WHAT IS CLAIMED:

1. An isolated human CD27 antibody or antigen-binding fragment thereof, comprising a light chain variable region, said light chain variable region comprising:

a complementarity determining region light chain 1 (CDRL1) amino acid sequence selected from the group consisting of SEQ ID NOs: 59-66 and 158;

a CDRL2 amino acid sequence selected from the group consisting of SEQ ID NOs: 67-74; and

a CDRL3 amino acid sequence of SEQ ID NO: 75.

2. The isolated human CD27 antibody or antigen-binding fragment thereof of claim 1, further comprising a heavy chain variable region comprising:

a CDRH1 amino acid sequence selected from the group consisting of SEQ ID NOs: 42-45 and 161;

a CDRH2 amino acid sequence selected from the group consisting of SEQ ID NOs: 46-57, 156, and 157; and

a CDRH3 amino acid sequence of SEQ ID NO: 58.

3. An isolated human CD27 antibody or antigen-binding fragment thereof, comprising a heavy chain variable region, said heavy chain variable region comprising:

a complementarity determining region heavy chain 1 (CDRH1) amino acid sequence selected from the group consisting of SEQ ID NOs: 42-45 and 161;

a CDRH2 amino acid sequence selected from the group consisting of SEQ ID NOs: 46-57, 156, and 157; and

a CDRH3 amino acid sequence of SEQ ID NO: 58.

4. An isolated human CD27 antibody or antigen-binding fragment thereof, comprising a light chain variable region and a heavy chain variable region, said light chain variable region comprising:

a CDRL1 amino acid sequence selected from the group consisting of SEQ ID NOs: 59-66 and 158;

a CDRL2 amino acid sequence selected from the group consisting of SEQ ID NOs: 67-74; and

a CDRL3 amino acid sequence of SEQ ID NO: 75, and said heavy chain variable region comprising:
a CDRH1 amino acid sequence selected from the group consisting of SEQ ID NOs: 42-45;

a CDRH2 amino acid sequence selected from the group consisting of SEQ ID NOs: 46-57, 156, and 157; and

a CDRH3 amino acid sequence of SEQ ID NO: 58.

5. An isolated human CD27 antibody or antigen-binding fragment thereof, comprising a light chain variable region and a heavy chain variable region, said light chain variable region comprising:

a CDRL1 amino acid sequence of SEQ ID NO: 62;

a CDRL2 amino acid sequence of SEQ ID NO: 68; and

a CDRL3 amino acid sequence of SEQ ID NO: 75, and said heavy chain variable region comprising:
a CDRH1 amino acid sequence selected from the group consisting of SEQ ID NOs: 44 and 161;

a CDRH2 amino acid sequence of SEQ ID NO: 47; and

a CDRH3 amino acid sequence of SEQ ID NO: 58.

6. An isolated human CD27 antibody or antigen-binding fragment thereof, comprising a light chain variable amino acid sequence and a heavy chain

variable amino acid sequence, wherein the light chain variable amino acid sequence comprises SEQ ID NO: 143 and the heavy chain variable amino acid sequence comprises SEQ ID NO: 133.

7. The isolated antibody of claim 6, further comprising an IgG4 heavy chain constant region and an IgG4 light chain constant region.

8. The isolated antibody of claim 7, wherein the heavy chain constant region comprises the amino acid sequence of SEQ ID NO:159 and the light chain constant region comprises the amino acid sequence of SEQ ID NO:160.

9. An isolated human CD27-neutralizing antibody or antigen-binding fragment thereof, said antibody or antigen-binding fragment binding to an epitope bound by the antibody of claim 6 as determined by binding to immobilized CD27 extracellular domain.

10. The isolated antibody of claim 6, wherein said antibody binds to human CD27 with a K_D of 1×10^{-7} M or less as determined by surface plasmon resonance.

11. An isolated nucleic acid molecule, selected from the group consisting of (i) a nucleotide sequence encoding the antibody or antigen binding portion of claim 6, (ii) the light chain nucleotide sequence of SEQ ID NO: 163 and/or the heavy chain nucleotide sequence of SEQ ID NO: 164 or (iii) a nucleotide sequence encoding the light chain variable region amino acid sequence of SEQ ID NO: 143 and/or a nucleotide sequence encoding the heavy chain variable region amino acid sequence of SEQ ID NO: 133.

