Claims

We claim:

1. An antibody with a binding affinity (K_D) to human α-CGRP of 50 nM or less as measured by surface plasmon resonance at 37 °C.

2. The antibody according to claim 1, comprising a V_H domain that is at least 90% identical in amino acid sequence to SEQ ID NO: 1.

3. The antibody according to claim 2, wherein the amino acid residue at position 99 of SEQ ID NO: 1 is L or is substituted by A, N, S, T, V or R, and wherein the amino acid residue at position 100 of SEQ ID NO: 1 is A, or is substituted by L, R, S, V, Y, C G, T, K or P.

4. The antibody according to claim 1, comprising a V_L domain that is at least 90% identical in amino acid sequence to SEQ ID NO: 2.

5. The antibody according to claim 1, comprising at least one CDR selected from the group consisting of:
   a. CDR H1 as set forth in SEQ ID NO: 3;
   b. CDR H2 as set forth in SEQ ID NO: 4;
   c. CDR H3 as set forth in SEQ ID NO: 5;
   d. CDR L1 as set forth in SEQ ID NO: 6;
   e. CDR L2 as set forth in SEQ ID NO: 7;
   f. CDR L3 as set forth in SEQ ID NO: 8; and
   g. variants of L1, L2 and H2 as shown in Table 6.

6. The antibody according to claim 1, comprising:
   a. a V_H CDR3 as set forth in SEQ ID NO: 5, or a sequence that differs from SEQ ID NO: 5 by 1 or 2 conservative amino acid substitutions; and
   b. a V_L CDR3 as set forth in SEQ ID NO: 8, or a sequence that differs from SEQ ID NO: 8 by 1 or 2 conservative amino acid substitutions.

7. An antibody comprising a V_H domain that is at least 90% identical in amino acid sequence to SEQ ID NO: 1 and a V_L domain that is at least 90% identical in amino acid sequence to SEQ ID NO: 2.

8. The antibody of claim 7, wherein the antibody is an IgG, an IgM, an IgE, an IgA, or an IgD molecule, or is derived therefrom.

9. The antibody according to claim 7, comprising a heavy chain produced by the expression vector with ATCC Accession No. PTA-6867.

10. The antibody according to claim 7, comprising a light chain produced by the expression vector with ATCC Accession No. PTA-6866.

11. A pharmaceutical composition comprising the antibody according to claim 1 and a pharmaceutically acceptable excipient.

12. A method for preventing or treating at least one vasomotor symptom in an individual, comprising administering to the individual an effective amount of an anti-CGRP antagonist antibody.

13. The method according to claim 12, where said vasomotor symptom is a migraine with or without aura, hemiplegic migraine, cluster headache, migrainous neuralgia, chronic headache, or tension headache.

14. The method according to claim 12, where said vasomotor symptom is hot flush.

15. The method of claim 12, where the anti-CGRP antagonist antibody is any of the antibodies described in claims 1 to 10.

16. The method of claim 12, where the anti-GCRP antagonist antibody is the antibody produced by the expression vectors with ATCC Accession Nos. PTA-6867 and PTA-6866.

Claims

1. An isolated polynucleotide comprising a polynucleotide encoding the antibody G1 or its variants shown in Table 6, or a fragment thereof.

2. The isolated polynucleotide according to claim 1, wherein the fragment is selected from,
(a) a light chain of the antibody G1,
(b) a heavy chain of the antibody G1,
(c) a fragment containing one or more variable regions from a light chain and/or a heavy chain of the antibody G1,
(d) a fragment containing any of one, two, three, four, five or six complementarity determining regions from a light chain and/or a heavy chain of the antibody G1.

3. The isolated polynucleotide according to claim 1, wherein the polynucleotide comprises either or both of the polynucleotides shown in SEQ ID NO:13 and SEQ ID NO:14.

4. The isolated polynucleotide according to claim 1, wherein the polynucleotide comprises either or both of the polynucleotides shown in SEQ ID NO:9 and SEQ ID NO:10.

5. A vector comprising the polynucleotide according to any one of claims 1 to 4.

6. The vector according to claim 5 wherein the vector is deposited with ATCC No. PTA-6867 or ATCC No. PTA-6866.

7. A host cell comprising the polynucleotide according to any one of claims 1 to 4 or the vector according to either of claims 5 or 6.

8. A method of generating antibody G1 or its variants shown in Table 6, or a fragment thereof comprising the steps of expressing the polynucleotide according to any one of claims 1 to 4 or the vector according to either of claims 5 or 6 in a suitable cell and (b) optionally recovering and/or isolating the antibody or fragment thereof.