctattcactgggtgaagcagaggcctgaa
     K A S G Y T F T D H A I H W V K Q R P E

                                                CDR2
                          ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
241 cagggcctggaatggattggatatatttatcctgaacatggtactattacgtataatgag
     Q G L E W I G Y I Y P E H G T I T Y N E

    ~~~~~~~~~~~~
301 aagttcaagggcaaggccacattgactgcagataaatcctccagtactgtctatatgcac
     K F K G K A T L T A D K S S S T V Y M H

                                                    ~~~~~~~~~~
361 ctcaatagcctgacatctgaggattcagcagtgtatttctgtgcaagactcaggaactat
     L N S L T S E D S A V Y F C A R L R N Y

       CDR3
    ~~~~~~~~~~~~~~~~~~~
421 ttgtatattatggactactggggtcaaggaacctcagtcaccgtctcctcagccaaaacg
     L Y I M D Y W G Q G T S V T V S S A K T

481 acacccccatctgtctatccactggcccccggatctgctgcccaaactaactccatggtg
     T P P S V Y P L A P G S A A Q T N S M V

541 accctgggatgcctggtcaagggctatttccctgagccagtgacagtgacctggaactct
     T L G C L V K G Y F P E P V T V T W N S

601 ggatccctgtccagcggtgtgcacaccttcccagctgtcctgcagtctgacctctacact
     G S L S S G V H T F P A V L Q S D L Y T

661 ctgagcagctcagtgactgtcccctccagcacctggcccagcgagaccgtcacctgcaac
     L S S S V T V P S S T W P S E T V T C N

721 gttgcccacccggccagcagcaccaaggtggacaagaaaattgtgcccagggattgt
     V A H P A S S T K V D K K I V P R D C
```

FIG. 12 Anti-Cadherin-17 PTA001_A14 VH

```
1   tgactgggaaaaccctggcgttacccacgctttgtacatggagaaaataaagtgaaacaa
     - L G K P W R Y P R F V H G E N K V K Q

61  agcactattgcactggcactcttaccgctcttatttacccctgtggcaaaagcccaggtt
     S T I A L A L L P L L F T P V A K A Q V

121 cagctgcaacagtctgacgccgcgttggtgaaacctggagcttcagtgaagatatcgtgc
     Q L Q Q S D A A L V K P G A S V K I S C

                        CDR1
              ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
181 aaggtttctggctacaccttcagtgaccatgctattcactggatgaagcagaggcctgaa
     K V S G Y T F S D H A I H W M K Q R P E

                                                CDR2
                          ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
241 cagggcctggaatggattggatatattttcctagagatgcttttagtttgaacaatgag
     Q G L E W I G Y I F P R D A F S L N N E

    ~~~~~~~~~~~~
301 aagttcaagggcaaggccacactgagtgcagacacatcctccagcacagcctacatggag
     K F K G K A T L S A D T S S S T A Y M E

                                                          ~~~~~~~~~~
361 ctcaccagcctgacatttgaggattctgcagtctatttctgtgcaagaatgagaaactac
     L T S L T F E D S A V Y F C A R M R N Y

       CDR3
    ~~~~~~~~~~~~~~~~~~~
421 ttctatgttatggactactggggtcaaggaacctcagtcaccgtctcctcagccaaaacg
     F Y V M D Y W G Q G T S V T V S S A K T

481 acacccccatctgtctatacactggcccctggatctgctgcccaaactaactccatggtg
     T P P S V Y T L A P G S A A Q T N S M V

541 accctgggatgcctggtcaagggctatttccctgagccagtgacagtgacctggaactct
     T L G C L V K G Y F P E P V T V T W N S

601 ggatccctgtccagcggtgtgcacaccttcccagctgtcctgcagtctgacctctacact
     G S L S S G V H T F P A V L Q S D L Y T

661 ctgagcagctcagtgactgtcccctccagcacctggcccagcgagaccgtcacctgcaac
     L S S S V T V P S S T W P S E T V T C N

721 gttgcccacccggccagcagcaccaaggtggacaagaaaattgtgcccagggattgt
     V A H P A S S T K V D K K I V P R D C
```

FIG. 13 Anti-Cadherin-17 PTA001_A1 VK

```
1   taagattagcggatcctacctgacgctttttatcgcaactctctactgtttctccatacc
        -   -   -   R   I   L   P   D   A   F   Y   R   N   S   L   L   F   L   H   T

61  cgttttttggatggagtgaaacgatgaaatacctattgcctacggcagccgctggattg
        R   F   F   G   W   S   E   T   M   K   Y   L   L   P   T   A   A   A   G   L

121 ttattactcgctgcccaaccagccatggccgatgttgtgctgacccagactccactctcc
        L   L   L   A   A   Q   P   A   M   A   D   V   V   L   T   Q   T   P   L   S

                                                                ~~~~~~~~~~~~~~~~~~~~~~
181 ctgcctgtcactcttggagatcaagcctccatctcttgcagatctagtcagagcctttta
        L   P   V   T   L   G   D   Q   A   S   I   S   C   R   S   S   Q   S   L   L

        CDR1
        ~~~~~~~~~~~~~~~~~~~~~~~~~~~~
241 cacagtaatggaaacacctatttacattggtacctgctgaagccaggccagtctccaaag
        H   S   N   G   N   T   Y   L   H   W   Y   L   L   K   P   G   Q   S   P   K

                                CDR2
                        ~~~~~~~~~~~~~~~~~~~~~~
301 ctcctgatctacaaagtttccaaccgattttctggggtcccagacaggttcagtggcagt
        L   L   I   Y   K   V   S   N   R   F   S   G   V   P   D   R   F   S   G   S

361 ggatcagggacagatttcacactcaagatcaccagagtggaggctgaggatctgggagtt
        G   S   G   T   D   F   T   L   K   I   T   R   V   E   A   E   D   L   G   V

                            CDR3
                    ~~~~~~~~~~~~~~~~~~~~~~~~~
421 tatttctgctctcaaagtacacatgtgctcacgttcggtgctgggaccaagctggagctg
        Y   F   C   S   Q   S   T   H   V   L   T   F   G   A   G   T   K   L   E   L

481 aaacgggctgatgctgcaccaactgtatccatcttcccaccatccagtgagcagttaaca
        K   R   A   D   A   A   P   T   V   S   I   F   P   P   S   S   E   Q   L   T

541 tctggaggtgcctcagtcgtgtgcttcttgaacaacttctaccccaaagacatcaatgtc
        S   G   G   A   S   V   V   C   F   L   N   N   F   Y   P   K   D   I   N   V

601 aagtggaagattgatggcagtgaacgacaaaatggcgtcctgaacagttggactgatcag
        K   W   K   I   D   G   S   E   R   Q   N   G   V   L   N   S   W   T   D   Q

661 gacagcaaagacagcacctacagcatgagcagcaccctcacgttgaccaaggacgagtat
        D   S   K   D   S   T   Y   S   M   S   S   T   L   T   L   T   K   D   E   Y

721 gaacgacataacagctatacctgtgaggccactcacaagacatcaacttcacccattgtc
        E   R   H   N   S   Y   T   C   E   A   T   H   K   T   S   T   S   P   I   V

781 aagagcttcaacaggaatgagtcttatccatatgatgtgccagattatgcgagctaa
        K   S   F   N   R   N   E   S   Y   P   Y   D   V   P   D   Y   A   S   -
```

FIG. 14 Anti-Cadherin-17 PTA001_A2 and PTA001_A3 VK

```
1   taagattagcggatcctacctgacgctttttatcgcaactctctactgtttctccatacc
      -  -  -  R  I  L  P  D  A  F  Y  R  N  S  L  L  F  L  H  T

61  cgttttttggatggagtgaaacgatgaaatacctattgcctacggcagccgctggattg
      R  F  F  G  W  S  E  T  M  K  Y  L  L  P  T  A  A  A  G  L

121 ttattactcgctgcccaaccagccatggccgatattgtgatgacccaggctgcaccctct
      L  L  L  A  A  Q  P  A  M  A  D  I  V  M  T  Q  A  A  P  S

                                                  ~~~~~~~~~~~~~~~~~~~~
181 gtacctgtcactcctggagagtcagtatccatctcctgcacgtctagtaagagtctcctg
      V  P  V  T  P  G  E  S  V  S  I  S  C  T  S  S  K  S  L  L

          CDR1
    ~~~~~~~~~~~~~~~~~~~~~~~~~~~~
241 cgtagtaatggcaacacttacttgtattggttcctgcagaggccaggccagtctcctcag
      R  S  N  G  N  T  Y  L  Y  W  F  L  Q  R  P  G  Q  S  P  Q

                          CDR2
                ~~~~~~~~~~~~~~~~~~~~~
301 ctcctgatatatcggatgtccaaccttgcctcgggagtcccagacaggttcagtggcagt
      L  L  I  Y  R  M  S  N  L  A  S  G  V  P  D  R  F  S  G  S

361 gggtcaggaactgctttcacactgagaatcagtagagtggaggctgaggatgtgggtgtt
      G  S  G  T  A  F  T  L  R  I  S  R  V  E  A  E  D  V  G  V

                          CDR3
             ~~~~~~~~~~~~~~~~~~~~~~~~~~~~
421 tattactgtatgcaacatctagaatatcctttcacgttcggctcggggacaaagttggaa
      Y  Y  C  M  Q  H  L  E  Y  P  F  T  F  G  S  G  T  K  L  E

