CLAIMS

1. An antibody or an antibody fragment thereof, which is a monoclonal antibody or an antibody fragment thereof that binds to Fc receptor-like protein 1 (hereinafter, abbreviated as FCRL1), wherein

the antibody is any one antibody selected from the following (a) to (g):

(a) an antibody in which complementarity determining regions (hereinafter, abbreviated as CDR) 1 to 3 of a heavy chain variable region (hereinafter, abbreviated as VH) comprise the amino acid sequences represented by SEQ ID NOs: 20 to 22, respectively, and CDRs 1 to 3 of a light chain variable region (hereinafter, abbreviated as VL) comprise the amino acid sequences represented by SEQ ID NOs: 24 to 26, respectively,

(b) an antibody in which CDRs 1 to 3 of a VH comprise the amino acid sequences represented by SEQ ID NOs: 28 to 30, respectively, and CDRs 1 to 3 of a VL comprise the amino acid sequences represented by SEQ ID NOs: 32 to 34, respectively,

(c) an antibody in which CDRs 1 to 3 of a VH comprise the amino acid sequences represented by SEQ ID NOs: 36 to 38, respectively, and CDRs 1 to 3 of a VL comprise the amino acid sequences represented by SEQ ID NOs: 40 to 42, respectively,

(d) an antibody in which CDRs 1 to 3 of a VH comprise the amino acid sequences represented by SEQ ID NOs: 44 to 46, respectively, and CDRs 1 to 3 of a VL comprise the amino acid sequences represented by SEQ ID NOs: 48 to 50, respectively,

(e) an antibody in which CDRs 1 to 3 of a VH comprise the amino acid sequences represented by SEQ ID NOs: 52 to 54, respectively, and CDRs 1 to 3 of a VL comprise the amino acid sequences represented by SEQ ID NOs: 56 to 58, respectively, and

(f) an antibody in which CDRs 1 to 3 of a VH comprise the amino acid sequences represented by SEQ ID NOs: 60 to 62, respectively, and CDRs 1 to 3 of a VL comprise the amino acid sequences represented by SEQ ID NOs: 64 to 66, respectively, and

(g) an antibody in which CDRs 1 to 3 of a VH comprise the amino acid sequences represented by SEQ ID NOs: 36 to 38, respectively, and CDRs 1 to 3 of a VL comprise the amino acid sequences represented by SEQ ID NOs: 40, 71, and 42, respectively.

2. An antibody or an antibody fragment thereof, which is a monoclonal antibody or an antibody fragment thereof that binds to FCRL1, wherein

the antibody is any one antibody selected from the following (2b-1) to (2b-4), (2c-1),

(2c-2), and (2g-1):

(2b-1) an antibody in which a VH comprises the amino acid sequence represented by SEQ ID NO: 72 and a VL comprises the amino acid sequence represented by SEQ ID NO: 68,

(2b-2) an antibody in which a VH comprises the amino acid sequence represented by SEQ ID NO: 73 and a VL comprises the amino acid sequence represented by SEQ ID NO: 74,

(2b-3) an antibody in which a VH comprises the amino acid sequence represented by SEQ ID NO: 72 and a VL comprises the amino acid sequence represented by SEQ ID NO: 74,

(2b-4) an antibody in which a VH comprises the amino acid sequence represented by SEQ ID NO: 73 and a VL comprises the amino acid sequence represented by SEQ ID NO: 68,

(2c-1) an antibody in which a VH comprises the amino acid sequence represented by SEQ ID NO: 75 and a VL comprises the amino acid sequence represented by SEQ ID NO: 76,

(2c-2) an antibody in which a VH comprises the amino acid sequence represented by SEQ ID NO: 77 and a VL comprises the amino acid sequence represented by SEQ ID NO: 76, and

(2g-1) an antibody in which a VH comprises the amino acid sequence represented by SEQ ID NO: 77 and a VL comprises the amino acid sequence represented by SEQ ID NO: 78.

3. The antibody or the antibody fragment thereof according to claim 1 or 2, wherein

a heavy chain constant region of the antibody is a heavy chain constant region of IgG.

4. The antibody or the antibody fragment thereof according to claim 3, wherein

the heavy chain constant region of the antibody comprises the amino acid sequence represented by SEQ ID NO: 79 or 80.

5. The antibody or the antibody fragment thereof according to any one of claims 1 to 4, wherein

the antibody is a genetically recombinant antibody.

6. The antibody or the antibody fragment thereof according to claim 5, wherein

the genetically recombinant antibody is one selected from the group consisting of a chimeric antibody, a humanized antibody, and a human antibody.

7. The antibody fragment according to any one of claims 1 to 6, wherein

the antibody fragment is one selected from Fab, Fab', $F(ab')_2$, a single chain antibody (scFv), a dimerized V region (diabody), a disulfide-stabilized V region (dsFv), and a peptide comprising a CDR.

8. A hybridoma that produces the antibody according to any one of claims 1 to 6.

9. A nucleic acid comprising a nucleotide sequence that encodes the antibody or the antibody fragment thereof according to any one of claims 1 to 7.

10. A vector comprising the nucleic acid according to claim 9.

11. A transformed cell obtained by introducing the vector according to claim 10 into a host cell.

12. A method for producing the antibody or the antibody fragment thereof according to any one of claims 1 to 7, comprising:

culturing the hybridoma according to claim 8 or the transformed cell according to claim 11 in a medium, and collecting the antibody or the antibody fragment thereof from a culture.

13. An antibody-drug conjugate comprising:

the antibody or the antibody fragment thereof according to any one of claims 1 to 7.

14. The antibody-drug conjugate according to claim 13, wherein

the antibody-drug conjugate comprises the antibody or the antibody fragment thereof linked to a drug via a linker.

15. A composition comprising:

the antibody or the antibody fragment thereof according to any one of claims 1 to 7, or the antibody-drug conjugate according to claim 13 or 14.

16. A reagent for detecting or measuring FCRL1, comprising:

the antibody or the antibody fragment thereof according to any one of claims 1 to 7,

or the antibody-drug conjugate according to claim 13 or 14.

17. A diagnostic agent for a disease associated with FCRL1, comprising:

the antibody or the antibody fragment thereof according to any one of claims 1 to 7, or the antibody-drug conjugate according to claim 13 or 14.

18. The diagnostic agent according to claim 17, wherein

the disease associated with FCRL1 is cancer, an autoimmune disease or an inflammatory disease.

19. A therapeutic agent for a disease associated with FCRL1, comprising:

the antibody or the antibody fragment thereof according to any one of claims 1 to 7, or the antibody-drug conjugate according to claim 13 or 14.

20. The therapeutic agent according to claim 19, wherein

the disease associated with FCRL1 is cancer, an autoimmune disease, or an inflammatory disease.

21. Use of the antibody or the antibody fragment thereof according to any one of claims 1 to 7, or the antibody-drug conjugate according to claim 13 or 14, in the manufacture of a diagnostic agent for diagnosing a disease associated with FCRL1.

22. Use of the antibody or the antibody fragment thereof according to any one of claims 1 to 7, or the antibody-drug conjugate according to claim 13 or 14, in the manufacture of a therapeutic agent for treating a disease associated with FCRL1.

23. The antibody or the antibody fragment thereof according to any one of claims 1 to 7, or the antibody-drug conjugate according to claim 13 or 14, for use as a diagnostic agent for a disease associated with FCRL1.

24. The antibody or the antibody fragment thereof according to any one of claims 1 to 7, or the antibody-drug conjugate according to claim 13 or 14, for use as a therapeutic agent for a disease associated with FCRL1.