Any of the preceding compositions (e.g., pharmaceutical compositions) may further include an IL-13 axis binding antagonist, an IL-5 axis binding antagonist, an IL-33 axis binding antagonist, an M1 prime antagonist, an IgE antagonist, a TRPA1 antagonist, a CRTH2 antagonist, a broncodilator or asthma symptom controller medication, an immunomodulator, a corticosteroid, a Th2 pathway inhibitor, a tyrosine kinase inhibitor, or a phosphodiesterase inhibitor. In some examples, the IL-13 axis binding antagonist is an anti-IL-13 antibody. In some examples, the anti-IL-13 antibody is lebrikizumab. In some examples, the IL-5 axis binding antagonist is an IL-5 binding antagonist or an IL-5 receptor binding antagonist. In some examples, the IL-33 axis binding antagonist is an IL-33 binding antagonist or an ST2 binding antagonist. In some examples, the IL-33 binding antagonist is an anti-IL-33 antibody. In some examples, the M1 prime antagonist is quilizumab. In some instances, the IgE antagonist is omalizumab (XOLAIR®).

Any of the preceding compositions (e.g., pharmaceutical compositions) may be formulated for administration to a human. In certain examples, the pharmaceutical compositions comprise antibodies that do not comprise non-human constant region sequences. In certain examples, the pharmaceutical compositions comprise antibodies that do not comprise non-human framework and non-human constant region sequences. In certain examples, the pharmaceutical compositions comprise antibodies that are human antibodies, humanized antibodies, or chimeric antibodies.

In some examples, any one of the preceding antibodies can be used as a medicament. In one aspect, the present disclosure refers to any one of the preceding antibodies for use as a medicament.

In some examples, any of the preceding antibodies can be used in treating a disorder. In some examples, the disorder is selected from the group consisting of a pulmonary disorder, an autoimmune disorder, an inflammatory disorder, a fibrotic disorder, a granulocytic (neutrophilic or eosinophilic) disorder, a monocytic disorder, a lymphocytic disorder, or a disorder associated with increased numbers or distribution of normal or aberrant tissue resident cells (such as mast cells, macrophages, or lymphocytes) or stromal cells (such as fibroblasts, myofibroblasts, smooth muscle cells, epithelia, or endothelia). In one aspect, the present disclosure refers to any of the preceding antibodies for use in treating a tryptase beta-associated disorder selected from the group consisting of a pulmonary disorder, an autoimmune disorder, an inflammatory disorder, a fibrotic disorder, a granulocytic (neutrophilic or eosinophilic) disorder, a monocytic disorder, a lymphocytic disorder, a disorder associated with increased numbers or distribution of normal or aberrant tissue resident cells or stromal cells, and mastocytosis. In some examples, the disorder is a pulmonary disorder. In some examples, the pulmonary disorder is selected from the group consisting of asthma, airway hyperresponsiveness, and chronic obstructive pulmonary disease (COPD). In some examples, the pulmonary disorder is asthma. In some examples, the asthma is Th2-high asthma or Th2-low asthma. In some examples, the autoimmune disorder is selected from the group consisting of rheumatoid arthritis, psoriasis, eosinophilic esophagitis, inflammatory bowel disease (IBD), and Crohn's disease. In some examples, the inflammatory disorder is chronic idiopathic urticaria (CIU, also known as chronic spontaneous urticaria, CSU), anaphylaxis, anaphylactic shock, atopic dermatitis, or allergic rhinitis. In some examples, the fibrotic disorder is idiopathic pulmonary fibrosis (IPF). In some examples, the disorder is a disorder associated with increased numbers or distribution of normal or aberrant tissue resident cells (such as mast cells, macrophages, or lymphocytes) or stromal cells (such as fibroblasts, myofibroblasts, smooth muscle cells, epithelia, or endothelia). In some examples, the disorder is mastocytosis. In some examples, the antibody is for use in combination with an additional therapeutic agent. In some examples, the additional therapeutic agent is an IL-13 axis binding antagonist, an IL-5 axis binding antagonist, an IL-33 axis binding antagonist, an M1 prime antagonist, an IgE antagonist, a TRPA1 antagonist, a CRTH2 antagonist, a broncodilator or asthma symptom controller medication, an

immunomodulator, a corticosteroid, a Th2 pathway inhibitor, a tyrosine kinase inhibitor, or a phosphodiesterase inhibitor. In some examples, the IL-13 axis binding antagonist is an anti-IL-13 antibody. In some examples, the anti-IL-13 antibody is lebrikizumab. In some examples, the IL-5 axis binding antagonist is an IL-5 binding antagonist or an IL-5 receptor binding antagonist. In some examples, the IL-33 axis binding antagonist is an IL-33 binding antagonist or an ST2 binding antagonist. In some examples, the IL-33 binding antagonist is an anti-IL-33 antibody. In some examples, the M1 prime antagonist is quilizumab. In some examples, the antibody is for administration subcutaneously, intravenously, intramuscularly, topically, orally, transdermally, intraperitoneally, intraorbitally, by implantation, by inhalation, intrathecally, intraventricularly, or intranasally. In some examples, the antibody is for administration subcutaneously. In some examples, the antibody is for use in a human subject.