12. An isolated nucleic acid vector or vectors comprising the isolated nucleic acid molecule of claim 11.

13. A prokaryotic or eukaryotic host cell comprising the isolated nucleic acid vector or vectors of claim 12.

14. The host cell according to claim 13, wherein said host cell is at least one selected from COS-1, COS-7, HEK293, BHK21, CHO, BSC-1, Hep G2, 653, SP2/0, 293, HeLa, myeloma, or lymphoma cells, or any derivative, immortalized or transformed cell thereof.

15. A method for producing a CD27 antibody, comprising incorporating the nucleic acid molecule of claim 11 into a vector, transforming a host cell, transgenic animal or transgenic plant to express an antibody and recovering the expressed antibody.

16. A method of inhibiting T-cell mediated B-cell antibody production, comprising contacting a portion of the T-cells of a subject with an effective amount of an antibody or antigen binding portion of claim 6; and the antibody or antigen binding portion thereof inhibits the activation of CD27 on said human T-cells in the presence of human CD70 protein or a portion of human CD70 protein.

17. The method of claim 16, wherein the subject is suffering from an inflammatory disorder.

18. The method of claim 17, wherein the inflammatory disorder is systemic lupus erythematosus.

19. The method of claim 16, wherein the subject exhibits a antigen-specific humoral immune response associated with a disorder selected from the group consisting of a disease of the pulmonary or pleural system, a disease of the central or peripheral nervous system, a disease of the eye or visual system, a disease of the gastrointestinal and digestive system, a disease of the cardiovascular system, an infectious disease, and a parasitic infection.

20. The method of claim 16, wherein the antibody or antigen binding portion thereof is administered systemically to the subject.

21. A method of inhibiting naïve T-cell proliferation, comprising contacting a tissue with an effective amount of an antibody or antigen binding portion of claim 6; and the antibody of antigen binding portion inhibits the activation of CD27 on said human T-cells in the presence of human CD70 protein or a portion of human CD70 protein.

22. An article of manufacture comprising a pharmaceutically acceptable formulation comprising the antibody of claim 6.

23. An isolated human antibody or antigen-binding fragment thereof, comprising an

antibody variable region binding to an epitope on human CD27 protein bound by an antibody selected from the group consisting of antibodies C2177, CD2186, CD2191, and CD2192.

24. An isolated human antibody or antigen-binding fragment thereof, comprising an antibody variable region competing for binding to human CD27 protein with an antibody selected from the group consisting of antibodies C2177, CD2186, CD2191, and CD2192.

25. An isolated human CD27 antibody or antigen-binding fragment thereof, comprising a light chain variable region, said light chain variable region comprising:

a complementarity determining region light chain 1 (CDRL1) amino acid sequence selected from the group consisting of SEQ ID NOs: 24-36, 153, and 155;

a CDRL2 amino acid sequence selected from the group consisting of SEQ ID NOs: 37-40 and 154; and

a CDRL3 amino acid sequence of SEQ ID NO: 41.

26. An isolated human CD27 antibody or antigen-binding fragment thereof, comprising a heavy chain variable region, said heavy chain variable region comprising:

a complementarity determining region heavy chain 1 (CDRH1) amino acid sequence selected from the group consisting of SEQ ID NOs: 1 and 2;

a CDRH2 amino acid sequence selected from the group consisting of SEQ ID NOs: 3-22, 151, and 152; and

a CDRH3 amino acid sequence selected from the group consisting of SEQ ID NOs: 23 and 162.

