

CLAIMS

WHAT IS CLAIMED IS:

1. A polypeptide comprising an Fc variant of a human IgG1 Fc polypeptide, wherein the Fc variant (i) comprises an Alanine (A) at position 236, a Leucine (L) at position 330, and a Glutamic acid (E) at position 332, and (ii) does not comprise an Aspartic acid (D) at position 239, and wherein the numbering is according to the EU index in Kabat.
2. The polypeptide of claim 1, wherein the Fc variant further comprises a Leucine (L) at position 428, and a Serine (S) at position 434.
3. The polypeptide of claim 1 or 2, wherein the Fc variant comprises a Serine (S) at position 239.
4. The polypeptide of any one of claims 1-3, wherein the Fc variant comprises the sequence of SEQ ID NO: 2 or 3.
5. An antibody comprising the polypeptide of any one of claims 1-4.
6. The antibody of claim 5, wherein the antibody has specificity for a target molecule.
7. The antibody of claim 6, wherein the target molecule is selected from the group consisting of a cytokine, a soluble factor, a molecule expressed on a pathogen, a molecule expressed on cells, and a molecule expressed on cancer cells.
8. The antibody of any one of claims 1-7, wherein the antibody is selected from the group consisting of a chimeric antibody, a humanized antibody, and a human antibody.
9. The antibody of any one of claims 1-8, wherein the antibody has one or more of the following features: (1) a higher binding affinity to hFcγRIIA, hFcγRIIIA, hFcRn, or/and hFcγRIIIB as compared to an antibody having the sequence of SEQ ID NO: 1, (2) a longer serum half-life as compared to an antibody having the sequence of SEQ ID NO: 4, and (3) identical or better half-life as compared to an antibody having the sequence of SEQ ID NO:1.
10. A nucleic acid comprising a sequence encoding the polypeptide or antibody of any one of claims 1-9.
11. An expression vector comprising the nucleic acid of claim 10.
12. A host cell comprising the nucleic acid of claim 10.
13. A method of producing a polypeptide or an antibody, comprising culturing the host cell of claim 12 in a medium under conditions permitting expression of a polypeptide or antibody encoded by the nucleic acid, and purifying the polypeptide or antibody from the cultured cell or the medium of the cell.

14. A pharmaceutical formulation comprising (i) the polypeptide or antibody of any one of claims 1-9 or the nucleic acid of claim 10, and (ii) a pharmaceutically acceptable carrier.

~~15. A method of treating an inflammatory disorder, comprising administering to a subject in need thereof a therapeutically effective amount of the polypeptide or antibody of any one of claims 1-9 or the nucleic acid of claim 10.~~

~~16. A method of treating a neoplastic disorder, comprising administering to a subject in need thereof a therapeutically effective amount of the polypeptide or antibody of any one of claims 1-9 or the nucleic acid of claim 10.~~

~~17. A method of treating an infectious disease, comprising administering to a subject in need thereof a therapeutically effective amount of the polypeptide or antibody of any one of claims 1-9 or the nucleic acid of claim 10.~~

~~18.~~ 15. Use of the polypeptide or antibody of any one of claims 1-9 or the nucleic acid of claim 10 in the manufacture of ~~manufacturing~~ a medicament for treating an inflammatory disorder.

~~19.~~ 16. Use of the polypeptide or antibody of any one of claims 1-9 or the nucleic acid of claim 10 in the manufacture of ~~manufacturing~~ a medicament for treating a neoplastic disorder.

~~20.~~ 17. Use of the polypeptide or antibody of any one of claims 1-9 or the nucleic acid of claim 10 in the manufacture of ~~manufacturing~~ a medicament for treating an infectious disease.