In some examples, any one of the preceding compositions (e.g., pharmaceutical compositions) can be used as a medicament. In one aspect, the present disclosure refers to any one of the preceding pharmaceutical compositions for use as a medicament.

In some examples, any of the preceding compositions (e.g., pharmaceutical compositions) can be used in treating a disorder. In some examples, the disorder is selected from the group consisting of a pulmonary disorder, an autoimmune disorder, an inflammatory disorder, a fibrotic disorder, a granulocytic (neutrophilic or eosinophilic) disorder, a monocytic disorder, a lymphocytic disorder, or a disorder associated with increased numbers or distribution of normal or aberrant tissue resident cells (such as mast cells, macrophages, or lymphocytes) or stromal cells (such as fibroblasts, myofibroblasts, smooth muscle cells, epithelia, or endothelia). In one aspect, the present disclosure refers to any of the preceding pharmaceutical compositions for use in treating a tryptase beta-associated disorder selected from the group consisting of a pulmonary disorder, an autoimmune disorder, an inflammatory disorder, a fibrotic disorder, a granulocytic (neutrophilic or eosinophilic) disorder, a monocytic disorder, a lymphocytic disorder, a disorder associated with increased numbers or distribution of normal or aberrant tissue resident cells or stromal cells, and mastocytosis. In some examples, the disorder is a pulmonary disorder. In some examples, the pulmonary disorder is selected from the group consisting of asthma, airway hyperresponsiveness, and chronic obstructive pulmonary disease (COPD). In some examples, the pulmonary disorder is asthma. In some examples, the asthma is Th2-high asthma or Th2-low asthma. In some examples, the autoimmune disorder is selected from the group consisting of rheumatoid arthritis, psoriasis, eosinophilic esophagitis, inflammatory bowel disease (IBD), and Crohn's disease. In some examples, the inflammatory disorder is chronic idiopathic urticaria (CIU or CSU), anaphylaxis, anaphylactic shock, atopic dermatitis, or allergic rhinitis. In some examples, the fibrotic disorder is idiopathic pulmonary fibrosis (IPF). In some examples, the disorder is a disorder associated with increased numbers or distribution of normal or aberrant tissue resident cells (such as mast cells, macrophages, or lymphocytes) or stromal cells (such as fibroblasts, myofibroblasts, smooth muscle cells, epithelia, or endothelia). In some examples, the disorder is mastocytosis. In some examples, the composition (e.g., pharmaceutical composition) is for use in combination with an additional therapeutic agent. In some examples, the additional therapeutic agent is an IL-13 axis binding antagonist, an IL-5 axis binding antagonist, an IL-33 axis binding antagonist, an M1 prime antagonist, an IgE antagonist, a TRPA1 antagonist, a CRTH2 antagonist, a broncodilator or asthma symptom controller medication, an immunomodulator, a corticosteroid, a Th2 pathway inhibitor, a tyrosine kinase inhibitor, or a phosphodiesterase inhibitor. In some examples, the IL-13 axis binding antagonist is an anti-IL-13 antibody. In some examples, the anti-IL-13 antibody is lebrikizumab. In some examples, the IL-5 axis binding antagonist is an IL-5 binding antagonist or an IL-5 receptor binding antagonist. In some examples, the IL-33 axis binding antagonist is an IL-33 binding

antagonist or an ST2 binding antagonist. In some examples, the IL-33 binding antagonist is an anti-IL-33 antibody. In some examples, the M1 prime antagonist is quilizumab. In some examples, the composition (e.g., pharmaceutical composition) is for administration subcutaneously, intravenously, intramuscularly, topically, orally, transdermally, intraperitoneally, intraorbitally, by implantation, by inhalation, intrathecally, intraventricularly, or intranasally. In some examples, the composition (e.g., pharmaceutical composition) is for administration subcutaneously. In some examples, the composition (e.g., pharmaceutical composition) is for use in a human subject.

