

CLAIMS

What is claimed is:

1. An antibody comprising an Fc region, wherein the antibody comprises an amino acid substitution at position E430G and one or more amino acid substitutions in the Fc region at a residue position selected from the group consisting of: L234F, L235A, L235E, S267E, K322A, L328F, A330S, P331S, and any combination thereof, wherein the numbering of the residues is according to EU or Kabat numbering.
2. The antibody of claim 1, wherein the antibody is of the IgG class.
3. The antibody of claim 2, wherein the antibody has an IgG1 isotype.
4. The antibody of any one of claims 1-3, wherein:
 - (a) the Fc region comprises an amino acid substitution at positions E430G, L243A, L235A, and P331S, wherein the numbering of the residue position is according to EU numbering;
 - (b) the Fc region comprises an amino acid substitution at positions E430G and P331S, wherein the numbering of the residue position is according to EU numbering;
 - (c) the Fc region comprises an amino acid substitution at positions E430G and K322A, wherein the numbering of the residue position is according to EU numbering;
 - (d) the Fc region comprises an amino acid substitution at positions E430G, A330S, and P331S, wherein the numbering of the residue position is according to EU numbering;
 - (e) the Fc region comprises an amino acid substitution at positions E430G, K322A, A330S, and P331S, wherein the numbering of the residue position is according to EU numbering;
 - (f) the Fc region comprises an amino acid substitution at positions E430G, K322A, and A330S, wherein the numbering of the residue position is according to EU numbering;
 - (g) the Fc region comprises an amino acid substitution at positions E430G, K322A, and P331S, wherein the numbering of the residue position is according to EU numbering;
 - or
 - (h) the Fc region comprises an amino acid sequence selected from the group consisting of SEQ ID NOs: 146-156.
5. The antibody of any one of claims 1-4, wherein the Fc region comprises an amino acid sequence of SEQ ID NO:149 or 151.
6. The antibody of any one of claims 1-5, wherein the Fc region increases clustering without activating complement as compared to a corresponding antibody comprising an Fc region that does not comprise the amino acid substitutions.

7. The antibody of any one of claims 1-6, wherein the antibody induces one or more activities of the protein specifically bound to the antibody.
8. The antibody of any one of claims 1-7, wherein the antibody specifically binds to TREM2.
9. The antibody of any one of claims 1-8, wherein the antibody induces one or more activities of TREM2.