Clin Immunol., 2012, 130(3):563-71). There is currently a need for therapies that can control the activity of immune cells involved in inflammation, such as the activity of eosinophils and mast cells.

[0006] Previous studies have demonstrated that eosinophils undergo apoptosis when Siglec-8 is crosslinked with specific murine antibodies raised against the extracellular portion of Siglec-8 (Nutku et al., *Blood*, 2003, 336:918-24). These antibodies are described in U.S. Pat. No. 8,207,305, U.S. Pat. No. 8,197,811, U.S. Pat. No. 7,871,612, and U.S. Pat. No. 7,557,191. However, there remains a need for developing humanized anti-Siglec-8 antibodies that recognize human Siglec-8 with high affinity and specificity. Discovery of such anti-Siglec-8 antibodies may allow for the development of treatment for diseases mediated by the activity of eosinophils and/or mast cells.

[0007] All references cited herein, including patent applications, patent publications, and scientific literature, are herein incorporated by reference in their entirety, as if each individual reference were specifically and individually indicated to be incorporated by reference.

SUMMARY

[0008] Provided herein are anti-Siglec-8 antibodies (including humanized anti-Siglec-8 antibodies), compositions comprising thereof, and methods of using the same.

[0009] Provided herein is a humanized antibody that specifically binds to a human Siglec-8, wherein the binding affinity and/or binding avidity of the humanized antibody to a human Siglec-8 are higher than the binding affinity and/or binding avidity of antibody 2E2 and/or antibody 2C4 to the human Siglec-8. Provided herein is a humanized antibody that binds to a human Siglec-8, wherein the binding affinity or avidity of the humanized antibody to the human Siglec-8 is higher than the binding affinity or avidity of antibody 2E2 or 2C4 to the human Siglec-8. In some embodiments, the human Siglec-8 is a dimer. In some embodiments, the human Siglec-8 comprises an extracellular domain human Siglec-8 fused to a Fc region of an immunoglobulin. In some embodiments, the Fc region is a human IgG1 Fc region. In some embodiments, the Fc region is a human IgG4 Fc region. In some embodiments, the human Siglec-8 comprises the amino acid sequence of SEQ ID NO:74.

[0010] In some embodiments, the humanized antibody comprises a heavy chain variable region and a light chain variable region, wherein the heavy chain variable region comprises (i) HVR-H1 comprising the amino acid sequence of SEQ ID NO:61, (ii) HVR-H2 comprising the amino acid sequence of SEQ ID NO:62, and (iii) HVR-H3 comprising the amino acid sequence of SEQ ID NO:63; and/or wherein the light chain variable region comprises (i) HVR-L1 comprising the amino acid sequence of SEQ ID NO:64, (ii) HVR-L2 comprising the amino acid sequence of SEQ ID NO:65, and (iii) HVR-L3 comprising the amino acid sequence of SEQ ID NO:66. In one aspect, provided herein is a humanized antibody that binds to a human Siglec-8, wherein the antibody comprises a heavy chain variable region comprising the amino acid sequence of SEQ ID NO:6; and a light chain variable region comprising the

amino acid sequence selected from SEQ ID NOs:16 or 21. In any of the embodiments herein, the antibody may comprise a heavy chain Fc region comprising a human IgG Fc region. In further embodiments, the human IgG Fc region comprises a human IgG1 or IgG4. In some embodiments, the human IgG1 comprises the amino acid sequence of SEQ ID NO:78. In some embodiments, the human IgG4 comprises the amino acid sequence of SEQ ID NO:79. In any of the embodiments herein, the antibody may comprise a heavy chain comprising the amino acid sequence of SEQ ID NO:75; and/or a light chain comprising the amino acid sequence selected from SEQ ID NOs:76 or 77. In some embodiments, the human IgG4 comprises the amino acid substitution S228P, wherein the amino acid residues are numbered according to the EU index as in Kabat. In any of the embodiments herein, the antibody may comprise a heavy chain comprising the amino acid sequence of SEQ ID NO:87; and/or a light chain comprising the amino acid sequence of SEQ ID NO:76. In some embodiments, the antibody has been engineered to improve antibody-dependent cell-mediated cytotoxicity (ADCC) activity. In some embodiments, the antibody comprises two heavy chains and wherein at least one of the two or both heavy chains of the antibody is non-fucosylated.