In some examples, any one of the preceding antibodies can be used in the manufacture of a medicament for treating a disorder. In one aspect, the present disclosure refers to use of any one of the preceding antibodies in the manufacture of a medicament for treating a tryptase beta-associated disorder selected from the group consisting of a pulmonary disorder, an autoimmune disorder, an inflammatory disorder, a fibrotic disorder, a granulocytic (neutrophilic or eosinophilic) disorder, a monocytic disorder, a lymphocytic disorder, a disorder associated with increased numbers or distribution of normal or aberrant tissue resident cells or stromal cells, and mastocytosis. In some examples, the disorder is selected from the group consisting of a pulmonary disorder, an autoimmune disorder, an inflammatory disorder, a fibrotic disorder, a granulocytic (neutrophilic or eosinophilic) disorder, a monocytic disorder, a lymphocytic disorder, or a disorder associated with increased numbers or distribution of normal or aberrant tissue resident cells (such as mast cells, macrophages, or lymphocytes) or stromal cells (such as fibroblasts, myofibroblasts, smooth muscle cells, epithelia, or endothelia). In some examples, the disorder is a pulmonary disorder. In some examples, the pulmonary disorder is selected from the group consisting of asthma, airway hyperresponsiveness, and chronic obstructive pulmonary disease (COPD). In some examples, the pulmonary disorder is asthma. In some examples, the asthma is Th2-high asthma or Th2-low asthma. In some examples, the autoimmune disorder is selected from the group consisting of rheumatoid arthritis, psoriasis, eosinophilic esophagitis, inflammatory bowel disease (IBD), and Crohn's disease. In some examples, the inflammatory disorder is chronic idiopathic urticaria (CIU or CSU), anaphylaxis, anaphylactic shock, atopic dermatitis, or allergic rhinitis. In some examples, the fibrotic disorder is idiopathic pulmonary fibrosis (IPF). In some examples, the disorder is a disorder associated with increased numbers or distribution of normal or aberrant tissue resident cells (such as mast cells, macrophages, or lymphocytes) or stromal cells (such as fibroblasts, myofibroblasts, smooth muscle cells, epithelia, or endothelia). In some examples, the disorder is mastocytosis. In some examples, the medicament is formulated for use in combination with an additional therapeutic agent. In some examples, the additional therapeutic agent is an IL-13 axis binding antagonist, an IL-5 axis binding antagonist, an IL-33 axis binding antagonist, an M1 prime antagonist, an IgE antagonist, a TRPA1 antagonist, a CRTH2 antagonist, a broncodilator or asthma symptom controller medication, an immunomodulator, a corticosteroid, a Th2 pathway inhibitor, a tyrosine kinase inhibitor, or a phosphodiesterase inhibitor. In some examples, the IL-13 axis binding antagonist is an anti-IL-13 antibody. In some examples, the anti-IL-13 antibody is lebrikizumab. In some examples, the IL-5 axis binding antagonist is an IL-5 binding antagonist or an IL-5 receptor binding antagonist. In some examples, the IL-33 axis binding antagonist is an IL-33 binding antagonist or an ST2 binding antagonist. In some examples, the IL-33 binding antagonist is an anti-IL-33 antibody. In some examples, the M1 prime antagonist is quilizumab. In some examples, the medicament is formulated for administration subcutaneously, intravenously, intramuscularly, topically, orally, transdermally, intraperitoneally, intraorbitally, by implantation, by inhalation, intrathecally, intraventricularly, or intranasally. In some examples, the medicament is formulated for administration subcutaneously. In some examples, the medicament is formulated for use in a human subject.