481 ataaaacgggctgatgctgcaccaactgtatccatcttcccaccatccagtgagcagtta
      I  K  R  A  D  A  A  P  T  V  S  I  F  P  P  S  S  E  Q  L

541 acatctggaggtgcctcagtcgtgtgcttcttgaacaacttctaccccaaagacatcaat
      T  S  G  G  A  S  V  V  C  F  L  N  N  F  Y  P  K  D  I  N

601 gtcaagtggaagattgatggcagtgaacgacaaaatggcgtcctgaacagttggactgat
      V  K  W  K  I  D  G  S  E  R  Q  N  G  V  L  N  S  W  T  D

661 caggacagcaaagacagcacctacagcatgagcagcaccctcacgttgaccaaggacgag
      Q  D  S  K  D  S  T  Y  S  M  S  S  T  L  T  L  T  K  D  E

721 tatgaacgacataacagctatacctgtgaggccactcacaagacatcaacttcacccatt
      Y  E  R  H  N  S  Y  T  C  E  A  T  H  K  T  S  T  S  P  I

781 gtcaagagcttcaacaggaatgagtcttatccatatgatgtgccagattatgcgagctaa
      V  K  S  F  N  R  N  E  S  Y  P  Y  D  V  P  D  Y  A  S  -
```

FIG. 15 Anti-Cadherin-17 PTA001_A4 VK

```
1   taagattagcggatcctacctgacgctttttatcgcaactctctactgtttctccatacc
     - - - R I L P D A F Y R N S L L F L H T

61  cgttttttggatggagtgaaacgatgaaatacctattgcctacggcagccgctggattg
     R F F G W S E T M K Y L L P T A A A G L

121 ttattactcgctgcccaaccagccatggccgacatcgttatgtctcagtctccatcctcc
     L L L A A Q P A M A D I V M S Q S P S S

                                                ~~~~~~~~~~~~~~~~~~~~~
181 ctagctgtgtcagttggagagaaggttactatgagctgcaagtccagccagagcctttta
     L A V S V G E K V T M S C K S S Q S L L

     CDR1
    ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
241 catagtagcaatcaaaagaactacttggcctggtaccagcagaaaccagggcagtctcct
     H S S N Q K N Y L A W Y Q Q K P G Q S P

                          CDR2
                    ~~~~~~~~~~~~~~~~~~~~~
301 aaagtgctgatttactgggcatccactagagaatctggggtccctgatcgcttcacaggc
     K V L I Y W A S T R E S G V P D R F T G

361 agtggatctgggacagatttcactctcaccatcaccagtgtgaagtctgaagacctggca
     S G S G T D F T L T I T S V K S E D L A

                          CDR3
                   ~~~~~~~~~~~~~~~~~~~~~~~~~~~
421 gtttattactgtcagcaatattatagctatccgtggacgttcggtggcggcaccaggctg
     V Y Y C Q Q Y Y S Y P W T F G G G T R L

481 gaaatcaaacgggctgatgctgcaccaactgtatccatcttcccaccatccagtgagcag
     E I K R A D A A P T V S I F P P S S E Q

541 ttaacatctggaggtgcctcagtcgtgtgcttcttgaacaacttctaccccaaagacatc
     L T S G G A S V V C F L N N F Y P K D I

601 aatgtcaagtggaagattgatggcagtgaacgacaaaatggcgtcctgaacagttggact
     N V K W K I D G S E R Q N G V L N S W T

661 gatcaggacagcaaagacagcacctacagcatgagcagcaccctcacgttgaccaaggac
     D Q D S K D S T Y S M S S T L T L T K D

721 gagtatgaacgacataacagctatacctgtgaggccactcacaagacatcaacttcaccc
     E Y E R H N S Y T C E A T H K T S T S P

781 attgtcaagagcttcaacaggaatgagtcttatccatatgatgtgccagattatgcgagc
     I V K S F N R N E S Y P Y D V P D Y A S

841 taa
```

FIG. 16 Anti-Cadherin-17 PTA001_A5 VK

```
1   taagattagcggatcctacctgacgctttttatcgcaactctctactgtttctccatacc
      -  -  -  R  I  L  P  D  A  F  Y  R  N  S  L  L  F  L  H  T

61  cgttttttggatggagtgaaacgatgaaatacctattgcctacggcagccgctggattg
      R  F  F  G  W  S  E  T  M  K  Y  L  L  P  T  A  A  A  G  L

121 ttattactcgctgcccaaccagccatggccgatattgtgatgacccaggctgcaccctct
      L  L  L  A  A  Q  P  A  M  A  D  I  V  M  T  Q  A  A  P  S

                                                  ~~~~~~~~~~~~~~~~~~~~
181 gtacctgtcactcctggagagtcagtatccatctcctgcaggtctagtaagagtctcctg
      V  P  V  T  P  G  E  S  V  S  I  S  C  R  S  S  K  S  L  L

          CDR1
    ~~~~~~~~~~~~~~~~~~~~~~~~~~~~
241 cgcagtaatggcaacacttacttgtattggttcctgcagaggccaggccagtctcctcag
      R  S  N  G  N  T  Y  L  Y  W  F  L  Q  R  P  G  Q  S  P  Q

                        CDR2
                ~~~~~~~~~~~~~~~~~~~~~
301 ctcctgatatatcggctgtccaaccttgcctcaggagtcccagacaggttcagtggcagt
      L  L  I  Y  R  L  S  N  L  A  S  G  V  P  D  R  F  S  G  S

361 gggtctggaactgctttcacactgagaatcagtagagtggaggctgaggatgtgggtgtt
      G  S  G  T  A  F  T  L  R  I  S  R  V  E  A  E  D  V  G  V

                        CDR3
              ~~~~~~~~~~~~~~~~~~~~~~~~~~~
421 tattactgtatgcaacatctagaatatcctttcacattcggctcggggacaaagttggaa
      Y  Y  C  M  Q  H  L  E  Y  P  F  T  F  G  S  G  T  K  L  E

481 ataaaacgggctgatgctgcaccaactgtatccatcttcccaccatccagtgagcagtta
      I  K  R  A  D  A  A  P  T  V  S  I  F  P  P  S  S  E  Q  L

541 acatctggaggtgcctcagtcgtgtgcttcttgaacaacttctaccccaaagacatcaat
      T  S  G  G  A  S  V  V  C  F  L  N  N  F  Y  P  K  D  I  N

601 gtcaagtggaagattgatggcagtgaacgacaaaatggcgtcctgaacagttggactgat
      V  K  W  K  I  D  G  S  E  R  Q  N  G  V  L  N  S  W  T  D

661 caggacagcaaagacagcacctacagcatgagcagcaccctcacgttgaccaaggacgag
      Q  D  S  K  D  S  T  Y  S  M  S  S  T  L  T  L  T  K  D  E

721 tatgaacgacataacagctatacctgtgaggccactcacaagacatcaacttcacccatt
      Y  E  R  H  N  S  Y  T  C  E  A  T  H  K  T  S  T  S  P  I

781 gtcaagagcttcaacaggaatgagtcttatccatatgatgtgccagattatgcgagctaa
      V  K  S  F  N  R  N  E  S  Y  P  Y  D  V  P  D  Y  A  S  -
```

FIG. 17 Anti-Cadherin-17 PTA001_A6 VK

```
1   taagattagcggatcctacctgacgctttttatcgcaactctctactgtttctccatacc
      -  -  -  R  I  L  P  D  A  F  Y  R  N  S  L  L  F  L  H  T

61  cgttttttggatggagtgaaacgataaaatacctattgcctacggcagccgctggattg
      R  F  F  G  W  S  E  T  I  K  Y  L  L  P  T  A  A  A  G  L

121 ttattactcgctgcccaaccagccatggccgatattgtgatgacccaggctgcaccctct
      L  L  L  A  A  Q  P  A  M  A  D  I  V  M  T  Q  A  A  P  S

                                                ~~~~~~~~~~~~~~~~~~~~
181 gtacctgtcactcctggagagtcagtatccatctcctgcacgtctagtaagagtctcctg
      V  P  V  T  P  G  E  S  V  S  I  S  C  T  S  S  K  S  L  L

      CDR1
      ~~~~~~~~~~~~~~~~~~~~~~~~~~~~
241 cgtagtaatggcaacacttacttgtattggttcctgcagaggccaggccagtctcctcag
      R  S  N  G  N  T  Y  L  Y  W  F  L  Q  R  P  G  Q  S  P  Q

                          CDR2
                  ~~~~~~~~~~~~~~~~~~~~~~
301 ctcctgatatatcggatgtccaaccttgcctcgggagtcccagacaggttcagtggcagt
      L  L  I  Y  R  M  S  N  L  A  S  G  V  P  D  R  F  S  G  S

361 gggtcaggaactgctttcacactgagaatcagtagagtggaggctgaggatgtgggtgtt
      G  S  G  T  A  F  T  L  R  I  S  R  V  E  A  E  D  V  G  V

                          CDR3
              ~~~~~~~~~~~~~~~~~~~~~~~~~~~~
421 tattactgtatgcaacatctagaatatcctttcacgttcggctcggggacaaagttggaa
      Y  Y  C  M  Q  H  L  E  Y  P  F  T  F  G  S  G  T  K  L  E

