CLAIMS

1. An isolated antibody, or antigen binding portion thereof, that specifically binds to human CD40, wherein said antibody comprises a first polypeptide portion comprising a heavy chain variable region, and a second polypeptide portion comprising a light chain variable region, wherein:

said heavy chain variable region comprises a CDR1 comprising SEQ ID NO: 1, a CDR2 comprising SEQ ID NO: 2, and a CDR3 comprising SEQ ID NO: 3; and

said light chain variable region comprises a CDR1 comprising SEQ ID NO: 7, a CDR2 comprising SEQ ID NO: 8, and a CDR3 comprising SEQ ID NO: 9.

2. The isolated antibody or antigen binding portion thereof of claim 1, wherein said antibody or antigen binding portion thereof antagonizes a CD40 activity.

3. The isolated antibody or antigen binding portion thereof of claim 1, wherein:

said heavy chain variable region comprises one of:

(i) a CDR1 consisting of SEQ ID NO: 1, a CDR2 consisting of SEQ ID NO: 2, and a CDR3 consisting of SEQ ID NO: 3; and

said light chain variable region comprises a CDR1 consisting of SEQ ID NO: 7, a CDR2 consisting of SEQ ID NO: 8, and a CDR3 consisting of SEQ ID NO: 9.

4. The isolated antibody or antigen binding portion thereof of claim 1, wherein said heavy chain variable region comprises the amino acid sequence of SEQ ID NO: 4, and said light chain variable region comprises the amino acid sequence of SEQ ID NO: 10.

5. The isolated antibody or antigen binding portion thereof of claim 1, wherein said heavy chain variable region comprises the amino acid sequence of SEQ ID NO: 4, and said light chain variable region comprises the amino acid sequence of SEQ ID NO: 16.

6. The isolated antibody or antigen binding portion thereof of any one of claims 1-5, wherein said first polypeptide portion comprises a human heavy chain constant region; and said second polypeptide portion comprises a human light chain constant region.

7. The isolated antibody or antigen binding portion thereof of claim 6, comprising a human IgG1 Fc domain comprising a mutation at Kabat position 238 that

reduces binding to Fc-gamma-receptors (FcγRs), wherein proline 238 (P238) is substituted with an amino acid selected from the group consisting of: lysine, serine, alanine, arginine, and tryptophan, and wherein the antibody or antigen binding portion has reduced FcγR binding.

8. The isolated antibody or antigen binding portion thereof of claim 7, wherein the substituted amino acid is lysine.

9. The isolated antibody or antigen binding portion thereof of claim 8, wherein the Fc domain comprises an amino acid sequence selected from: SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28, or SEQ ID NO: 29.

10. The isolated antibody or antigen binding portion thereof of claim 7, wherein:

said heavy chain variable region comprises a CDR1 consisting of SEQ ID NO: 1, a CDR2 consisting of SEQ ID NO: 2, and a CDR3 consisting of SEQ ID NO: 3; and

said light chain variable region comprises a CDR1 consisting of SEQ ID NO: 7, a CDR2 consisting of SEQ ID NO: 8, and a CDR3 consisting of SEQ ID NO: 9.

11. The isolated antibody or antigen binding portion thereof of claim 10, wherein the human IgG1 Fc domain comprises the amino acid sequence of SEQ ID NO: 22 or SEQ ID NO: 23.

12. The isolated antibody or antigen binding portion thereof of claim 1, wherein the first polypeptide portion comprises or consists of an amino acid sequence selected from the group consisting of: SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 30, and SEQ ID NO: 31;

and

the second polypeptide portion comprises or consists of the amino acid sequence of SEQ ID NO: 11.

13. The isolated antibody or antigen binding portion thereof of claim 1, wherein the first polypeptide portion comprises or consists of an amino acid sequence of SEQ ID NO: 5;

and

the second polypeptide portion comprises or consists of the amino acid sequence of SEQ ID NO: 11.

14. The isolated antibody or antigen binding portion thereof of any of claims 1 to 13, wherein the isolated antibody or antigen binding portion thereof is humanized.

15. The antibody or antigen binding portion thereof of any of claims 1-7, wherein the antigen binding portion is an scFv-Fc.

16. The antibody or antigen binding portion thereof of any one of claims 1-15, wherein the antibody or antigen-binding portion thereof is linked to a therapeutic agent.

17. The antibody or antigen binding portion thereof of any one of claims 1-16, wherein the antibody or antigen-binding portion thereof is linked to a second functional moiety having a different binding specificity than said antibody or antigen binding portion thereof.

18. The antibody or antigen binding portion thereof of any one of claims 1-17, further comprising an additional moiety.

19. A pharmaceutical composition comprising: a) the antibody, or antigen binding portion thereof, of any one of claims 1 to 18; and b) a pharmaceutically acceptable carrier.

20. Use of the antibody, or the antigen binding portion thereof, of any one of claims 1 to 18 in the manufacture of a medicament for treating or preventing an immune response in a subject, wherein the antibody, or the antigen binding portion thereof is to be administered to the subject.

21. Use of the antibody, or the antigen binding portion thereof, of any one of claims 1 to 18 in the manufacture of a medicament for treating or preventing an autoimmune or inflammatory disease in a subject, wherein the antibody, or the antigen binding portion thereof is to be administered to the subject.

22. The use of claim 20 or 21, wherein the antibody, or the antigen binding portion thereof is to be administered with an immunosuppressive/immunomodulatory and/or anti-inflammatory agent.

23. The use of claim 22, wherein said immunosuppressive/ immunomodulatory and/or anti-inflammatory agent is CTLA4 mutant molecule L104EA29Y-Ig (belatacept).

24. The use of claim 21, wherein the subject has a disease selected from the group consisting of: Addison's disease, allergies, anaphylaxis, ankylosing spondylitis, asthma, atherosclerosis, atopic allergy, autoimmune diseases of the ear, autoimmune diseases of the eye, autoimmune hepatitis, autoimmune parotitis, bronchial asthma, coronary heart disease, Crohn's disease, diabetes, epididymitis, glomerulonephritis, Graves' disease, Guillain-Barre syndrome, Hashimoto's disease, hemolytic anemia, idiopathic thrombocytopenic purpura, inflammatory bowel disease, an immune response to recombinant drug products (e.g., Factor VII in hemophiliacs), lupus nephritis, systemic lupus erythematosus, multiple sclerosis, myasthenia gravis, pemphigus, psoriasis, rheumatic fever, rheumatoid arthritis, sarcoidosis, scleroderma, Sjogren's syndrome, spondyloarthropathies, thyroiditis, transplant rejection, vasculitis, and ulcerative colitis.

25. An antibody, or antigen binding portion thereof, of any one of claims 1 to 18 for use as a medicament.

26. An antibody, or antigen binding portion thereof, of any one of claims 1 to 18 for use in the treatment of a subject in need thereof.

27. The use of claim 21, wherein the subject has Sjogren's syndrome.