In some examples, any one of the preceding compositions (e.g., pharmaceutical compositions) can be used in the manufacture of a medicament for treating a disorder. In one aspect, the present disclosure refers to use of any one of the preceding pharmaceutical compositions in the manufacture of a medicament for treating a tryptase beta-associated disorder selected from the group consisting of a pulmonary disorder, an autoimmune disorder, an inflammatory disorder, a fibrotic disorder, a granulocytic (neutrophilic or eosinophilic) disorder, a monocytic disorder, a lymphocytic disorder, a disorder associated with increased numbers or distribution of normal or aberrant tissue resident cells or stromal cells, or mastocytosis. In some examples, the disorder is selected from the group consisting of a pulmonary disorder, an autoimmune disorder, an inflammatory disorder, a fibrotic disorder, a granulocytic (neutrophilic or eosinophilic) disorder, a monocytic disorder, a lymphocytic disorder, or a disorder associated with increased numbers or distribution of normal or aberrant tissue resident cells (such as mast cells, macrophages, or lymphocytes) or stromal cells (such as fibroblasts, myofibroblasts, smooth muscle cells, epithelia, or endothelia). In some examples, the disorder is a pulmonary disorder. In some examples, the pulmonary disorder is selected from the group consisting of asthma, airway hyperresponsiveness, and chronic obstructive pulmonary disease (COPD). In some examples, the pulmonary disorder is asthma. In some examples, the asthma is Th2-high asthma or Th2-low asthma. In some examples, the autoimmune disorder is selected from the group consisting of rheumatoid arthritis, psoriasis, eosinophilic esophagitis, inflammatory bowel disease (IBD), and Crohn's disease. In some examples, the inflammatory disorder is chronic idiopathic urticaria (CIU or CSU), anaphylaxis, anaphylactic shock, atopic dermatitis, or allergic rhinitis. In some examples, the fibrotic disorder is idiopathic pulmonary fibrosis (IPF). In some examples the disorder is a disorder associated with increased numbers or distribution of normal or aberrant tissue resident cells (such as mast cells, macrophages, or lymphocytes) or stromal cells (such as fibroblasts, myofibroblasts, smooth muscle cells, epithelia, or endothelia). In some examples, the disorder is mastocytosis. In some examples, the medicament is formulated for use in combination with an additional therapeutic agent. In some examples, the additional therapeutic agent is an IL-13 axis binding antagonist, an IL-5 axis binding antagonist, an IL-33 axis binding antagonist, an M1 prime antagonist, an IgE antagonist, a TRPA1 antagonist, a CRTH2 antagonist, a broncodilator or asthma symptom controller medication, an immunomodulator, a corticosteroid, a Th2 pathway inhibitor, a tyrosine kinase inhibitor, or a phosphodiesterase inhibitor. In some examples, the IL-13 axis binding antagonist is an anti-IL-13 antibody. In some examples, the anti-IL-13 antibody is lebrikizumab. In some examples, the IL-5 axis binding antagonist is an IL-5 binding antagonist or an IL-5 receptor binding antagonist. In some examples, the IL-33 axis binding antagonist is an IL-33 binding antagonist or an ST2 binding antagonist. In some examples, the IL-33 binding antagonist is an anti-IL-33 antibody. In some examples, the M1 prime antagonist is quilizumab. In some examples, the medicament is formulated for administration subcutaneously, intravenously, intramuscularly, topically, orally, transdermally, intraperitoneally, intraorbitally, by implantation, by inhalation, intrathecally, intraventricularly, or intranasally. In some examples, the medicament is formulated for administration subcutaneously. In some examples, the medicament is formulated for use in a human subject.

In another example, the disclosure features a method of treating a disorder in a subject in need thereof, the method comprising administering to the subject a therapeutically effective amount of any one of the preceding antibodies. In some examples, the disorder is selected from the group consisting of a pulmonary disorder, an autoimmune disorder, an inflammatory disorder, a fibrotic disorder, a granulocytic (neutrophilic or eosinophilic) disorder, a monocytic disorder, a lymphocytic disorder, or a disorder associated with increased numbers or distribution of normal or aberrant tissue resident cells (such as mast cells, macrophages, or lymphocytes) or stromal cells (such as fibroblasts, myofibroblasts,

What is claimed is:

1. An isolated antibody that binds to human tryptase beta 1, or an antigen-binding fragment thereof, wherein the antibody comprises the following six hypervariable regions (HVRs):

(a) an HVR-H1 comprising the amino acid sequence of DYGMV (SEQ ID NO: 7);

(b) an HVR-H2 comprising the amino acid sequence of FISSGSSTVYYADTMKG (SEQ ID NO: 2);

(c) an HVR-H3 comprising the amino acid sequence of RNYDDWYFDV (SEQ ID NO: 8);

(d) an HVR-L1 comprising the amino acid sequence of SASSSVTYMY (SEQ ID NO: 4);

(e) an HVR-L2 comprising the amino acid sequence of RTSDLAS (SEQ ID NO: 5); and

(f) an HVR-L3 comprising the amino acid sequence of QHYHSYPLT (SEQ ID NO: 6).

2. The antibody of claim 1, wherein the antibody comprises (a) a heavy chain variable (VH) domain comprising an amino sequence having at least 90%, at least 95%, or at least 99% sequence identity to the amino acid sequence of SEQ ID NO: 9; (b) a light chain variable (VL) domain comprising an amino acid sequence having at least 90%, at least 95%, or at least 99% identity to the amino acid sequence of SEQ ID NO: 10; or (c) a VH domain as in (a) and a VL domain as in (b).

