CLAIMS

1. An antibody, or an antigen-binding fragment thereof, which specifically binds to Bet v 1 (Betula verrucosa allergen 1).,

wherein the antibody, or the antigen-binding fragment thereof, further preferably binds specifically to a Bet v 1 homologous allergen.

2. The antibody, or an antigen-binding fragment thereof, according to claim 1, wherein the Bet v 1 homologous allergen is a tree pollen allergen,

wherein the Bet v 1 homologous tree pollen allergen is preferably selected from the group consisting of Cor a 1, Aln g 1, Fag s 1, Que a 1, Cas s 1, Ost c 1 and Car b1.

3. The antibody, or an antigen-binding fragment thereof, according to any one of the previous claims, wherein the antibody or the antigen-binding fragment thereof, further binds specifically to a Bet v 1 homologous food allergen,

wherein the Bet v 1 homologous food allergen is preferably selected from the group consisting of Mal d 1, Cor a 1 and Jug r 5.

4. The antibody, or an antigen-binding fragment thereof, according to any one of the previous claims, wherein the antibody, or the antigen-binding fragment thereof, comprises a CDRH1 having at least 70% identity to SEQ ID NO: 1, a CDRH2 having at least 70% identity to SEQ ID NO: 2, a CDRH3 having at least 70% identity to SEQ ID NO: 3, a CDRL1 having at least 70% identity to SEQ ID NO: 4, a CDRL2 having at least 70% identity to SEQ ID NO: 5, and a CDRL3 having at least 70% identity to SEQ ID NO: 6.,

and/or

wherein the antibody, or the antigen-binding fragment thereof, comprises a CDRH1 according to SEQ ID NO: 1, a CDRH2 according to SEQ ID NO: 2, a CDRH3 according to SEQ ID NO: 3, a CDRL1 according to SEQ ID NO: 4, a CDRL2 according to SEQ ID NO: 5, and a CDRL3 according to SEQ ID NO: 6.

5. The antibody, or an antigen-binding fragment thereof, according to any one of the previous claims, wherein the antibody, or the antigen-binding fragment thereof, comprises a VH having at least 70% identity to SEQ ID NO: 7, and a VL having at least 70% identity to SEQ ID NO: 8,

and/or

wherein the antibody, or the antigen-binding fragment thereof, comprises a VH according to SEQ ID NO: 7, and a VL according to SEQ ID NO: 8.

6. The antibody, or an antigen-binding fragment thereof, according to any one of claims 1 to 3, wherein (i) the antibody, or the antigen-binding fragment thereof, comprises a CDRH1 having at least 70% identity to SEQ ID NO: 9, a CDRH2 having at least 70% identity to SEQ ID NO: 10, a CDRH3 having at least 70% identity to SEQ ID NO: 11, a CDRL1 having at least 70% identity to SEQ ID NO: 12, a CDRL2 having at least 70% identity to SEQ ID NO: 13, and a CDRL3 having at least 70% identity to SEQ ID NO: 14,

and/or

wherein (ii) the antibody, or the antigen-binding fragment thereof, comprises a CDRH1 according to SEQ ID NO: 9, a CDRH2 according to SEQ ID NO: 10, a CDRH3 according to SEQ ID NO: 11, a CDRL1 according to SEQ ID NO: 12, a CDRL2 according to SEQ ID NO: 13, and a CDRL3 according to SEQ ID NO: 14,

and/or

wherein (iii) the antibody, or the antigen-binding fragment thereof, comprises a VH having at least 70% identity to SEQ ID NO: 15, and a VL having at least 70% identity to SEQ ID NO: 16,

and/or

wherein (iv) the antibody, or the antigen-binding fragment thereof, comprises a VH according to SEQ ID NO: 15; and a VL according to SEQ ID NO: 16.

7. The antibody, or an antigen-binding fragment thereof, according to any one of claims 1 to 3, wherein (i) the antibody, or the antigen-binding fragment thereof, comprises a CDRH1 having at least 70% identity to SEQ ID NO: 17, a CDRH2 having at least 70% identity to SEQ

ID NO: 18, a CDRH3 having at least 70% identity to SEQ ID NO: 19, a CDRL1 having at least 70% identity to SEQ ID NO: 20, a CDRL2 having at least 70% identity to SEQ ID NO: 21, and a CDRL3 having at least 70% identity to SEQ ID NO: 22,

and/or

wherein (ii) the antibody, or the antigen-binding fragment thereof, comprises a CDRH1 according to SEQ ID NO: 17, a CDRH2 according to SEQ ID NO: 18, a CDRH3 according to SEQ ID NO: 19, a CDRL1 according to SEQ ID NO: 20, a CDRL2 according to SEQ ID NO: 21, and a CDRL3 according to SEQ ID NO: 22,

and/or

wherein (iii) the antibody, or the antigen-binding fragment thereof, comprises a VH having at least 70% identity to SEQ ID NO: 23; and a VL having at least 70% identity to SEQ ID NO: 24,

and/or

wherein (iv) the antibody, or the antigen-binding fragment thereof, comprises a VH according to SEQ ID NO: 23; and a VL according to SEQ ID NO: 24.

