Claims

1. An isolated antibody that binds to CD47, wherein the antibody has a modified IgG constant region comprising one or more substitutions compared to SEQ ID NO: 1 that results in a reduced FcγR binding affinity as compared to a corresponding anti-CD47 antibody with a wildtype IgG1 isotype, wherein the antibody causes a reduced level of platelet depletion after administration compared to the corresponding anti-CD47 antibody with a wildtype IgG1 isotype platelet depletion after administration, and wherein the antibody is an IgG1 isotype or IgG4 isotype.

2. The antibody of claim 1, wherein the IgG isotype is a human IgG isotype.

3. The antibody of claim 2, wherein the antibody comprises a N297A mutation.

4. The antibody of any one of claims 1-3, wherein the antibody is a human IgG1 isotype.

5. The antibody of claim 4, wherein the antibody comprises L235E, L235A, and/or L234A.

6. The antibody of any one of claims 1-3, wherein the antibody is a human IgG4 isotype.

7. The antibody of claim 6, wherein the antibody comprises a S228P mutation (IgG4P).

8. The antibody of claim 6 or 7, wherein the antibody comprises a L235E mutation.

9. The antibody of claim 8, wherein the antibody comprises a S228P and a L235E mutation (IgG4PE).

10. The antibody of any one of claims 1-9, wherein the antibody does not cause a significant level of agglutination of red blood cells.

11. The antibody of any one of claims 1-10, wherein the antibody prevents CD47 from interacting with signal-regulatory-protein α (SIRPα).

12. The antibody of any one of claims 1-11, wherein the antibody promotes macrophage-mediated phagocytosis of a CD47-expressing cell.

13. The antibody of any one of claims 1-12, wherein the antibody is chimeric or humanized.

14. The antibody of any one of claims 1-13, wherein the CD47 is human CD47.

15. The antibody of any one of claims 1-14, wherein the corresponding anti-CD47 antibody with a wildtype IgG1 isotype has a wildtype human IgG1 isotype.

16. A pharmaceutical composition comprising the antibody of any one of claims 1-15 and a carrier.

17. Use of the antibody of any one of claims 1-15, or the pharmaceutical composition of claim 16, in the manufacture of a medicament for the treatment of cancer in a subject.

18. The use of claim 17, wherein the subject is a human.

19. The use of claim 17 or claim 18, wherein the use is in combination with a second therapy comprising chemotherapy.

20. The use of any one of claim 17-19, wherein the antibody is to be administered to the subject at a dose of at least 10 mg/kg.

21. The use of any one of claims 17-20, wherein the antibody is to be administered to the subject at a dose of at least 30 mg/kg.

22. The antibody of any one of claims 1-15, or the pharmaceutical composition of claim 16, for use in therapy.