481 ataaaacgggctgatgctgcaccaactgtatccatcctcccaccatccagtgagcagtta
      I  K  R  A  D  A  A  P  T  V  S  I  L  P  P  S  S  E  Q  L

541 acatctggaggtgcctcagtcgtgtgcttcttgaacaacttctaccccaaagacatcaat
      T  S  G  G  A  S  V  V  C  F  L  N  N  F  Y  P  K  D  I  N

601 gtcaagtggaagattgatggcagtgaacgacaaaatggcgtcctgaacagttggactgat
      V  K  W  K  I  D  G  S  E  R  Q  N  G  V  L  N  S  W  T  D

661 caggacagcaaagacagcacctacagcatgagcagcaccctcacgttgaccaaggacgag
      Q  D  S  K  D  S  T  Y  S  M  S  S  T  L  T  L  T  K  D  E

721 tatgaacgacataacagctatacctgtgaggccactcacaagacatcaacttcacccatt
      Y  E  R  H  N  S  Y  T  C  E  A  T  H  K  T  S  T  S  P  I

781 gtcaagagcttcaacaggaatgagtcttatccatatgatgtgccagattatgcgagctaa
      V  K  S  F  N  R  N  E  S  Y  P  Y  D  V  P  D  Y  A  S  -
```

FIG. 18 Anti-Cadherin-17 PTA001_A7 VK

```
1   taagattagcggatcctacctgacgctttttatcgcaactctctactgtttctccatacc
        -   -   -   R   I   L   P   D   A   F   Y   R   N   S   L   L   F   L   H   T

61  cgttttttggatggagtgaaacgatgaaatacctattgcctacggcagccgctggattg
        R   F   F   G   W   S   E   T   M   K   Y   L   L   P   T   A   A   A   G   L

121 ttattactcgctgcccaaccagccatggccgatattgtgatgacccaggctgcaccctct
        L   L   L   A   A   Q   P   A   M   A   D   I   V   M   T   Q   A   A   P   S

                                                                ~~~~~~~~~~~~~~~~~~~~~~
181 gtacctgtcactcctggagagtcagtttccatctcctgcaggtcttctaagagtctcctg
        V   P   V   T   P   G   E   S   V   S   I   S   C   R   S   S   K   S   L   L

          CDR1
        ~~~~~~~~~~~~~~~~~~~~~~~~~~~~
241 cgtactaatggcaacacttacttgcattggttcctgcagaggccaggccagtctcctcag
        R   T   N   G   N   T   Y   L   H   W   F   L   Q   R   P   G   Q   S   P   Q

                              CDR2
                    ~~~~~~~~~~~~~~~~~~~~~~
301 ctcctgatatatcggatgtccaaccttgcctcaggagtcccagacaggttcagtggcagt
        L   L   I   Y   R   M   S   N   L   A   S   G   V   P   D   R   F   S   G   S

361 gggtcaggaactgttttcacactgagaatcagtagagtggaggctgaggatgtgggtgtt
        G   S   G   T   V   F   T   L   R   I   S   R   V   E   A   E   D   V   G   V

                              CDR3
                ~~~~~~~~~~~~~~~~~~~~~~~~~~~
421 tattactgtatgcaacatctagaatatccattcacgttcggctcggggacaaagttggaa
        Y   Y   C   M   Q   H   L   E   Y   P   F   T   F   G   S   G   T   K   L   E

481 ataaaaagggctgatgctgcaccaactgtatccatcttcccaccatccagtgagcagtta
        I   K   R   A   D   A   A   P   T   V   S   I   F   P   P   S   S   E   Q   L

541 acatctggaggtgcctcagtcgtgtgcttcttgaacaacttctaccccaaagacatcaat
        T   S   G   G   A   S   V   V   C   F   L   N   N   F   Y   P   K   D   I   N

601 gtcaagtggaagattgatggcagtgaacgacaaaatggcgtcctgaacagttggactgat
        V   K   W   K   I   D   G   S   E   R   Q   N   G   V   L   N   S   W   T   D

661 caggacagcaaagacagcacctacagcatgagcagcaccctcacgttgaccaaggacgag
        Q   D   S   K   D   S   T   Y   S   M   S   S   T   L   T   L   T   K   D   E

721 tatgaacgacataacagctatacctgtgaggccactcacaagacatcaacttcacccatt
        Y   E   R   H   N   S   Y   T   C   E   A   T   H   K   T   S   T   S   P   I

781 gtcaagagcttcaacaggaatgagtcttatccatatgatgtgccagattatgcgagctaa
        V   K   S   F   N   R   N   E   S   Y   P   Y   D   V   P   D   Y   A   S   -
```

FIG. 19 Anti-Cadherin-17 PTA001_A8 VK

```
1   taagattagcggatcctaccttacgctttttatcgcaactctctactgtttctccatacc
        -   -   -   R   I   L   P   Y   A   F   Y   R   N   S   L   L   F   L   H   T

61  cgtttttttggatggagtgaaacgatgaaatacctattgcctacggcagccgctggattg
        R   F   F   G   W   S   E   T   M   K   Y   L   L   P   T   A   A   A   G   L

121 ttattactcgctgcccaaccagccatggccgatattgtgatgacccaggctgcaccctct
        L   L   L   A   A   Q   P   A   M   A   D   I   V   M   T   Q   A   A   P   S

                                                        ~~~~~~~~~~~~~~~~~~~~~~
181 gtacctgtcactcctggagaatcagtatccatctcctgcaggtctagtaagagtctcctg
        V   P   V   T   P   G   E   S   V   S   I   S   C   R   S   S   K   S   L   L

        CDR1
        ~~~~~~~~~~~~~~~~~~~~~~~~~~~~
241 cgtagtaatggcaacacttacttgtattggttcctgcagaggccaggccagtctcctcag
        R   S   N   G   N   T   Y   L   Y   W   F   L   Q   R   P   G   Q   S   P   Q

                            CDR2
                    ~~~~~~~~~~~~~~~~~~~~~~
301 ctcctgatatatcggctgtctaaccttgcctcaggagtcccagacaggttcagtggcagt
        L   L   I   Y   R   L   S   N   L   A   S   G   V   P   D   R   F   S   G   S

361 gggtcaggaactgctttcacactgagaatcagtagagtggaggctgaggatgtgggtgtt
        G   S   G   T   A   F   T   L   R   I   S   R   V   E   A   E   D   V   G   V

                            CDR3
                ~~~~~~~~~~~~~~~~~~~~~~~~~~~~
421 tattactgtatgcaacatctagaatatcctttcacattcggctcggggacaaagttggaa
        Y   Y   C   M   Q   H   L   E   Y   P   F   T   F   G   S   G   T   K   L   E

481 ataaaacgggctgatgctgcaccaactgtatccatcttcccaccatccagtgagcagtta
        I   K   R   A   D   A   A   P   T   V   S   I   F   P   P   S   S   E   Q   L

541 acatctggaggtgcctcagtcgtgtgcttcttgaacaacttctaccccaaagacatcaat
        T   S   G   G   A   S   V   V   C   F   L   N   N   F   Y   P   K   D   I   N

601 gtcaagtggaagattgatggcagtgaacgacaaaatggcgtcctgaacagttggactgat
        V   K   W   K   I   D   G   S   E   R   Q   N   G   V   L   N   S   W   T   D

661 caggacagcaaagacagcacctacagcatgagcagcaccctcacgttgaccaaggacgag
        Q   D   S   K   D   S   T   Y   S   M   S   S   T   L   T   L   T   K   D   E

721 tatgaacgacataacagctatacctgtgaggccactcacaagacatcaacttcacccatt
        Y   E   R   H   N   S   Y   T   C   E   A   T   H   K   T   S   T   S   P   I

781 gtcaagagcttcaacaggaatgagtcttatccatatgatgtgccagattatgcgagctaa
        V   K   S   F   N   R   N   E   S   Y   P   Y   D   V   P   D   Y   A   S   -
```

FIG. 20 Anti-Cadherin-17 PTA001_A9 VK

```
1   taagattagcggatcctacctgacgctttttatcgcaactctctactgtttctccatacc
      -  -  -  R  I  L  P  D  A  F  Y  R  N  S  L  L  F  L  H  T

61  cgttttttggatggagtgaaacgatgaaatacctattgcctacggcagccgctggattg
      R  F  F  G  W  S  E  T  M  K  Y  L  L  P  T  A  A  A  G  L

121 ttattactcgctgcccaaccagccatggccgatattgtgatgacccaggctgcaccctct
      L  L  L  A  A  Q  P  A  M  A  D  I  V  M  T  Q  A  A  P  S

                                                ~~~~~~~~~~~~~~~~~~~~
181 gtacctgtcactcctggagagtcagtatccatctcctgcacgtctagtaagagtctcctg
      V  P  V  T  P  G  E  S  V  S  I  S  C  T  S  S  K  S  L  L

      CDR1
      ~~~~~~~~~~~~~~~~~~~~~~~~~~~~
241 cgtagtaatggcaacacttacttgtattggttcctgcagaggccaggccagtctcctcag
      R  S  N  G  N  T  Y  L  Y  W  F  L  Q  R  P  G  Q  S  P  Q

                        CDR2
                  ~~~~~~~~~~~~~~~~~~~~~
301 ctcctgatatatcggatgtccaaccttgcctcgggagtcccagacaggttcagtggcagt
      L  L  I  Y  R  M  S  N  L  A  S  G  V  P  D  R  F  S  G  S

