

CLAIMS:

1. A programmed death-ligand 1 (PD-L1) binding agent comprising an immunoglobulin heavy chain variable region polypeptide and an immunoglobulin light chain variable region polypeptide, wherein:

the immunoglobulin heavy chain variable region polypeptide comprises a complementarity determining region 1 (HCDR1) comprising any one of SEQ ID NOs: 1-23, 309, or 345, a complementarity determining region 2 (HCDR2) comprising any one of SEQ ID NOs: 24-57, 310-314, or 346-349, and a complementarity determining region 3 (HCDR3) comprising any one of SEQ ID NOs: 58-95, 315-318, or 350-354; or

the immunoglobulin light chain variable region polypeptide comprises a complementarity determining region 1 (LCDR1) comprising any one of SEQ ID NOs: 96-128, 319-323, 355, or 356, a complementarity determining region 2 (LCDR2) comprising any one of SEQ ID NOs: 129-151 or 357-359, and a complementarity determining region 3 (LCDR3) comprising any one of SEQ ID NOs: 152-176 or 360.

2. A PD-L1 binding agent comprising an immunoglobulin heavy chain variable region of any one of SEQ ID NOs: 223-264, 324-334, or 361-365 or at least the CDRs thereof; and an immunoglobulin light chain variable region of any one of SEQ ID NOs: 265-306, 335-344, or 366-370 or at least the CDRs thereof.

3. A PD-L1 binding agent comprising an immunoglobulin heavy chain variable region polypeptide with an amino acid sequence that is at least 90% identical to any one of SEQ ID NOs: 223-264, 324-334, or 361-365, and an immunoglobulin light chain variable region polypeptide with an amino acid sequence that is at least 90% identical to any one of SEQ ID NOs: 265-306, 335-344, or 366-370.

4. The PD-L1 binding agent of any one of claims 1-3, which comprises the heavy and light chain immunoglobulin polypeptides, or at least the CDRs thereof, of a PD-L1 binding agent of Table 1.

5. The PD-L1 binding agent of any one of claims 1-4, wherein the binding agent is an antibody, an antibody conjugate, or an antigen-binding fragment thereof.

6. The PD-L1 binding agent of claim 5, wherein the binding agent is an antibody fragment selected from F(ab')₂, Fab', Fab, Fv, scFv, dsFv, dAb, and a single chain binding polypeptide.
7. The PD-L1 binding agent of claim 5, wherein the binding agent is an antibody.
8. The PD-L1 binding agent of any of claims 1-7, further comprising an immunoglobulin Fc region.
9. The PD-L1 binding agent of claim 8, further comprising a transforming growth factor beta 1 (TGFβ1) receptor, or a fragment thereof that binds TGFβ1, attached to the Fc region.
10. The PD-L1 binding agent of any one of claims 7-9, wherein the antibody is an IgG, IgM, IgA, IgD or IgE antibody.
11. The PD-L1 binding agent of any one of claims 7-9, wherein the antibody is an IgG antibody.
12. The PD-L1 binding agent of any one of claims 7-11, wherein the antibody exhibits antibody dependent cell-mediated cytotoxicity (ADCC), antibody-dependent cell-mediated phagocytosis (ADCP), or complement dependent cytotoxicity (CDC).
13. The PD-L1 binding agent of any of claims 1-12, wherein the binding agent is part of a bispecific antibody, chimeric antigen receptor, chimeric T cell receptor, or bispecific T-cell engager.
14. The PD-L1 binding agent of any of claims 1-12, wherein the binding agent is an internalizing binding agent.
15. A nucleic acid encoding the heavy chain immunoglobulin polypeptide of the anti-PD-L1 binding agent of any one of claims 1-14.
16. A nucleic acid encoding the light chain immunoglobulin polypeptide of the anti-PD-L1 binding agent of any one of claims 1-14.

17. A nucleic acid encoding the heavy chain immunoglobulin polypeptide and the light chain immunoglobulin polypeptide of the PD-L1 binding agent of any one of claims 1-14.

18. A vector comprising the nucleic acid sequence of any one of claims 15-17.

19. An isolated cell comprising the nucleic acid of any one of claims 15-17, optionally in a vector.

20. A method of providing a PD-L1 binding agent of any of claims 1-14, the method comprising expressing in a cell *in vitro* one or more nucleic acids encoding the immunoglobulin heavy and light chain polypeptides thereof.

21. A composition comprising the PD-L1 binding agent of any one of claims 1-14 or nucleic acid of any one of claims 15-17, optionally in a vector, and a pharmaceutically acceptable carrier.

22. The PD-L1 binding agent of any one of claims 1-14 or conjugate comprising same, or the composition of claim 21, for use as a medicament for treating a disease, disorder, or condition in a mammal that is responsive to PD-L1 inhibition or binding.

23. The PD-L1 binding agent or composition of claim 22, wherein the disease, disorder, or condition is cancer.

24. The PD-L1 binding agent of any one of claims 1-14 or the composition of claim 19 for use as a medicament for modulating an immune response in a mammal.

25. The PD-L1 binding agent for use according to claim 24, wherein the immune response is an anti-cancer immune response.

26. A method for treating a disease, disorder, or condition in a mammal that is responsive to PD-L1 inhibition or binding, the method comprising administering the PD-L1 binding agent of any one of claims 1-14 or conjugate comprising same, or the composition of claim 21, to the mammal.

27. The method of claim 26, wherein the disease, disorder, or condition is cancer.

28. The method of claim 26, wherein the disease, disorder, or condition is an autoimmune disorder.

29. The method of claim 26, wherein the disease, disorder, or condition is an infection.

30. A method for enhancing or inhibiting an immune response in a mammal comprising administering the PD-L1 binding agent of any one of claims 1-14 or conjugate comprising same, or the composition of claim 21, to the mammal.

31. The method of claim 30, wherein the immune response is an anti-cancer immune response.

32. A method of delivering a payload to a cell expressing PD-L1, the method comprising administering to the cell, or a mammal comprising the cell, a conjugate comprising a (1) PD-L1 binding agent of any one of claims 1-14 and a (2) payload to the mammal.

33. A hybridoma or cell line that expresses a PD-L1 binding agent of any of claims 1-14.