[0011] Provided herein is a humanized antibody that specifically binds to a human Siglec-8, wherein the antibody has a Tm of at least about 70°C to at least about 72°C in a thermal shift assay. Provided herein is a humanized antibody that binds to a human Siglec-8, wherein the antibody has a Tm of at least about 70°C in a thermal shift assay. In some embodiments, the antibody has a Tm at about 70°C, at about 71°C, or at about 72°C in a thermal shift assay. In some embodiments, the antibody has the same or higher Tm as compared to a chimeric 2C4 antibody. In some embodiments, the antibody has the same or higher Tm as compared to an antibody having a heavy chain comprising the amino acid sequence of SEQ ID NO:84 and a light chain comprising the amino acid sequence of SEQ ID NO:85.

[0012] In some embodiments, the antibody comprises a heavy chain variable region and a light chain variable region, wherein the heavy chain variable region comprises (i) HVR-H1 comprising the amino acid sequence of SEQ ID NO:61, (ii) HVR-H2 comprising the amino acid sequence of SEQ ID NO:62, and (iii) HVR-H3 comprising the amino acid sequence of SEQ ID NO:63; and/or wherein the light chain variable region comprises (i) HVR-L1 comprising the amino acid sequence of SEQ ID NO:64, (ii) HVR-L2 comprising the amino acid sequence of SEQ ID NO:65, and (iii) HVR-L3 comprising the amino acid sequence of SEQ ID NO:66. In some embodiments, the antibody comprises a heavy chain variable region comprising the amino acid sequence of SEQ ID NO:6; and/or a light chain variable region comprising the amino acid sequence selected from SEQ ID NOs:16 or 21. In any of the embodiments herein, the antibody may comprise a heavy chain Fc region comprising a human IgG Fc region. In further embodiments, the human IgG Fc region comprises a human IgG1 or IgG4. In some

embodiments, the human IgG1 comprises the amino acid sequence of SEQ ID NO:78. In some embodiments, the human IgG4 comprises the amino acid sequence of SEQ ID NO:79. In any of the embodiments herein, the antibody may comprise a heavy chain comprising the amino acid sequence of SEQ ID NO:75; and/or a light chain comprising the amino acid sequence selected from SEQ ID NOs:76 or 77. In some embodiments, the human IgG4 comprises the amino acid substitution S228P, wherein the amino acid residues are numbered according to the EU index as in Kabat. In any of the embodiments herein, the antibody may comprise a heavy chain comprising the amino acid sequence of SEQ ID NO:87; and/or a light chain comprising the amino acid sequence of SEQ ID NO:76. In some embodiments, the antibody has been engineered to improve antibody-dependent cell-mediated cytotoxicity (ADCC) activity. In some embodiments, at least one or two of the heavy chains of the antibody is non-fucosylated.

[0013] Provided herein is a humanized antibody that specifically binds to a human Siglec-8, wherein the antibody comprises a heavy chain variable region and a light chain variable region, wherein the heavy chain variable region comprises (i) HVR-H1 comprising the amino acid sequence of SEQ ID NO:61, (ii) HVR-H2 comprising the amino acid sequence of SEQ ID NO:62, and (iii) HVR-H3 comprising the amino acid sequence selected from SEQ ID NOs:63 and 67-70; and/or wherein the light chain variable region comprises (i) HVR-L1 comprising the amino acid sequence of SEQ ID NO:64, (ii) HVR-L2 comprising the amino acid sequence of SEQ ID NO:65, and (iii) HVR-L3 comprising the amino acid sequence of SEQ ID NO:66 or 71. Provided herein is a humanized antibody that binds to human Siglec-8, wherein the antibody comprises: (a) a heavy chain variable region and a light chain variable region, wherein the heavy chain variable region comprises (i) HVR-H1 comprising the amino acid sequence of SEQ ID NO:61, (ii) HVR-H2 comprising the amino acid sequence of SEQ ID NO:62, and (iii) HVR-H3 comprising the amino acid sequence selected from SEQ ID NOs:67-70; and/or wherein the light chain variable region comprises (i) HVR-L1 comprising the amino acid sequence of SEQ ID NO:64, (ii) HVR-L2 comprising the amino acid sequence of SEQ ID NO:65, and (iii) HVR-L3 comprising the amino acid sequence of SEQ ID NO:71; or (b) a heavy chain variable region and a light chain variable region, wherein the heavy chain variable region comprises (i) HVR-H1 comprising the amino acid sequence of SEQ ID NO:61, (ii) HVR-H2 comprising the amino acid sequence of SEQ ID NO:62, and (iii) HVR-H3 comprising the amino acid sequence of SEQ ID NO:63; and/or wherein the light chain variable region comprises (i) HVR-L1 comprising the amino acid sequence of SEQ ID NO:64, (ii) HVR-L2 comprising the amino acid sequence of SEQ ID NO:65, and (iii) HVR-L3 comprising the amino acid sequence of SEQ ID NO:66. In some embodiments, the antibody comprises a heavy

