

CLAIMS

What is claimed is:

1. An antibody that specifically binds to human LILRB2, wherein the antibody comprises the following six complementarity determining regions (CDRs):
 - (a) a CDR-H1 comprising the amino acid sequence of SEQ ID NO: 15;
 - (b) a CDR-H2 comprising the amino acid sequence of SEQ ID NO: 16;
 - (c) a CDR-H3 comprising the amino acid sequence of SEQ ID NO: 17;
 - (d) a CDR-L1 comprising the amino acid sequence of SEQ ID NO: 18;
 - (e) a CDR-L2 comprising the amino acid sequence of SEQ ID NO: 19; and
 - (f) a CDR-L3 comprising the amino acid sequence of SEQ ID NO: 20.
2. The antibody of claim 1, wherein the antibody comprises a variable heavy chain (V_H) region comprising an amino acid sequence that is at least 90% identical to the amino acid sequence of SEQ ID NO: 13 and a variable light chain (V_L) region comprising an amino acid sequence that is at least 90% identical to the amino acid sequence of SEQ ID NO: 14, wherein the V_H region comprises three CDRs comprising the amino acid sequences of SEQ ID NOS: 15-17, and the V_L region comprises three CDRs comprising the amino acid sequences of SEQ ID NOS: 18-20.
3. The antibody of claim 1 or 2, wherein the antibody comprises a V_H region comprising the amino acid sequence of SEQ ID NO: 13 and a V_L region comprising the amino acid sequence of SEQ ID NO: 14.
4. The antibody of any one of claims 1-3, wherein the antibody comprises a heavy chain comprising the amino acid sequence of SEQ ID NO: 11 and a light chain comprising the amino acid sequence of SEQ ID NO: 12.
5. The antibody of claim 1, wherein the antibody comprises a V_H region comprising an amino acid sequence that is at least 90% identical to the amino acid sequence of SEQ ID NO: 53 and a V_L region comprising an amino acid sequence that is at least 90% identical to the amino acid sequence of SEQ ID NO: 54, wherein the V_H region comprises three CDRs comprising the amino acid sequences of SEQ ID NOS: 15-17, and the V_L region comprises three CDRs comprising the amino acid sequences of SEQ ID NOS: 18-20.
6. The antibody of claim 1 or 5, wherein the antibody comprises a V_H region comprising the amino acid sequence of SEQ ID NO: 53 and a variable light chain V_L region comprising the amino acid sequence of SEQ ID NO: 54.

7. The antibody of any one of claims 1, 5 or 6, wherein the antibody comprises a heavy chain comprising the amino acid sequence of SEQ ID NO: 51 and a light chain comprising the amino acid sequence of SEQ ID NO: 52.

8. The antibody of claim 1, wherein the antibody comprises a V_H region comprising an amino acid sequence that is at least 90% identical to the amino acid sequence of SEQ ID NO: 63 and a V_L region comprising an amino acid sequence that is at least 90% identical to the amino acid sequence of SEQ ID NO: 64, wherein the V_H region comprises three CDRs comprising the amino acid sequences of SEQ ID NOs: 15-17, and the V_L region comprises three CDRs comprising the amino acid sequences of SEQ ID NOs: 18-20.

9. The antibody of claim 1 or 8, wherein the antibody comprises a V_H region comprising the amino acid sequence of SEQ ID NO: 63 and a V_L region comprising the amino acid sequence of SEQ ID NO: 64.

10. The antibody of any one of claims 1, 8 or 9, wherein the antibody comprises a heavy chain comprising the amino acid sequence of SEQ ID NO: 61 and a light chain comprising the amino acid sequence of SEQ ID NO: 62.

11. The antibody of claim 1, wherein the antibody comprises a V_H region comprising an amino acid sequence that is at least 90% identical to the amino acid sequence of SEQ ID NO: 73 and a V_L region comprising an amino acid sequence that is at least 90% identical to the amino acid sequence of SEQ ID NO: 74, wherein the V_H region comprises three CDRs comprising the amino acid sequences of SEQ ID NOs: 15-17, and the V_L region comprises three CDRs comprising the amino acid sequences of SEQ ID NOs: 18-20.

12. The antibody of claim 1 or 11, wherein the antibody comprises a V_H region comprising the amino acid sequence of SEQ ID NO: 73 and a V_L region comprising the amino acid sequence of SEQ ID NO: 74.

13. The antibody of any one of claims 1, 11 or 12, wherein the antibody comprises a heavy chain comprising the amino acid sequence of SEQ ID NO: 71 and a light chain comprising the amino acid sequence of SEQ ID NO: 72.

14. The antibody of claim 1, wherein the antibody comprises a V_H region comprising an amino acid sequence that is at least 90% identical to the amino acid sequence of SEQ ID NO: 83 and a V_L region comprising an amino acid sequence that is at least 90% identical to the amino acid sequence of SEQ ID NO: 84, wherein the V_H region comprises three CDRs comprising the amino acid sequences of SEQ ID

NOS: 15-17, and the V_L region comprises three CDRs comprising the amino acid sequences of SEQ ID NOS: 18-20.

15. The antibody of claim 1 or 14, wherein the antibody comprises a V_H region comprising the amino acid sequence of SEQ ID NO: 83 and a V_L region comprising the amino acid sequence of SEQ ID NO: 84.

16. The antibody of any one of claims 1, 14 or 15, wherein the antibody comprises a heavy chain comprising the amino acid sequence of SEQ ID NO: 81 and a light chain comprising the amino acid sequence of SEQ ID NO: 82.

17. The antibody of any one of claims 1-16, wherein the antibody is an IgG4 antibody.

18. The antibody of any one of claims 1-17, wherein the antibody comprises a human IgG4 heavy chain constant region.

19. The antibody of any one of claims 1-18, wherein the antibody comprises a human kappa light chain constant region.

20. A polynucleotide or polynucleotides encoding the heavy chain and the light chain of the antibody of any one of claims 1-19.

21. A host cell or vector comprising the nucleic acid molecule of claim 20.

22. A pharmaceutical composition comprising the antibody of any one of claims 1-19 or the polynucleotide or polynucleotides of claim 20.

23. The antibody of any one of claims 1-19 or the composition of claim 22 for use as a medicament.

24. The antibody of any one of claims 1-19 or the composition of claim 22 for use in a method of treating cancer.