8. The antibody, or an antigen-binding fragment thereof, according to any one of claims 1 to 3, wherein (i) the antibody, or the antigen-binding fragment thereof, comprises a CDRH1 having at least 70% identity to SEQ ID NO: 66, a CDRH2 having at least 70% identity to SEQ ID NO: 67, a CDRH3 having at least 70% identity to SEQ ID NO: 68, a CDRL1 having at least 70% identity to SEQ ID NO: 69, a CDRL2 having at least 70% identity to SEQ ID NO: 70, and a CDRL3 having at least 70% identity to SEQ ID NO: 71,

and/or

wherein (ii) the antibody, or the antigen-binding fragment thereof, comprises a CDRH1 according to SEQ ID NO: 66, a CDRH2 according to SEQ ID NO: 67, a CDRH3 according to SEQ ID NO: 68, a CDRL1 according to SEQ ID NO: 69, a CDRL2 according to SEQ ID NO: 70, and a CDRL3 according to SEQ ID NO: 71,

and/or

wherein (iii) the antibody, or the antigen-binding fragment thereof, comprises a VH having at least 70% identity to SEQ ID NO: 72; and a VL having at least 70% identity to SEQ ID NO: 73,

and/or

wherein (iv) the antibody, or the antigen-binding fragment thereof, comprises a VH according to SEQ ID NO: 72; and a VL according to SEQ ID NO: 73.

9. The antibody, or an antigen-binding fragment thereof, according to any one of claims 1 to 3, wherein (i) the antibody, or the antigen-binding fragment thereof, comprises a CDRH1 having at least 70% identity to SEQ ID NO: 74, a CDRH2 having at least 70% identity to SEQ ID NO: 75, a CDRH3 having at least 70% identity to SEQ ID NO: 76, a CDRL1 having at least 70% identity to SEQ ID NO: 77, a CDRL2 having at least 70% identity to SEQ ID NO: 78, and a CDRL3 having at least 70% identity to SEQ ID NO: 79,

and/or

wherein (ii) the antibody, or the antigen-binding fragment thereof, comprises a CDRH1 according to SEQ ID NO: 74, a CDRH2 according to SEQ ID NO: 75, a CDRH3 according to SEQ ID NO: 76, a CDRL1 according to SEQ ID NO: 77, a CDRL2 according to SEQ ID NO: 78, and a CDRL3 according to SEQ ID NO: 79,

and/or

wherein (iii) the antibody, or the antigen-binding fragment thereof, comprises a VH having at least 70% identity to SEQ ID NO: 80; and a VL having at least 70% identity to SEQ ID NO: 81,

and/or

wherein (iv) the antibody, or the antigen-binding fragment thereof, comprises a VH according to SEQ ID NO: 80; and a VL according to SEQ ID NO: 81.

10. The antibody, or an antigen-binding fragment thereof, according to any one of claims 1 to 3, wherein (i) the antibody, or the antigen-binding fragment thereof, comprises a CDRH1 having at least 70% identity to SEQ ID NO: 82, a CDRH2 having at least 70% identity to SEQ ID NO: 83, a CDRH3 having at least 70% identity to SEQ ID NO: 84, a CDRL1 having at least

70% identity to SEQ ID NO: 85, a CDRL2 having at least 70% identity to SEQ ID NO: 86, and a CDRL3 having at least 70% identity to SEQ ID NO: 87,

and/or

wherein (ii) the antibody, or the antigen-binding fragment thereof, comprises a CDRH1 according to SEQ ID NO: 82, a CDRH2 according to SEQ ID NO: 83, a CDRH3 according to SEQ ID NO: 84, a CDRL1 according to SEQ ID NO: 85, a CDRL2 according to SEQ ID NO: 86, and a CDRL3 according to SEQ ID NO: 87.,

and/or

wherein (iii) the antibody, or the antigen-binding fragment thereof, comprises a VH having at least 70% identity to SEQ ID NO: 88; and a VL having at least 70% identity to SEQ ID NO: 89,

and/or

wherein (iv) the antibody, or the antigen-binding fragment thereof, comprises a VH according to SEQ ID NO: 88; and a VL according to SEQ ID NO: 89.

11. The antibody, or an antigen-binding fragment thereof, according to any one of the previous claimswherein the CDRs or the variable regions of the antibody, or the antigen-binding fragment thereof, are human or are derived from human CDR or variable region sequences,

and/or

The antibody, or an antigen-binding fragment thereof, according to any one of the previous claims, wherein the antibody, or the antigen-binding fragment thereof, is a human antibody,

and/or

is a monoclonal antibody.

12. The antibody according to any one of the previous claims, wherein the antibody comprises an Fc moiety.

13. The antibody according to any one of the previous claims, wherein the antibody is of the IgG or IgA type,

wherein the antibody is preferably of the IgG1 or IgG4 type, preferably of the IgG4 type.

14. The antibody according to any one according to the previous claims, wherein the variable regions or the CDRs are derived from an IgE antibody and grafted in a scaffold of an IgG or IgA antibody or

wherein the antibody, or the antigen-binding fragment thereof, is purified.

15. The antibody, or an antigen-binding fragment thereof, according to any one of the previous claims, wherein the antibody, or the antigen-binding fragment thereof, is a single-chain antibody,

preferably an scFv.

16. The antibody, or an antigen-binding fragment thereof, according to any one of claims 1 to 8, wherein the antibody, or the antigen-binding fragment thereof, is selected from Fab, Fab', F(ab')2 and Fv.