3. The antibody of claim 1 or 2, wherein the VH domain comprises the amino acid sequence of SEQ ID NO: 9.

4. The antibody of any one of claims 1-3, wherein the VL domain comprises the amino acid sequence of SEQ ID NO: 10.

5. The antibody of claim 1, wherein the antibody comprises (a) a VH domain comprising an amino acid sequence having at least 90%, at least 95%, or at least 99% sequence identity to the amino acid sequence of SEQ ID NO: 9 and (b) a VL domain comprising an amino acid sequence having at least 90%, at least 95%, or at least 99% sequence identity to the amino acid sequence of SEQ ID NO: 10.

6. An isolated antibody that binds to human tryptase beta 1, or an antigen-binding fragment thereof, wherein the antibody comprises a VH domain comprising the amino acid sequence of SEQ ID NO: 9 and a VL domain comprising the amino acid sequence of SEQ ID NO: 10.

7. An isolated antibody comprising (a) a heavy chain comprising the amino acid sequence of SEQ ID NO: 76 or SEQ ID NO: 78 and (b) a light chain comprising the amino acid sequence of SEQ ID NO: 77 or SEQ ID NO: 79.

8. The antibody of any one of claims 1-7, wherein the antibody binds to an epitope on human tryptase beta 1 comprising at least one, at least two, at least three, or all four residues selected from the group consisting of His51, Val80, Lys81, and Asp82 of SEQ ID NO: 71.

9. The antibody of claim 8, wherein the epitope on human tryptase beta 1 further comprises one or more amino acid residues selected from the group consisting of Gln67, Leu83, Ala84, Ala85, Arg87, Pro103, Val104, Ser105, Arg106, Glu128, Glu129, and Pro130 of SEQ ID NO: 71.

10. The antibody of claim 9, wherein the epitope on human tryptase beta 1 comprises His51, Gln67, Val80, Lys81, Asp82, Leu83, Ala84, Ala85, Arg87, Pro103, Val104, Ser105, Arg106, Glu128, Glu129, and Pro130 of SEQ ID NO:71.

11. The antibody of any one of claims 1-10, wherein the antibody is capable of dissociating both the small interface of tetrameric human tryptase beta 1 and the large interface of tetrameric human tryptase beta 1.

12. The antibody of any one of claims 1-11, wherein the antibody further binds cynomolgus monkey (cyno) tryptase, human tryptase alpha, human tryptase beta 2 and/or human tryptase beta 3.

13. The antibody of any one of claims 5-7, wherein the antibody binds the tryptase with a K_D of 1 nM or less as assessed by surface plasmon resonance (SPR).

14. The antibody of claim 13, wherein the antibody binds the tryptase with a K_D of between 120 pM and 0.5 nM as assessed by SPR.

15. The antibody of claim 14, wherein the antibody binds tryptase with a K_D of 400 pM as assessed by SPR.

16. The antibody of any one of claims 1-15, wherein the antibody is capable of inhibiting the enzymatic activity of human tryptase beta 1.

17. The antibody of claim 16, wherein the antibody inhibits the activity of tryptase with an IC50 of 2.5 nM or lower as determined by a human tryptase beta enzymatic assay using a synthetic peptide S-2288 as a substrate.

18. The antibody of any one of claims 1-17, wherein:

(i) the antibody is capable of inhibiting the enzymatic activity of human tryptase beta 1 at pH 6;

(ii) the antibody is capable of inhibiting tryptase-mediated stimulation of bronchial smooth muscle cell proliferation and/or collagen-based contraction;

(iii) the antibody is capable of inhibiting mast cell histamine release;

(iv) the antibody is capable of inhibiting IgE-triggered histamine release and/or tryptase-triggered histamine release;

(v) the antibody is capable of inhibiting tryptase activity in cynomolgus monkey broncheoloar lavage (BAL) or nasosorption samples;

(vi) the antibody is capable of dissociating tetrameric human tryptase beta 1;

(vii) the antibody is capable of dissociating tetrameric human tryptase beta 1 when in a monovalent format; and/or

(viii) the antibody is capable of dissociating tetrameric human tryptase beta 1 in the presence of heparin.

19. The antibody of any one of claims 1-18, wherein the antibody is monoclonal or humanized.

20. The antibody of any one of claims 1-6 and 8-19, wherein the antibody is an antibody fragment that binds human tryptase beta 1.