361 gggtcaggaactgctttcacactgagaatcagtagagtggaggctgaggatgtgggtgtt
      G  S  G  T  A  F  T  L  R  I  S  R  V  E  A  E  D  V  G  V

                        CDR3
               ~~~~~~~~~~~~~~~~~~~~~~~~~~~~
421 tattactgtatgcaacatctagaatatcctttcacgttcggctcggggacaaagttggaa
      Y  Y  C  M  Q  H  L  E  Y  P  F  T  F  G  S  G  T  K  L  E

481 ataaaacgggctgatgctgcaccaactgtatccatctccccaccatccagtgagcagtta
      I  K  R  A  D  A  A  P  T  V  S  I  S  P  P  S  S  E  Q  L

541 acatctggaggtgcctcagtcgtgtgcttcttgaacaacttctaccccaaagacatcaat
      T  S  G  G  A  S  V  V  C  F  L  N  N  F  Y  P  K  D  I  N

601 gtcaagtggaagattgatggcagtgaacgacaaaatggcgtcctgaacagttggactgat
      V  K  W  K  I  D  G  S  E  R  Q  N  G  V  L  N  S  W  T  D

661 caggacagcaaagacagcacctacagcatgagcagcaccctcacgttgaccaaggacgag
      Q  D  S  K  D  S  T  Y  S  M  S  S  T  L  T  L  T  K  D  E

721 tatgaacgacataacagctatacctgtgaggccactcacaagacatcaacttcacccatt
      Y  E  R  H  N  S  Y  T  C  E  A  T  H  K  T  S  T  S  P  I

781 gtcaagagcttcaacaggaatgagtcttatccatatgatgtgccagattatgcgagctaa
      V  K  S  F  N  R  N  E  S  Y  P  Y  D  V  P  D  Y  A  S  -
```

FIG. 21 Anti-Cadherin-17 PTA001_A10 and PTA001_A12 VK

```
1   taagattagcggatcctacctgacgctttttatcgcaactctctactgtttctccatacc
      -  -  -  R  I  L  P  D  A  F  Y  R  N  S  L  L  F  L  H  T

61  cgttttttggatggagtgaaacgatgaaatacctattgcctacggcagccgctggattg
      R  F  F  G  W  S  E  T  M  K  Y  L  L  P  T  A  A  A  G  L

121 ttattactcgctgcccaaccagccatggccgatattgtgatgacccaggctgcaccctct
      L  L  L  A  A  Q  P  A  M  A  D  I  V  M  T  Q  A  A  P  S

                                t in A12
                                   ~          ~~~~~~~~~~~~~~~~~~~~
181 gtacctgtcactcctggagagtcagtatccatctcctgcaggtccagtaagagtctcctg
      V  P  V  T  P  G  E  S  V  S  I  S  C  R  S  S  K  S  L  L

          CDR1
    ~~~~~~~~~~~~~~~~~~~~~~~~~~~~
241 cgtagtaatggcaacacttacttgtattggttcctgcagaggccaggccagtctcctcag
      R  S  N  G  N  T  Y  L  Y  W  F  L  Q  R  P  G  Q  S  P  Q

                         CDR2
                  ~~~~~~~~~~~~~~~~~~~~~
301 ctcctcatatatcggatgtccaaccttgcctcaggagtcccagacaggttcagtggcagt
      L  L  I  Y  R  M  S  N  L  A  S  G  V  P  D  R  F  S  G  S

361 gggtcaggaactgccttcacactgagaatcagtagagtggaggctgaggatgtgggtgtt
      G  S  G  T  A  F  T  L  R  I  S  R  V  E  A  E  D  V  G  V

                         CDR3
               ~~~~~~~~~~~~~~~~~~~~~~~~~~~~
421 tattactgtatgcaacatctagaatatcctttcacgttcggaggggggaccaagctggaa
      Y  Y  C  M  Q  H  L  E  Y  P  F  T  F  G  G  G  T  K  L  E

481 ataaaacgggctgatgctgcaccaactgtatccatcttcccaccatccagtgagcagtta
      I  K  R  A  D  A  A  P  T  V  S  I  F  P  P  S  S  E  Q  L

541 acatctggaggtgcctcagtcgtgtgcttcttgaacaacttctaccccaaagacatcaat
      T  S  G  G  A  S  V  V  C  F  L  N  N  F  Y  P  K  D  I  N

601 gtcaagtggaagattgatggcagtgaacgacaaaatggcgtcctgaacagttggactgat
      V  K  W  K  I  D  G  S  E  R  Q  N  G  V  L  N  S  W  T  D

661 caggacagcaaagacagcacctacagcatgagcagcaccctcacgttgaccaaggacgag
      Q  D  S  K  D  S  T  Y  S  M  S  S  T  L  T  L  T  K  D  E

721 tatgaacgacataacagctatacctgtgaggccactcacaagacatcaacttcacccatt
      Y  E  R  H  N  S  Y  T  C  E  A  T  H  K  T  S  T  S  P  I

781 gtcaagagcttcaacaggaatgagtcttatccatatgatgtgccagattatgcgagctaa
      V  K  S  F  N  R  N  E  S  Y  P  Y  D  V  P  D  Y  A  S  -
```

FIG. 22 Anti-Cadherin-17 PTA001_A11 VK

```
1   taagattagcggatcctacctgacgctttttatcgcaactctcttctgtttctccatacc
        -   -   -   R   I   L   P   D   A   F   Y   R   N   S   L   L   F   L   H   T

61  cgtttttttggatggagtgaaacgatgaaatacctattgcctacggcagccgctggattg
        R   F   F   G   W   S   E   T   M   K   Y   L   L   P   T   A   A   A   G   L

121 ttattactcgctgcccaaccagccatggccgatattgtgatgacccaggctgcaccctct
        L   L   L   A   A   Q   P   A   M   A   D   I   V   M   T   Q   A   A   P   S

                                                                ~~~~~~~~~~~~~~~~~~~~~~
181 gtatctgtcactcctggagagtcagtatccatctcctgcaggtctactaagagtctcctg
        V   S   V   T   P   G   E   S   V   S   I   S   C   R   S   T   K   S   L   L

        CDR1
        ~~~~~~~~~~~~~~~~~~~~~~~~~~~~
241 cgtagtaatggcaacacttacttgtattggttcctccagaggccaggccagtctcctcag
        R   S   N   G   N   T   Y   L   Y   W   F   L   Q   R   P   G   Q   S   P   Q

                                CDR2
                        ~~~~~~~~~~~~~~~~~~~~~~
301 ctcctgatatatcggatgtccaaccttgcctcaggagtcccagacaggttcagtggcagt
        L   L   I   Y   R   M   S   N   L   A   S   G   V   P   D   R   F   S   G   S

361 gggtcaggaactgctttcacactgagaatcagtagagtggaggctgaggatgtgggtgtt
        G   S   G   T   A   F   T   L   R   I   S   R   V   E   A   E   D   V   G   V

                                CDR3
                        ~~~~~~~~~~~~~~~~~~~~~~~~~~~
421 tattactgtatgcaacatctagaatatcctttcacgttcggaggggggaccaagctggaa
        Y   Y   C   M   Q   H   L   E   Y   P   F   T   F   G   G   G   T   K   L   E

481 ataaaacgggctgatgctgcaccaactgtatccatcttcccaccatccagtgagcagtta
        I   K   R   A   D   A   A   P   T   V   S   I   F   P   P   S   S   E   Q   L

541 acatctggaggtgcctcagtcgtgtgcttcttgaacaacttctaccccaaagacatcaat
        T   S   G   G   A   S   V   V   C   F   L   N   N   F   Y   P   K   D   I   N

601 gtcaagtggaagattgatggcagtgaacgacaaaatggcgtcctgaacagttggactgat
        V   K   W   K   I   D   G   S   E   R   Q   N   G   V   L   N   S   W   T   D

661 caggacagcaaagacagcacctacagcatgagcagcaccctcacgttgaccaaggacgag
        Q   D   S   K   D   S   T   Y   S   M   S   S   T   L   T   L   T   K   D   E

721 tatgaacgacataacagctatacctgtgaggccactcacaagacatcaacttcacccatt
        Y   E   R   H   N   S   Y   T   C   E   A   T   H   K   T   S   T   S   P   I

781 gtcaagagcttcaacaggaatgagtcttatccatatgatgtgccagattatgcgagctaa
        V   K   S   F   N   R   N   E   S   Y   P   Y   D   V   P   D   Y   A   S   -
```

FIG. 23 Anti-Cadherin-17 PTA001_A13 VK

```
1   taagattagcggatcctacctgacgctttttatcgcaactctctactgtttctccatacc
      -  -  -  R  I  L  P  D  A  F  Y  R  N  S  L  L  F  L  H  T

61  cgttttttggatggagtgaaacgatgaaatacctattgcctacggcagccgctggattg
      R  F  F  G  W  S  E  T  M  K  Y  L  L  P  T  A  A  A  G  L

121 ttattactcgctgcccaaccagccatggccgatattgtgatgacccaggctgcaccctct
      L  L  L  A  A  Q  P  A  M  A  D  I  V  M  T  Q  A  A  P  S