17. The antibody, or an antigen-binding fragment thereof, according to any one of the previous claims, wherein the antibody, or the antigen-binding fragment thereof, is a multispecific antibody or a multispecific antigen-binding fragment,

wherein the multispecific antibody, or the multispecific antigen-binding fragment thereof, preferably binds to distinct, non-overlapping epitopes of Bet v 1, and optionally binds to distinct, non-overlapping epitopes of at least one bet v 1 homologous allergen.

18. The antibody, or an antigen-binding fragment thereof, according to claim 17, wherein the multispecific antibody, or the multispecific antigen-binding fragment thereof comprises at least two of the following:
    (i) an antigen-binding site comprising (a) the CDRH1, CDRH2, CDRH3, CDRL1, CDRL2 and CDRL3 sequences and/or (b) the VH and VL sequences as defined in any one of claims 4 to 5;

(ii) an antigen-binding site comprising (a) the CDRH1, CDRH2, CDRH3, CDRL1, CDRL2 and CDRL3 sequences and/or (b) the VH and VL sequences as defined in any one of claims 6; and an antigen-binding site selected from any one of (iii) to (vi):

(iii) an antigen-binding site comprising (a) the CDRH1, CDRH2, CDRH3, CDRL1, CDRL2 and CDRL3 sequences and/or (b) the VH and VL sequences as defined in any one of claims 7;

(iv) an antigen-binding site comprising (a) the CDRH1, CDRH2, CDRH3, CDRL1, CDRL2 and CDRL3 sequences and/or (b) the VH and VL sequences as defined in any one of claims 8;

(v) an antigen-binding site comprising (a) the CDRH1, CDRH2, CDRH3, CDRL1, CDRL2 and CDRL3 sequences and/or (b) the VH and VL sequences as defined in any one of claims 9;

(vi) an antigen-binding site comprising (a) the CDRH1, CDRH2, CDRH3, CDRL1, CDRL2 and CDRL3 sequences and/or (b) the VH and VL sequences as defined in any one of claims 10.

19. The antibody or the antigen-binding fragment according to any one of the claims 4, 6(i), (ii), 7(i), (ii), 8(i), (ii), 9(i), (ii), 10(i), (ii),wherein the CDRH1, CDRH2 and CDRH3 sequences are contained by a human variable heavy chain framework region VH chain selected from the group consisting of the amino acid sequences encoded by the genes IGHV1-18, IGHV1-2, IGHV1-24, IGHV1-3, IGHV1-45, IGHV1-46, IGHV1-58, IGHV1-69, IGHV1-69-2, IGHV1-69D, IGHV1-8, IGHV2-26, IGHV2-5, IGHV2-70, IGHV2-70D, IGHV3-11, IGHV3-13, IGHV3-15, IGHV3-20, IGHV3-21, IGHV3-23, IGHV3-23D, IGHV3-30, IGHV3-30-3, IGHV3-30-5, IGHV3-33, IGHV3-35, IGHV3-43, IGHV3-43D, IGHV3-48, IGHV3-49, IGHV3-53, IGHV3-62, IGHV3-64, IGHV3-64D, IGHV3-66, IGHV3-7, IGHV3-72, IGHV3-73, IGHV3-74, IGHV3-9, IGHV3-NL1, IGHV4-28, IGHV4-30-1, IGHV4-30-2, IGHV4-30-4, IGHV4-31, IGHV4-34, and IGHV4-38-2.

20. The antibody or the antigen-binding fragment according to any one of the claims4, 6(i), (ii), 7(i), (ii), 8(i), (ii), 9(i), (ii), 10(i), (ii), or 19, wherein the CDRL1, CDRL2 and CDRL3 sequences are contained by a human variable light chain framework region VL chain selected from the group consisting of the amino acid sequences encoded by the genes IGLV1-36, IGLV1-40, IGLV1-44, IGLV1-47, IGLV1-51, IGLV10-54, IGLV2-11, IGLV2-14, IGLV2-18, IGLV2-23, IGLV2-8, IGLV3-1, IGLV3-10, IGLV3-12, IGLV3-16, IGLV3-19, IGLV3-21, IGLV3-22, IGLV3-25, IGLV3-27, IGLV3-9, IGLV4-3, IGLV4-60, IGLV4-69, IGLV5-37, IGLV5-39, IGLV5-45, IGLV5-52, IGLV6-57, IGLV7-43, IGLV7-46, IGLV8-61, and IGLV9-49,

or wherein the CDRL1, CDRL2 and CDRL3 sequences are contained by a human variable light chain framework region VK chain selected from the group consisting of the amino acid sequences encoded by the genes IGKV1-12, IGKV1-13, IGKV1-16, IGKV1-17, IGKV1-27, IGKV1-33, IGKV1-39, IGKV1-5, IGKV1-6, IGKV1-8, IGKV1-9, IGKV1-NL1, IGKV1D-12, IGKV1D-13, IGKV1D-16, IGKV1D-17, IGKV1D-33, IGKV1D-39, IGKV1D-43, IGKV1D-8, IGKV2-24, IGKV2-28, IGKV2-29, IGKV2-30, IGKV2-40, IGKV2D-26, IGKV2D-28, IGKV2D-29, IGKV2D-30, IGKV2D-40, IGKV3-11, IGKV3-15, IGKV3-20, IGKV3D-11, IGKV3D-15, IGKV3D-20, IGKV3D-7, IGKV4-1, IGKV5-2, IGKV6-21, and IGKV6D-21.

