

CLAIMS

1. A modified anti-Programmed Death Ligand 1 (PD-L1) antibody, the antibody comprising:
a heavy chain comprising a heavy chain variable region including a CDR1 of SEQ ID NO: 3 or SEQ ID NO: 4, a CDR2 of SEQ ID NO: 5 or SEQ ID NO: 6, and a CDR3 of SEQ ID NO: 7 or SEQ ID NO: 8, and a heavy chain constant region of SEQ ID NO: 55; SEQ ID NO: 56 or SEQ ID NO: 57; and
a light chain comprising a light chain variable region including a CDR1 of SEQ ID NO: 10 or SEQ ID NO: 11, a CDR2 of SEQ ID NO: 12 or SEQ ID NO: 13 and a CDR3 of SEQ ID NO: 14 or SEQ ID NO: 15;
wherein the modified anti-PD-L1 antibody has a clearance rate from the blood that is enhanced relative to an anti-PD-L1 antibody having a heavy chain constant region of SEQ ID NO: 54 or SEQ ID NO: 108, and
wherein the modified anti-PD-L1 antibody lacks Fc-related effector function.
2. The anti-PD-L1 antibody according to claim 1, wherein the heavy chain variable region is SEQ ID NO: 2.
3. A anti-PD-L1 antibody according to claim 2, wherein the heavy chain is SEQ ID NO: 42, SEQ ID NO: 43 or SEQ ID NO: 44.
4. A anti-PD-L1 antibody according to claim 3, wherein the heavy chain is SEQ ID NO: 42.
5. The anti-PD-L1 antibody according to any one of claims 1-4, wherein the light chain further comprises a kappa light chain constant region.
6. The anti-PD-L1 antibody according to claim 5, wherein the kappa light chain constant region is SEQ ID NO: 16.
7. The anti-PD-L1 antibody according to any one of claims 1-5, wherein the light chain is SEQ ID NO: 21.
8. A modified anti-Programmed Death Ligand (PD-L1) antibody, the antibody comprising:
a heavy chain comprising a heavy chain variable region of SEQ ID NO: 2 and a heavy chain constant region of SEQ ID NO: 55; SEQ ID NO: 56 or SEQ ID NO: 57; and
a light chain comprising a light chain variable region of SEQ ID NO 9 and a light chain constant region of SEQ ID NO: 16;
wherein the modified anti-PD-L1 antibody has a clearance rate from the blood that is enhanced relative to an unmodified anti-PD-L1 antibody, and
wherein the modified anti-PD-L1 antibody lacks Fc-related effector function.
9. The anti-PD-L1 antibody according to claims 8, wherein the heavy chain constant region of SEQ ID NO: 55.

10. A modified anti-Programmed Death Ligand 1 (PD-L1) antibody which specifically binds to a human PD-L1, the modified anti-PD-L1 antibody comprising:
 - a heavy chain including a heavy chain variable domain and a heavy chain constant domain, the heavy chain variable region including a CDR1 of SEQ ID NO: 3 or SEQ ID NO: 4, a CDR2 of SEQ ID NO: 5 or SEQ ID NO: 6, and a CDR3 of SEQ ID NO: 7 or SEQ ID NO: 8; and
 - a light chain including a light chain variable domain, the light chain variable region including a CDR1 of SEQ ID NO: 10 or SEQ ID NO: 11, a CDR2 of SEQ ID NO: 12 or SEQ ID NO: 13 and a CDR3 of SEQ ID NO: 14 or SEQ ID NO 15;
 - wherein the modified anti-PD-L1 antibody has one or more amino acid modifications in the heavy chain constant domain to enhance a clearance rate of the modified anti-PD-L1 antibody from the blood relative to an anti-PD-L1 antibody without the one or more amino acid modifications.
11. The anti-PD-L1 antibody according to claim 10, wherein the modified anti-PD-L1 antibody has one or more amino acid modifications in the heavy chain constant domain to abolish Fc-related effector function.
12. The anti-PD-L1 antibody according to claim 10 or 11, wherein the heavy chain constant region is SEQ ID NO: 55; SEQ ID NO: 56 or SEQ ID NO: 57.
13. The anti-PD-L1 antibody according to any one of claims 10-12, wherein the heavy chain constant region is SEQ ID NO: 55.
14. The anti-PD-L1 antibody according to any one of claims 10-12, wherein the heavy chain is SEQ ID NO: 41, SEQ ID NO: 42, SEQ ID NO: 43, or SEQ ID NO: 44.
15. The anti-PD-L1 antibody according to any one of claims 10, 11 or 14, wherein the heavy chain is SEQ ID NO: 42.
16. A pharmaceutical composition comprising a modified anti-PD-L1 antibody according to any one of claims 1-15.
17. A pharmaceutical kit comprising a modified anti-PD-L1 antibody according to any one of claims 1-15 or a pharmaceutical composition according to claim 16.
18. A modified anti-Programmed Death Ligand (PD-L1) antibody as defined in any one of claims 1-15 or a pharmaceutical composition as defined in claim 16 for use in treating an Alzheimer's Disease.
19. Use of a modified anti-PD-L1 antibody as defined in any one of claims 1-15 or a pharmaceutical composition as defined in claim 16 in the manufacture of a medicament in the treatment of an Alzheimer's Disease.

20. A polynucleotide comprising a nucleic acid sequence encoding a heavy chain from a modified anti-PD-L1 antibody according to any one of claims 1-15 or a nucleic acid sequence encoding a light chain from a modified anti-PD-L1 antibody according to any one of claims 1-15.
21. The polynucleotide according to claim 20, wherein the nucleic acid sequence encoding the heavy chain comprises SEQ ID NO: 59, SEQ ID NO: 63, SEQ ID NO: 75 or SEQ ID NO: 79 and the nucleic acid sequence encoding the light chain comprises SEQ ID NO: 82, SEQ ID NO: 83, SEQ ID NO: 86, or SEQ ID NO: 87.
22. An expression construct comprising a nucleic acid sequence encoding a heavy chain from a modified anti-PD-L1 antibody according to in claim 20 or 21.
23. An expression construct comprising a nucleic acid sequence encoding a light chain from a modified anti-PD-L1 antibody according to claim 20 or 21.
24. A method of making a modified anti-PD-L1 antibody comprising:
expressing in a host cell a first and a second expression construct, wherein the first expression construct is defined by claim 22, and the second expression construct is defined by claim 23.