21. The antibody of any one of claims 1-19, wherein the antibody is a full-length antibody.

22. The antibody of claim 21, wherein the antibody is an IgG antibody.

23. The antibody of claim 22, wherein the IgG antibody is an IgG1 antibody or an IgG4 antibody.

24. The antibody of claim 23, wherein the IgG4 antibody comprises an S228P mutation (EU numbering).

25. The antibody of any one of claims 1-24, wherein the antibody is a monospecific antibody or a multispecific antibody.

26. The antibody of claim 25, wherein the antibody is a bispecific antibody.

27. The antibody of claim 26, wherein the antibody comprises a first binding domain that binds to human tryptase beta 1 and a second binding domain that binds to a second biological molecule, wherein the second biological molecule is selected from the group consisting of interleukin-13 (IL-13), interleukin-4 (IL-4), interleukin-5 (IL-5), interleukin-17 (IL-17), IgE, and interleukin-33 (IL-33).

28. An isolated nucleic acid, or a set of isolated nucleic acids, encoding the antibody of any one of claims 1-27.

29. An isolated nucleic acid, or a set of isolated nucleic acids, encoding an antibody comprising a VH domain comprising the amino acid sequence of SEQ ID NO: 9 and/or a VL domain comprising the amino acid sequence of SEQ ID NO: 10, wherein the nucleic acid or set comprises a sequence that at least 90%, at least 95%, or at least 99% identical to the sequence of SEQ ID NO: 104 and/or SEQ ID NO: 105.

30. A vector or set of vectors comprising the isolated nucleic acid or set of isolated nucleic acids of claim 28 or 29.

31. A host cell comprising the vector or set of vectors of claim 30.

32. The host cell of claim 31, wherein the host cell is a mammalian cell or a prokaryotic cell.

33. A method of producing the antibody of any one of claims 1-27, the method comprising culturing the host cell of claim 31 in a culture medium under suitable conditions that allow production of the antibody.

34. A pharmaceutical composition comprising the antibody of any one of claims 1-27 and a pharmaceutically acceptable carrier, excipient, or diluent.

35. The composition of claim 34, wherein the excipient is an antioxidant.

36. A pharmaceutical composition comprising:

(i) an isolated antibody that binds to human tryptase beta 1, or an antigen-binding fragment thereof, wherein the antibody comprises the following six hypervariable regions (HVRs):

(a) an HVR-H1 comprising the amino acid sequence of DYGMV (SEQ ID NO: 7);

(b) an HVR-H2 comprising the amino acid sequence of FISSGSSTVYYADTMKG (SEQ ID NO: 2);

(c) an HVR-H3 comprising the amino acid sequence of RNYDDWYFDV (SEQ ID NO: 8);

(d) an HVR-L1 comprising the amino acid sequence of SASSSVTYMY (SEQ ID NO: 4);

(e) an HVR-L2 comprising the amino acid sequence of RTSDLAS (SEQ ID NO: 5); and

(f) an HVR-L3 comprising the amino acid sequence of QHYHSYPLT (SEQ ID NO: 6), wherein the oxidation of tryptophan at position 6 of HVR-H3 (SEQ ID NO: 8) is no more than 30%.

37. A pharmaceutical composition comprising:

(i) an isolated antibody that binds to human tryptase, or an antigen-binding fragment thereof, wherein the antibody comprises the following six hypervariable regions (HVRs):

(a) an HVR-H1 comprising the amino acid sequence of DYGMV (SEQ ID NO: 7);

(b) an HVR-H2 comprising the amino acid sequence of FISSGSSTVYYADTMKG (SEQ ID NO: 2);

(c) an HVR-H3 comprising the amino acid sequence of RNYDDWYFDV (SEQ ID NO: 8);

(d) an HVR-L1 comprising the amino acid sequence of SASSSVTYMY (SEQ ID NO: 4);

(e) an HVR-L2 comprising the amino acid sequence of RTSDLAS (SEQ ID NO: 5); and

(f) an HVR-L3 comprising the amino acid sequence of QHYHSYPLT (SEQ ID NO: 6);

(ii) N-acetyltryptophan at a concentration of 0.1 mm to 1 mM; and

(iii) methionine at a concentration of 1 mM to 10 mM.

38. The composition of any one of claims 34-37, wherein the composition is in a light-proof container or pre-filled syringe.

39. The composition of any one of claims 34-38, wherein the composition further comprises an IL-13 axis binding antagonist, an IL-5 axis binding antagonist, an IL-33 axis binding antagonist, an M1 prime antagonist, an IgE antagonist, a TRPA1 antagonist, a CRTH2 antagonist, a broncodilator or asthma symptom controller medication, an immunomodulator, a corticosteroid, a Th2 pathway inhibitor, a tyrosine kinase inhibitor, or a phosphodiesterase inhibitor.