21. A nucleic acid molecule comprising a polynucleotide encoding the antibody, or an antigen-binding fragment thereof, according to any one of claims 1 to 20,

preferably comprising a nucleic acid sequence as set forth in any one of SEQ ID NOs 25 to 48, and 90 to 111; or a sequence variant thereof having at least 50%, at least 55%, at least 60%, at least 65%, at least 70%, at least 75%, at least 80%, at least 85%, at least 88%, at least 90%, at least 92%, at least 95%, at least 96%, at least 97%, at least 98% or at least 99% sequence identity.

22. A plurality of nucleic acid molecules encoding the antibody, or an antigen-binding fragment thereof, according to any one of claims 1 to 20, wherein each of the nucleic acid molecules comprises a polynucleotide encoding an immunoglobulin chain of the antibody, or an antigen-binding fragment thereof,

preferably comprising a nucleic acid sequence as set forth in any one of SEQ ID NOs 25 to 48, and 90 to 111; or a sequence variant thereof having at least 50%, at least 55%, at least 60%, at least 65%, at least 70%, at least 75%, at least 80%, at least 85%, at least 88%, at least 90%, at least 92%, at least 95%, at least 96%, at least 97%, at least 98% or at least 99% sequence identity.

23. A vector comprising the nucleic acid molecule according to claim 21 or the plurality of nucleic acid molecules according to claim 22 or

a plurality of vectors comprising the plurality of nucleic acid molecules according to claim 22.

24. A host cell expressing the antibody, or an antigen-binding fragment thereof, according to any one of claims 1 to 20, or comprising the vector according to claim 23 or the plurality of vectors of claim 23.

25. A method for preparing the antibody, or an antigen-binding fragment thereof, according any one of claims 1 to 20, or immunoglobulin chain(s) thereof, said method comprising
    (i) culturing the host cell according to claim 24; and
    (ii) isolating the antibody or immunoglobulin chain(s) thereof from the culture.

26. A composition comprising the antibody, or an antigen-binding fragment thereof, according to any one of claims 1 to 20, the nucleic acid or the plurality of nucleic acids according to any one of claims 21 to 22, the vector or the plurality of vectors according to claim 23, or the cell according to claim 24,preferably

further comprising a pharmaceutically acceptable excipient, diluent or carrier.

27. The composition according to claim26, wherein the composition comprises at least two distinct antibodies, or antigen-binding fragments thereof, binding to distinct, non-overlapping epitopes of Bet v 1, and optionally binding to distinct, non-overlapping epitopes of at least one Bet v 1 homologous protein,

wherein the composition preferably comprises at least two antibodies or antigen-binding fragments thereof, selected from the group consisting of:

(i) an antibody, or an antigen-binding fragment thereof, according to any one of claims 4 to 5;
(ii) an antibody, or an antigen-binding fragment thereof, according to any one of claims 6t; and an antibody, or an antigen-binding fragment thereof, according to any one of (iii) to (vi):
(iii) an antibody, or an antigen-binding fragment thereof, according to any one of claims 7 ;
(iv) an antibody, or an antigen-binding fragment thereof, according to any one of claims 8 ;
(v) an antibody, or an antigen-binding fragment thereof, according to any one of claims 9;
(vi) an antibody, or an antigen-binding fragment thereof, according to any one of claims 10.

and/or

which preferably comprises at least three distinct antibodies, or antigen-binding fragments thereof, and preferably comprises an antibody, or an antigen-binding

fragment thereof, according to (i), an antibody, or an antigen-binding fragment thereof, according to (ii), and an antibody, or an antigen-binding fragment thereof, according to at least one of (iii) to (vi), as defined in claim 27.

28. A composition comprising at least two distinct antibodies, or antigen-binding fragments thereof, wherein the two distinct antibodies or antigen-binding fragments bind to distinct, non-overlapping epitopes of Bet v 1, and optionally bind to distinct, non-overlapping epitopes of at least one Bet v 1 homologous protein, wherein the composition comprises at least two antibodies, or antigen-binding fragments thereof, selected from the group consisting of:

(i) an antibody, or an antigen-binding fragment thereof, comprising a CDRH1 having at least 70% identity to SEQ ID NO: 1, a CDRH2 having at least 70% identity to SEQ ID NO: 2, a CDRH3 having at least 70% identity to SEQ ID NO: 3, a CDRL1 having at least 70% identity to SEQ ID NO: 4, a CDRL2 having at least 70% identity to SEQ ID NO: 5, and a CDRL3 having at least 70% identity to SEQ ID NO: 6;

(ii) an antibody, or an antigen-binding fragment thereof, comprising a CDRH1 having at least 70% identity to SEQ ID NO: 9, a CDRH2 having at least 70% identity to SEQ ID NO: 10, a CDRH3 having at least 70% identity to SEQ ID NO: 11, a CDRL1 having at least 70% identity to SEQ ID NO: 12, a CDRL2 having at least 70% identity to SEQ ID NO: 13, and a CDRL3 having at least 70% identity to SEQ ID NO: 14; and an antibody, or an antigen-binding fragment thereof according to any one of (iii) to (vi):

(iii) an antibody, or an antigen-binding fragment thereof, comprising a CDRH1 having at least 70% identity to SEQ ID NO: 17, a CDRH2 having at least 70% identity to SEQ ID NO: 18, a CDRH3 having at least 70% identity to SEQ ID NO: 19, a CDRL1 having at least 70% identity to SEQ ID NO: 20, a CDRL2 having at least 70% identity to SEQ ID NO: 21, and a CDRL3 having at least 70% identity to SEQ ID NO: 22;