                                                  ~~~~~~~~~~~~~~~~~~~~~~
181 gtacctgtcactcctggagagtcagtatccatctcctgcaggtctagtaagagtctcctg
      V  P  V  T  P  G  E  S  V  S  I  S  C  R  S  S  K  S  L  L

          CDR1
      ~~~~~~~~~~~~~~~~~~~~~~~~~~~~
241 cgcagtaatggcaacacttacttgtattggttcctgcagaggccaggccagtctcctcag
      R  S  N  G  N  T  Y  L  Y  W  F  L  Q  R  P  G  Q  S  P  Q

                            CDR2
                  ~~~~~~~~~~~~~~~~~~~~~~
301 ctcctgatatatcggctgtccaaccttgcctcaggagtcccagacaggttcagtggcagt
      L  L  I  Y  R  L  S  N  L  A  S  G  V  P  D  R  F  S  G  S

361 gggtcaggaactgctttcacactgagaatcagtagagtggaggctgaggatgtgggtgtt
      G  S  G  T  A  F  T  L  R  I  S  R  V  E  A  E  D  V  G  V

                            CDR3
               ~~~~~~~~~~~~~~~~~~~~~~~~~~~~
421 tattactgtatgcaacatctagaatatcctttcacattcggctcggggacaaagttggaa
      Y  Y  C  M  Q  H  L  E  Y  P  F  T  F  G  S  G  T  K  L  E

481 ataaaacgggctgatgctgcaccaactgtatccatcttcccacaatacagtgagcagtta
      I  K  R  A  D  A  A  P  T  V  S  I  F  P  Q  Y  S  E  Q  L

541 acaactggaggtgcctcagtcgtgtgcttcttgaacaacttctaccccaaagacatcaat
      T  T  G  G  A  S  V  V  C  F  L  N  N  F  Y  P  K  D  I  N

601 gtcaagtggaagattgatggcagtgaacgacaaaatggcgtcctgaacagttggactgat
      V  K  W  K  I  D  G  S  E  R  Q  N  G  V  L  N  S  W  T  D

661 caggacagcaaagacagcacctacagcatgagcagcaccctcacgttgaccaaggacgag
      Q  D  S  K  D  S  T  Y  S  M  S  S  T  L  T  L  T  K  D  E

721 tatgaacgacataacagctatacctgtgaggccactcacaagacatcaacttcacccatt
      Y  E  R  H  N  S  Y  T  C  E  A  T  H  K  T  S  T  S  P  I

781 gtcaagagcttcaacaggaatgagtcttatccatatgatgtgccagattatgcgagctaa
      V  K  S  F  N  R  N  E  S  Y  P  Y  D  V  P  D  Y  A  S  -
```

FIG. 24 Anti-Cadherin-17 PTA001_A14 VK

```
1   cggatcctacctgacgctttttatcgcaactctctactgtttctccatacccgttttttt
     R  I  L  P  D  A  F  Y  R  N  S  L  L  F  L  H  T  R  F  F

61  ggatggagtgaaacgatgaaatacctattgcctacggcagccgctggattgttattactc
     G  W  S  E  T  M  K  Y  L  L  P  T  A  A  A  G  L  L  L  L

121 gctgcccaaccagccatggccgatattgtgatgacccaggctgcaccctctgtacctgtc
     A  A  Q  P  A  M  A  D  I  V  M  T  Q  A  A  P  S  V  P  V

                                                  CDR1
                                        ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
181 actcctggagagtcagtatccatctcctgcacgtctagtaagagtctcctgcgtagtaat
     T  P  G  E  S  V  S  I  S  C  T  S  S  K  S  L  L  R  S  N

    ~~~~~~~~~~~~~~~~~~
241 ggcaacacttacttgtattggttcctgcagaggccaggccagtctcctcagctcctgata
     G  N  T  Y  L  Y  W  F  L  Q  R  P  G  Q  S  P  Q  L  L  I

                CDR2
      ~~~~~~~~~~~~~~~~~~~~~~
301 tatcggatgtccaaccttgcctcgggagtcccagacaggttcagtggcagtgggtcagga
     Y  R  M  S  N  L  A  S  G  V  P  D  R  F  S  G  S  G  S  G

361 actgctttcacactgagaatcagtagagtggaggctgaggatgtgggtgtttattactgt
     T  A  F  T  L  R  I  S  R  V  E  A  E  D  V  G  V  Y  Y  C

                CDR3
    ~~~~~~~~~~~~~~~~~~~~~~~~~~~~
421 atgcaacatctagaatatcctttcacgttcggctcggggacaaatttggaaataaaacgg
     M  Q  H  L  E  Y  P  F  T  F  G  S  G  T  N  L  E  I  K  R

481 gctgatgctgcaccaactgtatccatcttcacaacatccagagagcagttaacatctgga
     A  D  A  A  P  T  V  S  I  F  T  T  S  R  E  Q  L  T  S  G

541 ggtgcctcagtcgtgtgcttcttgaacaacttctaccccaaagacatcaatgtcaag
     G  A  S  V  V  C  F  L  N  N  F  Y  P  K  D  I  N  V  K
```

FIG. 25 VH CDR1 Alignments

```
PTA001_A1
VH CDR1                 GGATTCACTTTCAGTAACTATGGCATGTCT
VH7-39                  GGATTCACTTTCAGTAGCTATGGCATGTCT
                        ********** ********** **********

PTA001_A2, PTA001_A14
VH CDR1                 GGCTACACCTTCAGTGACCATGCTATTCAC
VHII gene H17           GGCTACACCTTCACTGACCATGCTATTCAC
                        ********** ********** **********

PTA001_A3, PTA001_A5, PTA001_A6, PTA001_A7, PTA001_A8, PTA001_A9,
PTA001_A10, PTA001_A11, PTA001_A12, PTA001_A13
VH CDR1                 GGCTACACCTTCACTGACCATGCTATTCAC
VHII gene H17           GGCTACACCTTCACTGACCATGCTATTCAC
                        ********** ********** **********

PTA001_A4
VH CDR1                 GGCTACACCCTCACTGACCATACTATTCAC
VHII gene H17           GGCTACACCTTCACTGACCATACTATTCAC
                        ********* ********** **********
```

FIG. 26 VH CDR2 Alignments

```
PTA001_A2
VH CDR2            TATATTTATCCTAGACATGGGACTACTAACTACAATGAGAACTTCAAGGGC
VHII region VH105  TATATTTATCCTAGAGATGGTAGTACTAAGTACAATGAGAAGTTCAAGGGC
                   *************** **** * ****** *********** *********

PTA001_A3, PTA001_A5, PTA001_A6, PTA001_A8, PTA001_A9, PTA001_A10
VH CDR2            TATATTTATCCTGAACATGGAACTATTAAGTATAATGAGAAGTTCAAGGGC
VHII region VH105  TATATTTATCCTAGAGATGGTAGTACTAAGTACAATGAGAAGTTCAAGGGC
                   ************  * **** * ** ****** ******************

PTA001_A4
VH CDR2            TATATTTACCCTAGAGATGGAATAACTGGGTACAATGAGAAGTTCAAGGGC
VHII region VH105  TATATTTATCCTAGAGATGGTAGTACTAAGTACAATGAGAAGTTCAAGGGC
                   ******** *********** *  ***  ********************

PTA001_A7
VH CDR2            TATATTTATCCTAGACATGGGACTACTAACTACAATGAGAACTTCAAGGGC
VHII region VH105  TATATTTATCCTAGAGATGGTAGTACTAAGTACAATGAGAAGTTCAAGGGC
                   *************** **** * ****** *********** *********

PTA001_A11
VH CDR2            TATATTTATCCTGAACATGGTAGTATTACGTATAATGAGAAGTTCAAGGGC
VHII region VH105  TATATTTATCCTAGAGATGGTAGTACTAAGTACAATGAGAAGTTCAAGGGC
                   ************  * ********* ** *** ******************

PTA001_A12
VH CDR2            TATATCTACCCCAGAGATGATTTTGCTAAGGTGAATGAGAAGTTCAAGGGC
VHII region VH105  TATATTTATCCTAGAGATGGTAGTACTAAGTACAATGAGAAGTTCAAGGGC
                   ***** ** ** ******* *  * *****   ******************

PTA001_A13
VH CDR2            TATATTTATCCTGAACATGGTACTATTACGTATAATGAGAAGTTCAAGGGC
VHII region VH105  TATATTTATCCTAGAGATGGTAGTACTAAGTACAATGAGAAGTTCAAGGGC
                   ************  * ****** ** ** *** ******************

PTA001_A14
VH CDR2            TATATTTTTCCTAGAGATGCTTTTAGTTTGAACAATGAGAAGTTCAAGGGC
VHII region VH105  TATATTTATCCTAGAGATGGTAGTACTAAGTACAATGAGAAGTTCAAGGGC
                   ******* *********** *  ** *  * ********************
```

FIG. 27 VK CDR1 Alignments

```
PTA001_A1
VK CDR1         AGATCTAGTCAGAGCCTTTTACACAGTAATGGAAACACCTATTTACAT
VK1-110         AGATCTAGTCAGAGCCTTGTACACAGTAATGGAAACACCTATTTACAT
                ****************** ****************************

PTA001_A4
VK CDR1         AAGTCCAGCCAGAGCCTTTTACATAGTAGCAATCAAAAGAACTACTTGGCC
VK8-30          AAGTCCAGTCAGAGCCTTTTATATAGTAGCAATCAAAAGAACTACTTGGCC
                ******** ************ ****************************