27. An isolated human CD27 antibody or antigen-binding fragment thereof,

comprising a light chain variable region and a heavy chain variable region, said light chain variable region comprising:

a complementarity determining region light chain 1 (CDRL1) amino acid sequence selected from the group consisting of SEQ ID NOs: 24-36, 153, and 155;

a CDRL2 amino acid sequence selected from the group consisting of SEQ ID NOs: 37-40 and 154; and

a CDRL3 amino acid sequence of SEQ ID NO: 41, and said heavy chain variable region comprising:
a CDRH1 amino acid sequence selected from the group consisting of SEQ ID NOs: 1 and 2;

a CDRH2 amino acid sequence selected from the group consisting of SEQ ID NOs: 3-22, 151, and 152; and

a CDRH3 amino acid sequence selected from the group consisting of SEQ ID NOs: 23 and 162.

28. An isolated human CD27 antibody or antigen-binding fragment thereof, comprising a light chain variable amino acid sequence selected from the group consisting of SEQ ID NOs: 137-144 and 148.

29. The isolated antibody or antigen-binding fragment thereof of claim 28, further comprising a heavy chain variable amino acid sequence selected from the group consisting of SEQ ID NOs: 128-136 and 145-147.

30. An isolated human CD27 antibody or antigen-binding fragment thereof, comprising a heavy chain variable amino acid sequence selected from the group consisting of SEQ ID NOs: 128-136 and 145-147.

31. An isolated human CD27 antibody or antigen-binding fragment thereof, comprising a light chain variable amino acid sequence selected from the group consisting of SEQ ID NOs: 82-101.

32. The isolated antibody or antigen-binding fragment thereof of claim 31, further

comprising a heavy chain variable amino acid sequence selected from the group consisting of SEQ ID NOs: 102-125.

33. An isolated human CD27 antibody or antigen-binding fragment thereof, comprising a heavy chain variable amino acid sequence selected from the group consisting of SEQ ID NOs: 102-125.

34. An isolated CD27 antibody or antigen-binding fragment thereof, comprising a light chain variable amino acid sequence selected from the group consisting of SEQ ID NOs: 77, 79, 81, and 127.

35. The isolated antibody or antigen-binding fragment thereof of claim 34, further comprising a heavy chain variable amino acid sequence selected from the group consisting of SEQ ID NOs: 76, 78, 80, and 126.

36. An isolated CD27 antibody or antigen-binding fragment thereof, comprising a heavy chain variable amino acid sequence selected from the group consisting of SEQ ID NOs: 76, 78, 80, and 126.

37. Any invention described herein.

WHAT IS CLAIMED:

1. An isolated human CD27 antibody or antigen-binding fragment thereof, comprising a light chain variable region, said light chain variable region comprising:

a complementarity determining region light chain 1 (CDRL1) amino acid sequence selected from the group consisting of SEQ ID NOs: 59-66 and 158;

a CDRL2 amino acid sequence selected from the group consisting of SEQ ID NOs: 67-74; and

a CDRL3 amino acid sequence of SEQ ID NO: 75.

2. The isolated human CD27 antibody or antigen-binding fragment thereof of claim 1, further comprising a heavy chain variable region comprising:

a CDRH1 amino acid sequence selected from the group consisting of SEQ ID NOs: 42-45 and 161;

a CDRH2 amino acid sequence selected from the group consisting of SEQ ID NOs: 46-57, 156, and 157; and

a CDRH3 amino acid sequence of SEQ ID NO: 58.

3. An isolated human CD27 antibody or antigen-binding fragment thereof, comprising a heavy chain variable region, said heavy chain variable region comprising:

a complementarity determining region heavy chain 1 (CDRH1) amino acid sequence selected from the group consisting of SEQ ID NOs: 42-45 and 161;

a CDRH2 amino acid sequence selected from the group consisting of SEQ ID NOs: 46-57, 156, and 157; and

a CDRH3 amino acid sequence of SEQ ID NO: 58.

4. An isolated human CD27 antibody or antigen-binding fragment thereof, comprising a light chain variable region and a heavy chain variable region, said light chain variable region comprising:

a CDRL1 amino acid sequence selected from the group consisting of SEQ ID NOs: 59-66 and 158;

a CDRL2 amino acid sequence selected from the group consisting of SEQ ID NOs: 67-74; and

a CDRL3 amino acid sequence of SEQ ID NO: 75, and said heavy chain variable region comprising:
a CDRH1 amino acid sequence selected from the group consisting of SEQ ID NOs: 42-45;

a CDRH2 amino acid sequence selected from the group consisting of SEQ ID NOs: 46-57, 156, and 157; and

a CDRH3 amino acid sequence of SEQ ID NO: 58.