(iv) an antibody, or an antigen-binding fragment thereof, comprising a CDRH1 having at least 70% identity to SEQ ID NO: 66, a CDRH2 having at least 70% identity to SEQ ID NO: 67, a CDRH3 having at least 70% identity to SEQ ID NO: 68, a CDRL1 having at least 70% identity to SEQ ID NO: 69, a CDRL2 having at least 70% identity to SEQ ID NO: 70, and a CDRL3 having at least 70% identity to SEQ ID NO: 71;

(v) an antibody, or an antigen-binding fragment thereof, comprising a CDRH1 having at least 70% identity to SEQ ID NO: 74, a CDRH2 having at least 70% identity to SEQ ID NO: 75, a CDRH3 having at least 70% identity to SEQ ID NO: 76, a CDRL1 having at least 70% identity to SEQ ID NO: 77, a CDRL2 having at least 70% identity to SEQ ID NO: 78, and a CDRL3 having at least 70% identity to SEQ ID NO: 79;

(vi) an antibody, or an antigen-binding fragment thereof, comprising a CDRH1 having at least 70% identity to SEQ ID NO: 82, a CDRH2 having at least 70% identity to SEQ ID NO: 83, a CDRH3 having at least 70% identity to SEQ ID NO: 84, a CDRL1 having at least 70% identity to SEQ ID NO: 85, a CDRL2 having at least 70% identity to SEQ ID NO: 86, and a CDRL3 having at least 70% identity to SEQ ID NO: 87,

wherein the composition preferably comprises at least two antibodies or antigen-binding fragments thereof, selected from the group consisting of:

(i) an antibody, or an antigen-binding fragment thereof, comprising a CDRH1 according to SEQ ID NO: 1, a CDRH2 according to SEQ ID NO: 2, a CDRH3 according to SEQ ID NO: 3, a CDRL1 according to SEQ ID NO: 4, a CDRL2 according to SEQ ID NO: 5, and a CDRL3 according to SEQ ID NO: 6;

(ii) an antibody, or an antigen-binding fragment thereof, comprising a CDRH1 according to SEQ ID NO: 9, a CDRH2 according to SEQ ID NO: 10, a CDRH3 according to SEQ ID NO: 11, a CDRL1 according to SEQ ID NO: 12, a CDRL2 according to SEQ ID NO: 13, and a CDRL3 according to SEQ ID NO: 14; and an antibody, or an antigen-binding fragment thereof according to any one of (iii) to (vi):

(iii) an antibody, or an antigen-binding fragment thereof, comprising a CDRH1 according to SEQ ID NO: 17, a CDRH2 according to SEQ ID NO: 18, a CDRH3 according to SEQ ID NO: 19, a CDRL1 according to SEQ ID NO: 20, a CDRL2 according to SEQ ID NO: 21, and a CDRL3 according to SEQ ID NO: 22;

(iv) an antibody, or an antigen-binding fragment thereof, comprising a CDRH1 according to SEQ ID NO: 66, a CDRH2 according to SEQ ID NO: 67, a CDRH3 according to SEQ ID NO: 68, a CDRL1 according to SEQ ID NO: 69, a CDRL2 according to SEQ ID NO: 70, and a CDRL3 according to SEQ ID NO: 71;

(v) an antibody, or an antigen-binding fragment thereof, comprising a CDRH1 according to SEQ ID NO: 74, a CDRH2 according to SEQ ID NO: 75, a CDRH3 according to SEQ ID NO: 76, a CDRL1 according to SEQ ID NO: 77, a CDRL2 according to SEQ ID NO: 78, and a CDRL3 according to SEQ ID NO: 79;

(vi) an antibody, or an antigen-binding fragment thereof, comprising a CDRH1 according to SEQ ID NO: 82, a CDRH2 according to SEQ ID NO: 83, a CDRH3 according to SEQ ID NO: 84, a CDRL1 according to SEQ ID NO: 85, a CDRL2 according to SEQ ID NO:86, and a CDRL3 according to SEQ ID NO: 87,

and/or

wherein the composition preferably comprises at least two antibodies or antigen-binding fragments thereof, selected from the group consisting of:

(i) an antibody, or an antigen-binding fragment thereof, comprising a VH having at least 70% identity to SEQ ID NO: 7; and a VL having at least 70% identity to SEQ ID NO: 8;

(ii) an antibody, or an antigen-binding fragment thereof, comprising a VH having at least 70% identity to SEQ ID NO: 15; and a VL having at least 70% identity to SEQ ID NO: 16; and an antibody according to any one of (iii) to (vi):

(iii) an antibody, or an antigen-binding fragment thereof, comprising a VH having at least 70% identity to SEQ ID NO: 23; and a VL having at least 70% identity to SEQ ID NO: 24;

(iv) an antibody, or an antigen-binding fragment thereof, comprising a VH having at least 70% identity to SEQ ID NO: 72; and a VL having at least 70% identity to SEQ ID NO: 73;

(v) an antibody, or an antigen-binding fragment thereof, comprising a VH having at least 70% identity to SEQ ID NO: 80; and a VL having at least 70% identity to SEQ ID NO: 81;