PTA001_A2, PTA001_A3, PTA001_A6, PTA001_A9, PTA001_A14
VK CDR1         GTCTAGTAAGAGTCTCCTGCGTAGTAATGGCAACACTTACTTGTAT
VK24-140        GTCTAGTAAGAGTCTCCTGCATAGTAATGGCAACACTTACTTGTAT
                ******************* ************************

PTA001_A5, PTA001_A13
VK CDR1         AGGTCTAGTAAGAGTCTCCTGCGCAGTAATGGCAACACTTACTTGTAT
VK24-140        AGGTCTAGTAAGAGTCTCCTGCATAGTAATGGCAACACTTACTTGTAT
                ********************  ************************

PTA001_A7
VK CDR1         AGGTCTTCTAAGAGTCTCCTGCGTACTAATGGCAACACTTACTTGCAT
VK24-140        AGGTCTAGTAAGAGTCTCCTGCATAGTAATGGCAACACTTACTTGTAT
                ******  ************** ** ******************* **

PTA001_A8
VK CDR1         AGGTCTAGTAAGAGTCTCCTGCGTAGTAATGGCAACACTTACTTGTAT
VK24-140        AGGTCTAGTAAGAGTCTCCTGCATAGTAATGGCAACACTTACTTGTAT
                ********************** ************************

PTA001_A10
VK CDR1         AGGTCCAGTAAGAGTCTCCTGCGTAGTAATGGCAACACTTACTTGTAT
VK24-140        AGGTCTAGTAAGAGTCTCCTGCATAGTAATGGCAACACTTACTTGTAT
                ***** ***************** ************************

PTA001_A11
VK CDR1         AGGTCTACTAAGAGTCTCCTGCGTAGTAATGGCAACACTTACTTGTAT
VK24-140        AGGTCTAGTAAGAGTCTCCTGCATAGTAATGGCAACACTTACTTGTAT
                ******* ************** ************************

PTA001_A12
VK CDR1         AGGTCTAGTAAGAGTCTCCTACGTAGTAATGGCAACACTTACTTGTAT
VK24-140        AGGTCTAGTAAGAGTCTCCTGCATAGTAATGGCAACACTTACTTGTAT
                ******************** * ************************
```

FIG. 28 VK CDR2 Alignments

```
PTA001_A4
VK CDR2          TGGGCATCCACTAGAGAATCT
VK8-30           TGGGCATCCACTAGGGAATCT
                 ************** ******

PTA001_A2, PTA001_A3, PTA001_A6, PTA001_A9, PTA001_A14
VK CDR2          CGGATGTCCAACCTTGCCTCG
VK24-140         CGGATGTCCAACCTTGCCTCA
                 ********************

PTA001_A5, PTA001_A13
VK CDR2          CGGCTGTCCAACCTTGCCTCA
VK24-140         CGGATGTCCAACCTTGCCTCA
                 *** *****************

PTA001_A7, PTA001_A10, PTA001_A11, PTA001_A12
VK CDR2          CGGATGTCCAACCTTGCCTCA
VK24-140         CGGATGTCCAACCTTGCCTCA
                 ********************

PTA001_A8
VK CDR2          CGGCTGTCTAACCTTGCCTCA
VK24-140         CGGATGTCCAACCTTGCCTCA
                 *** **** ************
```

FIG. 29 VK CDR3 Alignments

```
PTA001_A1
VK CDR3          TCTCAAAGTACACATGTGCTCACG
VK1-110          TCTCAAAGTACACATGTTCCTCCC
                 ***************** *   *

PTA001_A4
VK CDR3          CAGCAATATTATAGCTATCCGTGGACG
VK8-30           CAGCAATATTATAGCTATCCTCCCACA
                 ********************    **

PTA001_A2, PTA001_A3, PTA001_A6, PTA001_A9, PTA001_A10, PTA001_A11,
PTA001_A12, PTA001_A14
VK CDR3          ATGCAACATCTAGAATATCCTTTCACG
VK24-140         ATGCAACATCTAGAATATCCTTTCACA
                 ***************************

PTA001_A5, PTA001_A8, PTA001_A13
VK CDR3          ATGCAACATCTAGAATATCCTTTCACA
VK24-140         ATGCAACATCTAGAATATCCTTTCACA
                 ***************************