5. An isolated human CD27 antibody or antigen-binding fragment thereof, comprising a light chain variable region and a heavy chain variable region, said light chain variable region comprising:

a CDRL1 amino acid sequence of SEQ ID NO: 62;

a CDRL2 amino acid sequence of SEQ ID NO: 68; and

a CDRL3 amino acid sequence of SEQ ID NO: 75, and said heavy chain variable region comprising:
a CDRH1 amino acid sequence selected from the group consisting of SEQ ID NOs: 44 and 161;

a CDRH2 amino acid sequence of SEQ ID NO: 47; and

a CDRH3 amino acid sequence of SEQ ID NO: 58.

6. An isolated human CD27 antibody or antigen-binding fragment thereof, comprising a light chain variable amino acid sequence and a heavy chain

variable amino acid sequence, wherein the light chain variable amino acid sequence comprises SEQ ID NO: 143 and the heavy chain variable amino acid sequence comprises SEQ ID NO: 133.

7. The isolated antibody of claim 6, further comprising an IgG4 heavy chain constant region and an IgG4 light chain constant region.

8. The isolated antibody of claim 7, wherein the heavy chain constant region comprises the amino acid sequence of SEQ ID NO:159 and the light chain constant region comprises the amino acid sequence of SEQ ID NO:160.

9. An isolated human CD27-neutralizing antibody or antigen-binding fragment thereof, said antibody or antigen-binding fragment binding to an epitope bound by the antibody of claim 6 as determined by binding to immobilized CD27 extracellular domain.

10. The isolated antibody of claim 6, wherein said antibody binds to human CD27 with a K_D of 1×10^{-7} M or less as determined by surface plasmon resonance.

11. An isolated nucleic acid molecule, selected from the group consisting of (i) a nucleotide sequence encoding the antibody or antigen binding portion of claim 6, (ii) the light chain nucleotide sequence of SEQ ID NO: 163 and/or the heavy chain nucleotide sequence of SEQ ID NO: 164 or (iii) a nucleotide sequence encoding the light chain variable region amino acid sequence of SEQ ID NO: 143 and/or a nucleotide sequence encoding the heavy chain variable region amino acid sequence of SEQ ID NO: 133.

12. An isolated nucleic acid vector or vectors comprising the isolated nucleic acid molecule of claim 11.

13. A prokaryotic or eukaryotic host cell comprising the isolated nucleic acid vector or vectors of claim 12.

14. The host cell according to claim 13, wherein said host cell is at least one selected from COS-1, COS-7, HEK293, BHK21, CHO, BSC-1, Hep G2, 653, SP2/0, 293, HeLa, myeloma, or lymphoma cells, or any derivative, immortalized or transformed cell thereof.

15. A method for producing a CD27 antibody, comprising incorporating the nucleic acid molecule of claim 11 into a vector, transforming a host cell, transgenic animal or transgenic plant to express an antibody and recovering the expressed antibody..

16. A method of inhibiting naïve T-cell proliferation, comprising contacting a tissue with an effective amount of an antibody or antigen binding portion of claim 6; and the antibody of antigen binding portion inhibits the activation of CD27 on said human T-cells in the presence of human CD70 protein or a portion of human CD70 protein.

17. An article of manufacture comprising a pharmaceutically acceptable formulation comprising the antibody of claim 6.

18. An isolated human CD27 antibody or antigen-binding fragment thereof, comprising a light chain variable amino acid sequence selected from the group consisting of SEQ ID NOs: 137-144 and 148.

19. The isolated antibody or antigen-binding fragment thereof of claim 23, further comprising a heavy chain variable amino acid sequence selected from the group consisting of SEQ ID NOs: 128-136 and 145-147.

20. An isolated human CD27 antibody or antigen-binding fragment thereof, comprising a heavy chain variable amino acid sequence selected from the group consisting of SEQ ID NOs: 128-136 and 145-147.