(vi) an antibody, or an antigen-binding fragment thereof, comprising a VH having at least 70% identity to SEQ ID NO: 88; and a VL having at least 70% identity to SEQ ID NO: 89,

and/or

wherein the composition preferably comprises at least two antibodies or antigen-binding fragments thereof, selected from the group consisting of:

(i) an antibody, or an antigen-binding fragment thereof, comprising a VH according to SEQ ID NO: 7; and a VL according to SEQ ID NO: 8;

(ii) an antibody, or an antigen-binding fragment thereof, comprising a VH according to SEQ ID NO: 15; and a VL according to SEQ ID NO: 16; and an antibody, or an antigen-binding fragment thereof, according to any one of (iii) to (vi):

(iii) an antibody, or an antigen-binding fragment thereof, comprising a VH according to SEQ ID NO: 23; and a VL according to SEQ ID NO: 24;

(iv) an antibody, or an antigen-binding fragment thereof, comprising a VH according to SEQ ID NO: 72; and a VL according to SEQ ID NO: 73;

(v) an antibody, or an antigen-binding fragment thereof, comprising a VH according to SEQ ID NO: 80; and a VL according to SEQ ID NO: 81;

(vi) an antibody, or an antigen-binding fragment thereof, comprising a VH according to SEQ ID NO: 88; and a VL according to SEQ ID NO: 89,

and/or

, which preferably comprises at least three distinct antibodies, or antigen-binding fragments thereof, and preferably comprises an antibody, or an antigen-binding fragment thereof according to (i), an antibody, or an antigen-binding fragment thereof, according to (ii), and an antibody, or an antigen-binding fragment thereof, according to at least one of (iii) to (vi).

29. The composition according to any one of claims 26 to 28, wherein the composition further comprises at least one additional agent useful for treating birch pollen allergy and/or a related tree pollen allergy, and/or a related food allergy,

wherein the additional agent useful for treating birch pollen allergy and/or a related allergy is preferably selected from the group consisting of: β-adrenergic agonists, epinephrine, antihistamine, corticosteroid, anti-IgE antibody, anti-IgE antibody binding fragment, peptide vaccine and further antibodies capable of binding to a birch pollen allergen,

and/or

wherein the composition further preferably comprises a birch pollen allergen and/or a Bet v 1 homologous allergen, preferably selected from the group consisting of Cor a 1, Aln g 1, Fag s 1, Que a 1, Cas s 1, Ost c 1, Car b1, Mal d 1, Jug r 5 and Pru p 1, and/or comprises an extract comprising a birch pollen allergen and/or a Bet v 1 homologous allergen, preferably selected from the group consisting of Cor a 1, Aln g 1, Fag s 1, Que a 1, Cas s 1, Ost c 1, Car b1, Mal d 1, Jug r 5 and Pru p 1.

30. A kit comprising one or more of
    (i) the antibody, or an antigen-binding fragment thereof, according to any one of claims 1 to 20;
    (ii) the nucleic acid molecule(s) according to any one of claims 21 to 22;
    (iii) the vector(s) according to claim 23;
    (iv) the cell according to claim 24; and/or
    (v) the composition according to any one of claims 26 to 29,

wherein the kit preferably comprises
    (i) at least two antibodies, or antigen-binding fragments thereof, according to any one of claims 1 to 20, which bind to distinct, non-overlapping epitopes of Bet v 1, and optionally bind to distinct, non-overlapping epitopes of at least one Bet v 1 homologous protein;

(ii) nucleic acid molecule(s) encoding at least two antibodies, or antigen-binding fragments thereof, according to any one of claims 1 to 20, which bind to distinct, non-overlapping epitopes of Bet v 1, and optionally bind to distinct, non-overlapping epitopes of at least one Bet v 1 homologous protein; or

(iii) composition(s) comprising (i) or (ii),

which more preferably bind to distinct, non-overlapping epitopes of Bet v 1, and optionally bind to distinct, non-overlapping epitopes of at least one bet v 1 homologous protein; or nucleic acid(s) encoding said antibodies or compositions comprising said antibodies.

31. A kit comprising at least two antibodies, or antigen-binding fragments thereof, wherein the three antibodies or antigen-binding fragments bind to distinct, non-overlapping epitopes of Bet v 1 and optionally bind to distinct, non-overlapping epitopes of at least one bet v 1 homologous protein, wherein the kit comprises at least two antibodies or antigen-binding fragments thereof, selected from the group consisting of:

(i) an antibody, or an antigen-binding fragment thereof, comprising a CDRH1 having at least 70% identity to SEQ ID NO: 1, a CDRH2 having at least 70% identity to SEQ ID NO: 2, a CDRH3 having at least 70% identity to SEQ ID NO: 3, a CDRL1 having at least 70% identity to SEQ ID NO: 4, a CDRL2 having at least 70% identity to SEQ ID NO: 5, and a CDRL3 having at least 70% identity to SEQ ID NO: 6;

(ii) an antibody, or an antigen-binding fragment thereof, comprising a CDRH1 having at least 70% identity to SEQ ID NO: 9, a CDRH2 having at least 70% identity to SEQ ID NO: 10, a CDRH3 having at least 70% identity to SEQ ID NO: 11, a CDRL1 having at least 70% identity to SEQ ID NO: 12, a CDRL2 having at least 70% identity to SEQ ID NO: 13, and a CDRL3 having at least 70% identity to SEQ ID NO: 14; and an antibody, or an antigen-binding fragment thereof, according to any one of (iii) to (vi):