PTA001_A7
VK CDR3          ATGCAACATCTAGAATATCCATTCACG
VK24-140         ATGCAACATCTAGAATATCCTTTCACA
                 ******************* *****
```

Anti-Cadherin-17 PTA001_A4 Western Blot

Error! Objects cannot be created from editing field codes.

FIG. 30

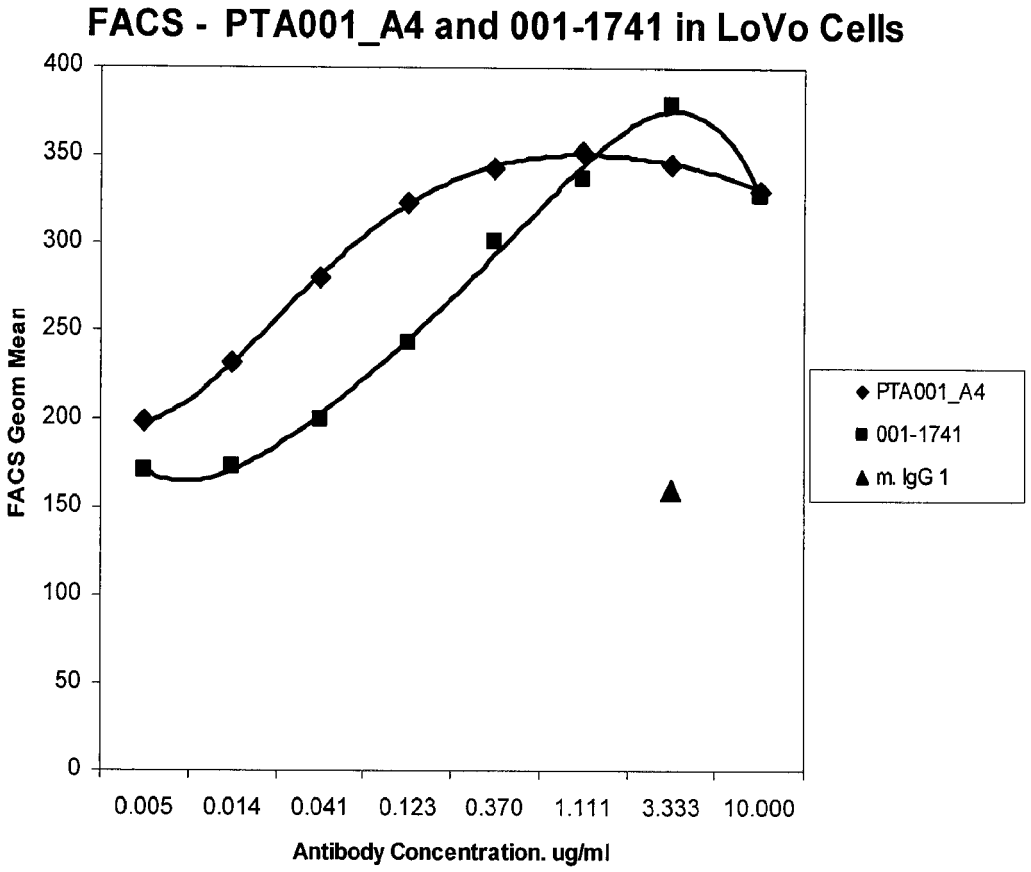


FIG. 31

FACS: PTA001_A4 vs LoVo, LS 174T

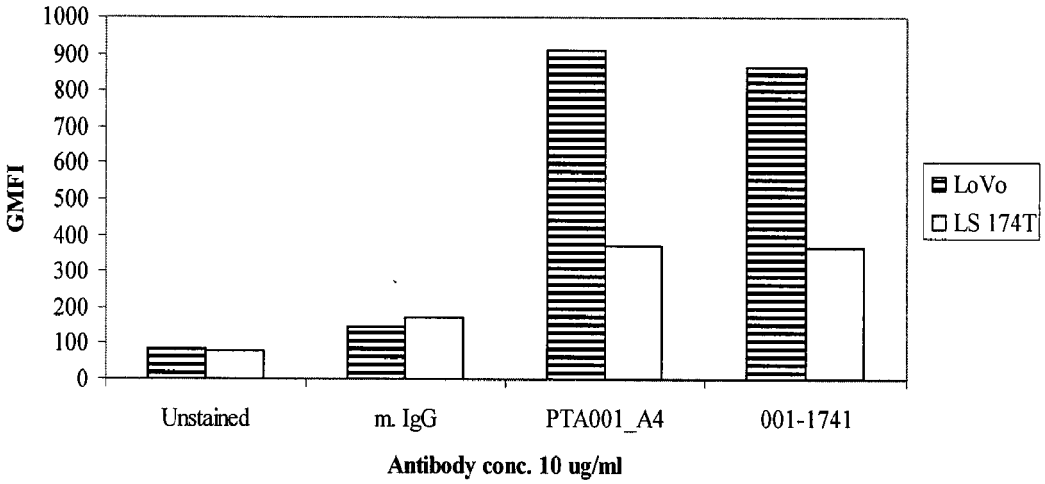


FIG. 32

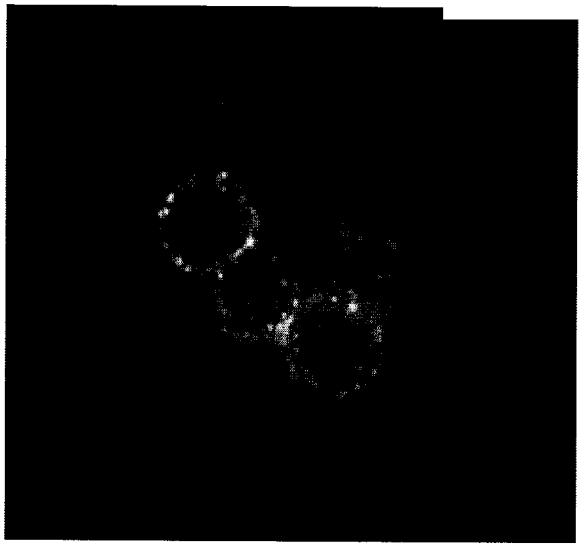


FIG. 33A

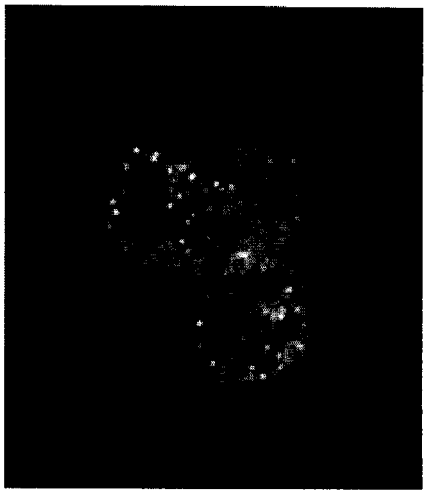