40. The antibody of any one of claims 1-27 for use as a medicament.

41. The antibody of any one of claims 1-27 for use in treating a tryptase beta-associated disorder selected from the group consisting of a pulmonary disorder, an autoimmune disorder, an inflammatory disorder, a fibrotic disorder, a granulocytic (neutrophilic or eosinophilic) disorder, a monocytic disorder, a lymphocytic disorder, a disorder associated with increased numbers or distribution of normal or aberrant tissue resident cells or stromal cells, and mastocytosis.

42. The antibody for use of claim 41, wherein the tryptase beta-associated disorder is a pulmonary disorder.

43. The antibody for use of claim 42, wherein the pulmonary disorder is selected from the group consisting of asthma, airway hyperresponsiveness, and chronic obstructive pulmonary disease (COPD).

44. The antibody for use of claim 43, wherein the pulmonary disorder is asthma.

45. The antibody for use of claim 41, wherein the autoimmune disorder is selected from the group consisting of rheumatoid arthritis, psoriasis, eosinophilic esophagitis, inflammatory bowel disease (IBD), and Crohn's disease.

46. The antibody for use of claim 41, wherein the inflammatory disorder is chronic spontaneous urticaria (CSU), anaphylaxis, anaphylactic shock, atopic dermatitis, or allergic rhinitis.

47. The antibody for use of claim 41, wherein the fibrotic disorder is idiopathic pulmonary fibrosis (IPF).

48. The antibody for use of any one of claims 41-47, which is for use in combination therapy with an additional therapeutic agent for treating the tryptase beta-associated disorder of any one of claims 41-47.

49. The antibody for use of claim 48, wherein the additional therapeutic agent comprises an IL-13 axis binding antagonist, an IL-5 axis binding antagonist, an IL-33 axis binding antagonist, an M1 prime antagonist, an IgE antagonist, a TRPA1 antagonist, a CRTH2 antagonist, a broncodilator or asthma symptom controller medication, an immunomodulator, a corticosteroid, a Th2 pathway inhibitor, a tyrosine kinase inhibitor, or a phosphodiesterase inhibitor.

50. The antibody for use of any one of claims 41-49, which is for administration subcutaneously, intravenously, intramuscularly, topically, orally, transdermally, intraperitoneally, intraorbitally, by implantation, by inhalation, intrathecally, intraventricularly, or intranasally.

51. The pharmaceutical composition of any one of claims 34-39 for use as a medicament.

52. The pharmaceutical composition of any one of claims 34-39 for use in treating a tryptase beta-associated disorder selected from the group consisting of a pulmonary disorder, an autoimmune disorder, an inflammatory disorder, a fibrotic disorder, a granulocytic (neutrophilic or eosinophilic) disorder, a monocytic disorder, a lymphocytic disorder, a disorder associated with increased numbers or distribution of normal or aberrant tissue resident cells or stromal cells, and mastocytosis.

53. The pharmaceutical composition for use of claim 52, wherein the tryptase beta-associated disorder is a pulmonary disorder.

54. The pharmaceutical composition for use of claim 53, wherein the pulmonary disorder is selected from the group consisting of asthma, airway hyperresponsiveness, and chronic obstructive pulmonary disease (COPD).

55. The pharmaceutical composition for use of claim 54, wherein the pulmonary disorder is asthma.

56. The pharmaceutical composition for use of claim 52, wherein the autoimmune disorder is selected from the group consisting of rheumatoid arthritis, psoriasis, eosinophilic esophagitis, inflammatory bowel disease (IBD), and Crohn's disease.

57. The pharmaceutical composition for use of claim 52, wherein the inflammatory disorder is chronic spontaneous urticaria (CSU), anaphylaxis, anaphylactic shock, atopic dermatitis, or allergic rhinitis.

58. The pharmaceutical composition for use of claim 52, wherein the fibrotic disorder is idiopathic pulmonary fibrosis (IPF).

59. The pharmaceutical composition for use of any one of claims 52-58, which is for use in combination therapy with an additional therapeutic agent for treating the tryptase beta-associated disorder of any one of claims 52-58.