(iii) an antibody, or an antigen-binding fragment thereof, comprising a CDRH1 having at least 70% identity to SEQ ID NO: 17, a CDRH2 having at least 70% identity to SEQ ID NO: 18, a CDRH3 having at least 70% identity to SEQ ID NO: 19, a CDRL1 having at least 70% identity to SEQ ID NO: 20, a CDRL2 having at least 70% identity to SEQ ID NO: 21, and a CDRL3 having at least 70% identity to SEQ ID NO: 22;

(iv) an antibody, or an antigen-binding fragment thereof, comprising a CDRH1 having at least 70% identity to SEQ ID NO: 66, a CDRH2 having at least 70% identity to SEQ ID NO: 67, a CDRH3 having at least 70% identity to SEQ ID NO: 68, a CDRL1 having at least 70% identity to SEQ ID NO: 69, a CDRL2 having at least 70% identity to SEQ ID NO: 70, and a CDRL3 having at least 70% identity to SEQ ID NO: 71;

(v) an antibody, or an antigen-binding fragment thereof, comprising a CDRH1 having at least 70% identity to SEQ ID NO: 74, a CDRH2 having at least 70% identity to SEQ ID NO: 75, a CDRH3 having at least 70% identity to SEQ ID NO: 76, a CDRL1 having at least 70% identity to SEQ ID NO: 77, a CDRL2 having at least 70% identity to SEQ ID NO: 78, and a CDRL3 having at least 70% identity to SEQ ID NO: 79;

(vi) an antibody, or an antigen-binding fragment thereof, comprising a CDRH1 having at least 70% identity to SEQ ID NO: 82, a CDRH2 having at least 70% identity to SEQ ID NO: 83, a CDRH3 having at least 70% identity to SEQ ID NO: 84, a CDRL1 having at least 70% identity to SEQ ID NO: 85, a CDRL2 having at least 70% identity to SEQ ID NO: 86, and a CDRL3 having at least 70% identity to SEQ ID NO: 87,

wherein the kit preferably comprises at least two antibodies or antigen-binding fragments thereof, selected from the group consisting of:

(i) an antibody, or an antigen-binding fragment thereof, comprising a CDRH1 according to SEQ ID NO: 1, a CDRH2 according to SEQ ID NO: 2, a CDRH3 according to SEQ ID NO: 3, a CDRL1 according to SEQ ID NO: 4, a CDRL2 according to SEQ ID NO: 5, and a CDRL3 according to SEQ ID NO: 6;

(ii) an antibody, or an antigen-binding fragment thereof, comprising a CDRH1 according to SEQ ID NO: 9, a CDRH2 according to SEQ ID NO: 10, a CDRH3 according to SEQ ID NO: 11, a CDRL1 according to SEQ ID NO: 12, a CDRL2 according to SEQ ID NO: 13, and a CDRL3 according to SEQ ID NO: 14; and an antibody, or an antigen-binding fragment thereof, according to any one of (iii) to (vi):

(iii) an antibody, or an antigen-binding fragment thereof, comprising a CDRH1 according to SEQ ID NO: 17, a CDRH2 according to SEQ ID NO: 18, a CDRH3 according to SEQ ID NO: 19, a CDRL1 according to SEQ ID NO: 20, a CDRL2 according to SEQ ID NO: 21, and a CDRL3 according to SEQ ID NO: 22;

(iv) an antibody, or an antigen-binding fragment thereof, comprising a CDRH1 according to SEQ ID NO: 66, a CDRH2 according to SEQ ID NO: 67, a CDRH3 according to SEQ ID NO: 68, a CDRL1 according to SEQ ID NO: 69, a CDRL2 according to SEQ ID NO: 70, and a CDRL3 according to SEQ ID NO: 71;

(v) an antibody, or an antigen-binding fragment thereof, comprising a CDRH1 according to SEQ ID NO: 74, a CDRH2 according to SEQ ID NO: 75, a CDRH3 according to SEQ ID NO: 76, a CDRL1 according to SEQ ID NO: 77, a CDRL2 according to SEQ ID NO: 78, and a CDRL3 according to SEQ ID NO: 79;

(vi) an antibody, or an antigen-binding fragment thereof, comprising a CDRH1 according to SEQ ID NO: 82, a CDRH2 according to SEQ ID NO: 83, a CDRH3 according to SEQ ID

NO: 84, a CDRL1 according to SEQ ID NO: 85, a CDRL2 according to SEQ ID NO:86, and a CDRL3 according to SEQ ID NO: 87,

and/or

wherein the kit preferably comprises at least two antibodies or antigen-binding fragments thereof, selected from the group consisting of:

(i) an antibody, or an antigen-binding fragment thereof, comprising a VH having at least 70% identity to SEQ ID NO: 7; and a VL having at least 70% identity to SEQ ID NO: 8;

(ii) an antibody, or an antigen-binding fragment thereof, comprising a VH having at least 70% identity to SEQ ID NO: 15; and a VL having at least 70% identity to SEQ ID NO: 16; and an antibody, or an antigen-binding fragment thereof, according to any one of (iii) to (vi):

(iii) an antibody, or an antigen-binding fragment thereof, comprising a VH having at least 70% identity to SEQ ID NO: 23; and a VL having at least 70% identity to SEQ ID NO: 24;

(iv) an antibody, or an antigen-binding fragment thereof, comprising a VH having at least 70% identity to SEQ ID NO: 72; and a VL having at least 70% identity to SEQ ID NO: 73;