FIG. 33B

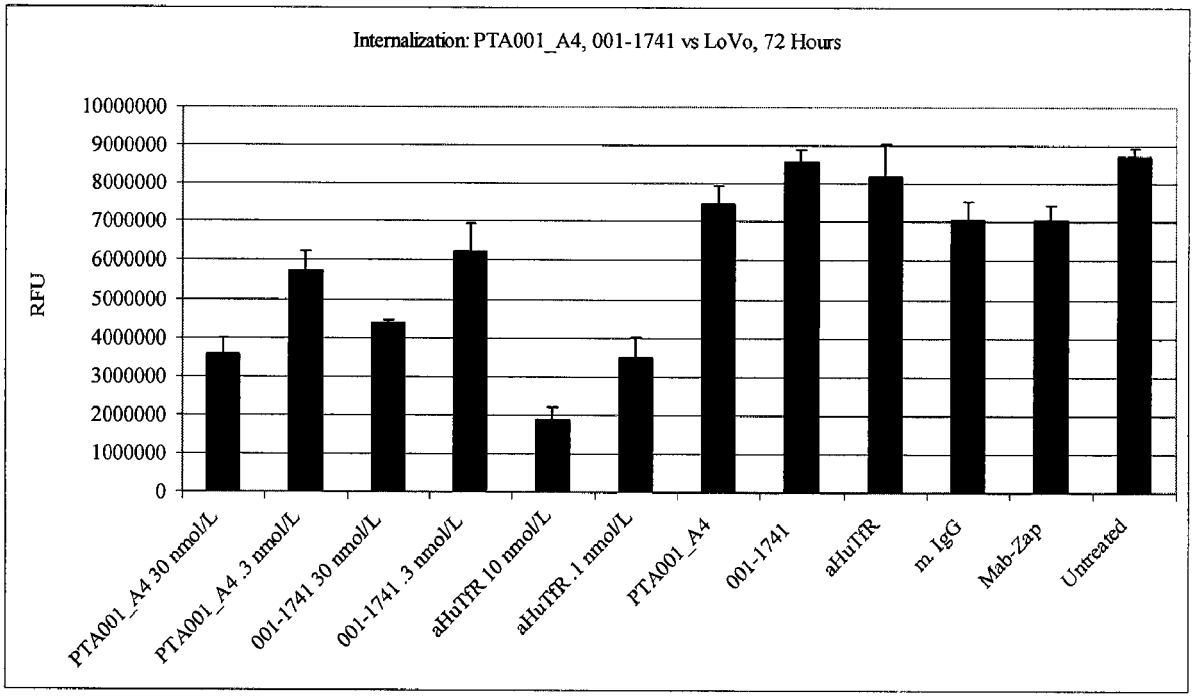


FIG. 34A

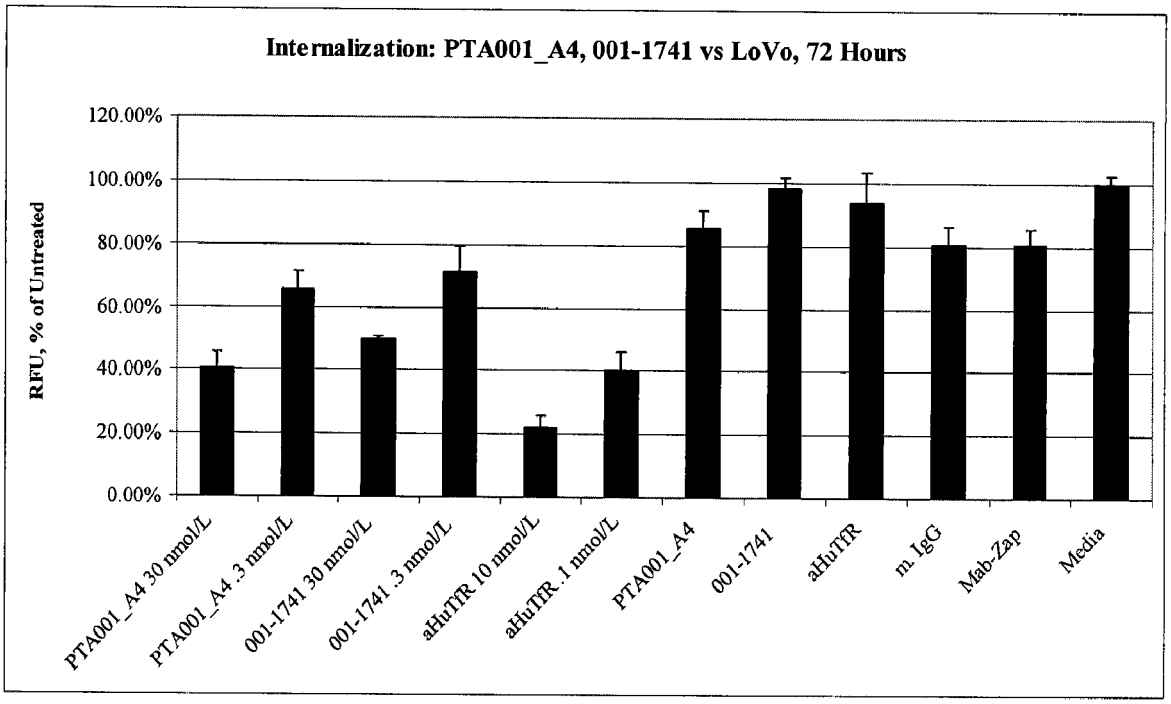


FIG. 34B

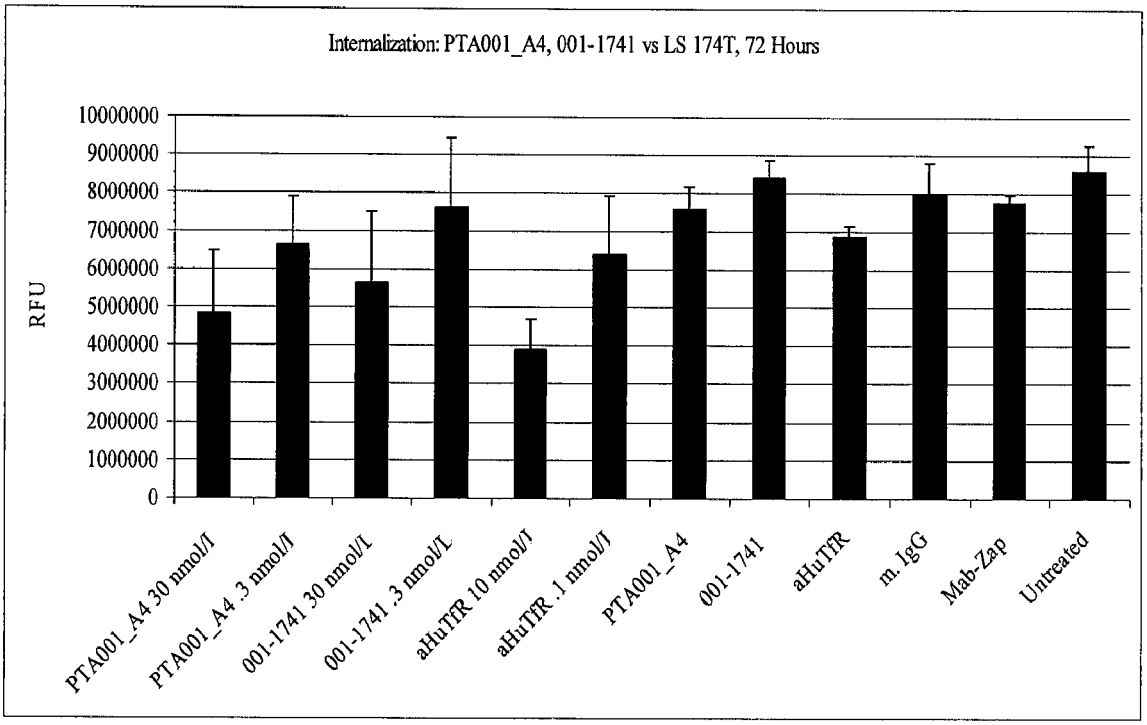


FIG. 34C

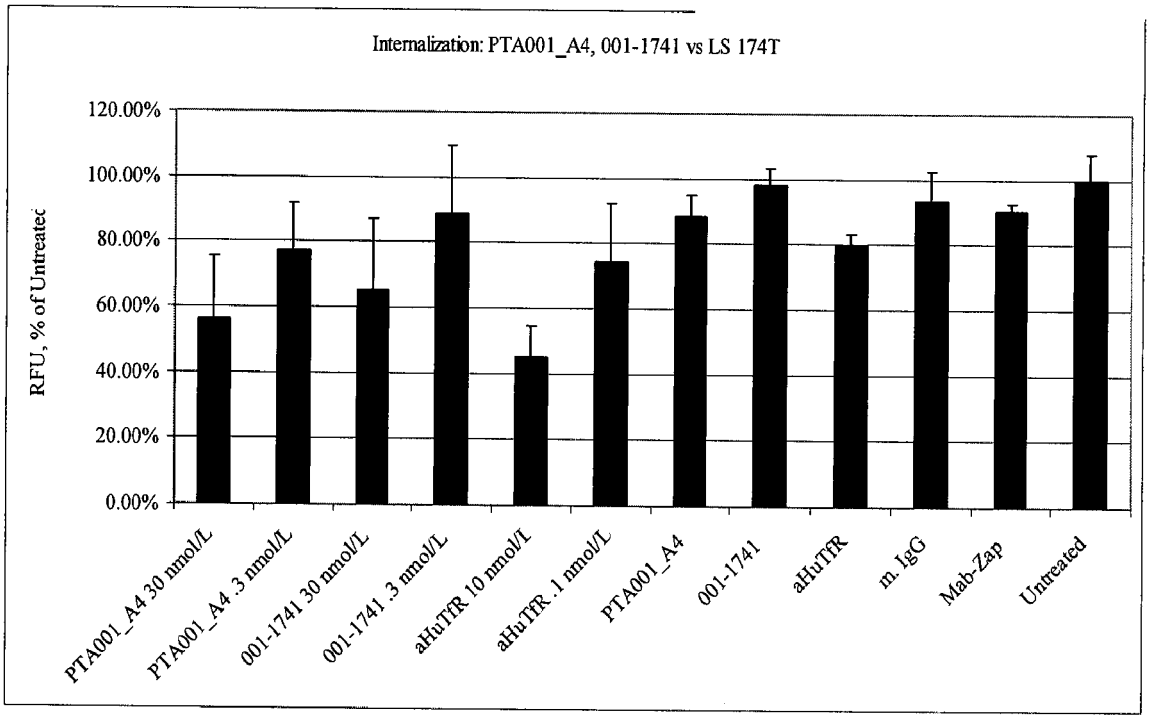


FIG. 34D

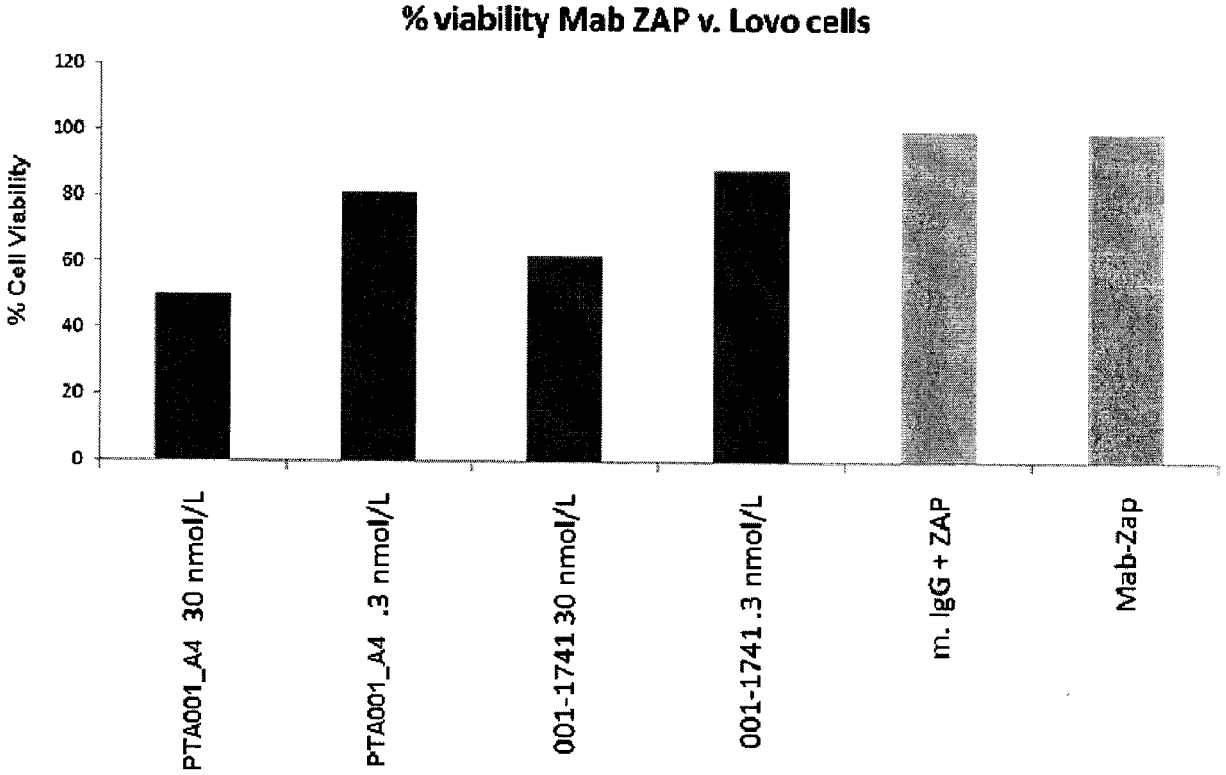


FIG. 35A

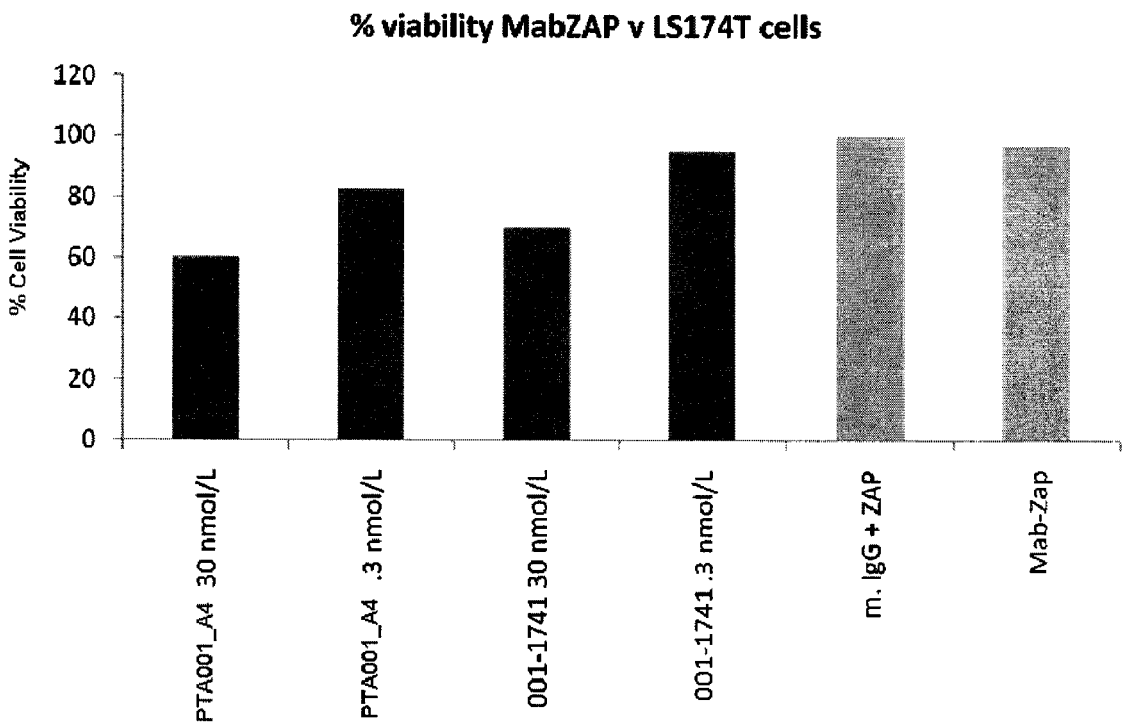

% viability MabZAP v LS174T cells
% Cell Viability
120
100
80
60
40
20
0
PTA001_A4 30 nmol/L
PTA001_A4 .3 nmol/L
001-1741 30 nmol/L
001-1741 .3 nmol/L
m. IgG + ZAP
Mab-Zap

FIG. 35B