60. The pharmaceutical composition for use of claim 59, wherein the additional therapeutic agent comprises an IL-13 axis binding antagonist, an IL-5 axis binding antagonist, an IL-33 axis binding antagonist, an M1 prime antagonist, an IgE antagonist, a TRPA1 antagonist, a CRTH2 antagonist, a broncodilator or asthma symptom controller medication, an immunomodulator, a corticosteroid, a Th2 pathway inhibitor, a tyrosine kinase inhibitor, or a phosphodiesterase inhibitor.

61. The pharmaceutical composition for use of any one of claims 52-60, which is for administration subcutaneously, intravenously, intramuscularly, topically, orally, transdermally, intraperitoneally, intraorbitally, by implantation, by inhalation, intrathecally, intraventricularly, or intranasally.

62. Use of an antibody of any one of claims 1-27 in the manufacture of a medicament for treating a tryptase beta-associated disorder selected from the group consisting of a pulmonary disorder, an autoimmune disorder, an inflammatory disorder, a fibrotic disorder, a granulocytic (neutrophilic or

eosinophilic) disorder, a monocytic disorder, a lymphocytic disorder, a disorder associated with increased numbers or distribution of normal or aberrant tissue resident cells or stromal cells, and mastocytosis.

63. The use of claim 62, wherein the tryptase beta-associated disorder is a pulmonary disorder.

64. The use of claim 63, wherein the pulmonary disorder is selected from the group consisting of asthma, airway hyperresponsiveness, and chronic obstructive pulmonary disease (COPD).

65. The use of claim 64, wherein the pulmonary disorder is asthma.

66. The use of claim 62, wherein the autoimmune disorder is selected from the group consisting of rheumatoid arthritis, psoriasis, eosinophilic esophagitis, inflammatory bowel disease (IBD), and Crohn's disease.

67. The use of claim 62, wherein the inflammatory disorder is chronic spontaneous urticaria (CSU), anaphylaxis, anaphylactic shock, atopic dermatitis, or allergic rhinitis.

68. The use of claim 62, wherein the fibrotic disorder is idiopathic pulmonary fibrosis (IPF).

69. The use of any one of claims 62-68, wherein the medicament is formulated for use in combination therapy with an IL-13 axis binding antagonist, an IL-5 axis binding antagonist, an IL-33 axis binding antagonist, an M1 prime antagonist, an IgE antagonist, a TRPA1 antagonist, a CRTH2 antagonist, a broncodilator or asthma symptom controller medication, an immunomodulator, a corticosteroid, a Th2 pathway inhibitor, a tyrosine kinase inhibitor, or a phosphodiesterase inhibitor.

70. Use of a pharmaceutical composition of any one of claims 34-39 in the manufacture of a medicament for treating a tryptase beta-associated disorder selected from the group consisting of a pulmonary disorder, an autoimmune disorder, an inflammatory disorder, a fibrotic disorder, a granulocytic (neutrophilic or eosinophilic) disorder, a monocytic disorder, a lymphocytic disorder, a disorder associated with increased numbers or distribution of normal or aberrant tissue resident cells or stromal cells, or mastocytosis.

71. The use of claim 70, wherein the tryptase beta-associated disorder is a pulmonary disorder.

72. The use of claim 71, wherein the pulmonary disorder is selected from the group consisting of asthma, airway hyperresponsiveness, and chronic obstructive pulmonary disease (COPD).

73. The use of claim 72, wherein the pulmonary disorder is asthma.

74. The use of claim 70, wherein the autoimmune disorder is selected from the group consisting of rheumatoid arthritis, psoriasis, eosinophilic esophagitis, inflammatory bowel disease (IBD), and Crohn's disease.

75. The use of claim 70, wherein the inflammatory disorder is chronic spontaneous urticaria (CSU), anaphylaxis, anaphylactic shock, atopic dermatitis, or allergic rhinitis.

76. The use of claim 70, wherein the fibrotic disorder is idiopathic pulmonary fibrosis (IPF).

77. The use of any one of claims 70-76, wherein the medicament is formulated for use in combination therapy with an IL-13 axis binding antagonist, an IL-5 axis binding antagonist, an IL-33 axis binding antagonist, an M1 prime antagonist, an IgE antagonist, a TRPA1 antagonist, a CRTH2 antagonist, a broncodilator or asthma symptom controller medication, an immunomodulator, a corticosteroid, a Th2 pathway inhibitor, a tyrosine kinase inhibitor, or a phosphodiesterase inhibitor.

78. The use of any one of claims 62-77, wherein the medicament is formulated for administration subcutaneously, intravenously, intramuscularly, topically, orally, transdermally, intraperitoneally, intraorbitally, by implantation, by inhalation, intrathecally, intraventricularly, or intranasally.