(v) an antibody, or an antigen-binding fragment thereof, comprising a VH having at least 70% identity to SEQ ID NO: 80; and a VL having at least 70% identity to SEQ ID NO: 81;

(vi) an antibody, or an antigen-binding fragment thereof, comprising a VH having at least 70% identity to SEQ ID NO: 88; and a VL having at least 70% identity to SEQ ID NO: 89,

and/or

wherein the kit preferably comprises at least two antibodies or antigen-binding fragments thereof, selected from the group consisting of:

(i) an antibody, or an antigen-binding fragment thereof, comprising a VH according to SEQ ID NO: 7; and a VL according to SEQ ID NO: 8;

(ii) an antibody, or an antigen-binding fragment thereof, comprising a VH according to SEQ ID NO: 15; and a VL according to SEQ ID NO: 16; and an antibody, or an antigen-binding fragment thereof, according to any one of (iii) to (vi):

(iii) an antibody, or an antigen-binding fragment thereof, comprising a VH according to SEQ ID NO: 23; and a VL according to SEQ ID NO: 24;

(iv) an antibody, or an antigen-binding fragment thereof, comprising a VH according to SEQ ID NO: 72; and a VL according to SEQ ID NO: 73;

(v) an antibody, or an antigen-binding fragment thereof, comprising a VH according to SEQ ID NO: 80; and a VL according to SEQ ID NO: 81;

(vi) an antibody, or an antigen-binding fragment thereof, comprising a VH according to SEQ ID NO: 88; and a VL according to SEQ ID NO: 89,

and/or

which preferably comprises at least three antibodies, or antigen-binding fragments thereof, and preferably comprises an antibody, or an antigen-binding fragment thereof, according to (i), an antibody, or an antigen-binding fragment thereof, according to (ii), and an antibody, or an antigen-binding fragment thereof, according to at least one of (iii) to (vi).

32. The antibody, or an antigen-binding fragment thereof, according to any one of claims 1 to 20, the nucleic acid or the plurality of nucleic acids according to any one of claims 21 to 22, the vector or the plurality of vectors according to claim 23, the cell according to claim 24, the composition according to any one of claims 26 to 29, or the kit according to any one of claims 30 to 31 for use as a medicament.

33. The antibody, or an antigen-binding fragment thereof, according to any one of claims 1 to 20, the nucleic acid or the plurality of nucleic acids according to any one of claims 21 to 22, the vector or the plurality of vectors according to claim 23, the cell according to claim 24, the composition according to any one of claims 26 to 29, or the kit according to any one of claims 30 to 31 for use in the prophylaxis or treatment of a birch pollen allergy and/or related tree pollen allergy, which preferably selected from at least one of hazel pollen allergy, black alder pollen allergy, beech pollen allergy, oak tree pollen allergy, chestnut pollen allergy, hop-hornbeam pollen allergy and hornbeam pollen allergy, and/or a related food allergy, preferably selected from at least one of apple allergy, hazelnut allergy and walnut allergy,

wherein the administration of the antibody, or the antigen-binding fragment thereof, the nucleic acid or the plurality of nucleic acids, the vector or the plurality of vectors, the cell, or the composition is preferably combined with the administration of a Bet v 1 birch pollen allergen, and/or a related tree pollen allergen, preferably selected from at least one of Cor a 1 hazel pollen allergen, Aln g 1 black alder pollen allergen, Fag s 1 beech pollen allergen, Que a 1 oak tree pollen allergen, Cas s 1 chestnut pollen allergen, Ost c 1 hop-hornbeam

pollen allergen and Car b1 hornbeam pollen allergen, and/or a related food allergen, preferably selected from at least one of Mal d 1 apple allergen, Cor a 1 hazelnut allergen and Jug r 5 walnut allergen,

more preferably wherein the antibody, or the antigen-binding fragment thereof, or the composition is administered before or during a desensitization procedure with a birch pollen allergen, and/or a related tree pollen allergen, and/or a related food allergen.

34. The antibody, or an antigen-binding fragment thereof, according to any one of claims 1 to 20, the composition according to any one of claims 26 to 29, or the kit according to any one of claims 30 to 31 for use in (*in-vitro*) diagnosis of a birch pollen allergy, and/or a related tree pollen allergy, preferably selected from at least one of hazel pollen allergy, black alder pollen allergy, beech pollen allergy, oak tree pollen allergy, chestnut pollen allergy, hop-hornbeam pollen allergy and hornbeam pollen allergy, and/or a related food allergy, preferably selected from at least one of apple allergy, hazelnut allergy and walnut allergy.

35. The antibody, or an antigen-binding fragment thereof, according to any one of claims 1 to 20, the composition according to any one of claims 26 to 29, or the kit according to any one of claims 30 to 31 for use in a method for detecting a birch pollen allergen, and/or a related tree pollen allergen, preferably selected from at least one of Cor a 1 hazel pollen allergen, Aln g 1 black alder pollen allergen, Fag s 1 beech pollen allergen, Que a 1 oak tree pollen allergen, Cas s 1 chestnut pollen allergen, Ost c 1 hop-hornbeam pollen allergen and Car b1 hornbeam pollen allergen, and/or a related food allergen, preferably selected from at least one of Mal d 1 apple allergen, Cor a 1 hazelnut allergen and Jug r 5 walnut allergen.