embodiments, the human IgG4 comprises the amino acid substitution S228P, wherein the amino acid residues are numbered according to the EU index as in Kabat. In some embodiments, the antibody has been engineered to improve antibody-dependent cell-mediated cytotoxicity (ADCC) activity. In some embodiments, at least one or two of the heavy chains of the antibody is non-fucosylated.

[0014] In yet another aspect, provided herein is a humanized antibody that binds to human Siglec-8, wherein the antibody comprises a heavy chain variable region comprising the amino acid sequence selected from SEQ ID NOs:2-14; and a light chain variable region comprising the amino acid sequence selected from SEQ ID NOs:16-24. In some embodiments, the antibody has been engineered to improve antibody-dependent cell-mediated cytotoxicity (ADCC) activity. In some embodiments, at least one or two of the heavy chains of the antibody is non-fucosylated.

[0015] Provided herein is a humanized antibody that specifically binds to human Siglec-8, wherein the antibody comprises a heavy chain variable region comprising the amino acid sequence selected from SEQ ID NOs:2-10; and/or a light chain variable region comprising the amino acid sequence selected from SEQ ID NOs:16-22. In some embodiments, the antibody has been engineered to improve antibody-dependent cell-mediated cytotoxicity (ADCC) activity. In some embodiments, at least one or two of the heavy chains of the antibody is non-fucosylated.

[0016] In another aspect, provided herein is a humanized antibody that binds to a human Siglec-8, wherein the antibody comprises: (a) heavy chain variable region comprising: (1) an HC-FR1 comprising the amino acid sequence selected from SEQ ID NOs:26-29; (2) an HVR-H1 comprising the amino acid sequence of SEQ ID NO:61; (3) an HC-FR2 comprising the amino acid sequence selected from SEQ ID NOs:31-36; (4) an HVR-H2 comprising the amino acid sequence of SEQ ID NO:62; (5) an HC-FR3 comprising the amino acid sequence selected from SEQ ID NOs:38-43; (6) an HVR-H3 comprising the amino acid sequence of SEQ ID NO:63; and (7) an HC-FR4 comprising the amino acid sequence selected from SEQ ID NOs:45-46, and (b) a light chain variable region comprising: (1) an LC-FR1 comprising the amino acid sequence selected from SEQ ID NOs:48-49; (2) an HVR-L1 comprising the amino acid sequence of SEQ ID NO:64; (3) an LC-FR2 comprising the amino acid sequence selected from SEQ ID NOs:51-53; (4) an HVR-L2 comprising the amino acid sequence of SEQ ID NO:65; (5) an LC-FR3 comprising the amino acid sequence selected from SEQ ID NOs:55-58; (6) an HVR-L3 comprising the amino acid sequence of SEQ ID NO:66; and (7) an LC-FR4 comprising the amino acid sequence of SEQ ID NO:60. In some embodiments, the antibody has been

SEQ ID NO:89, (ii) HVR-H2 comprising the amino acid sequence of SEQ ID NO:92, and (iii) HVR-H3 comprising the amino acid sequence of SEQ ID NO:95; and/or a light chain variable region comprising (i) HVR-L1 comprising the amino acid sequence of SEQ ID NO:98, (ii) HVR-L2 comprising the amino acid sequence of SEQ ID NO:101, and (iii) HVR-L3 comprising the amino acid sequence of SEQ ID NO:104. In a further embodiment, the antibody comprises a heavy chain variable region comprising the amino acid sequence of SEQ ID NO:107; and/or a light chain variable region comprising the amino acid sequence of SEQ ID NO:110. In any of the embodiments herein, the antibody may comprise a heavy chain variable region comprising a heavy chain variable region comprising a heavy chain variable region comprising (i) HVR-H1 comprising the amino acid sequence of SEQ ID NO:90, (ii) HVR-H2 comprising the amino acid sequence of SEQ ID NO:93, and (iii) HVR-H3 comprising the amino acid sequence of SEQ ID NO:96; and/or a light chain variable region comprising (i) HVR-L1 comprising the amino acid sequence of SEQ ID NO:99, (ii) HVR-L2 comprising the amino acid sequence of SEQ ID NO:102, and (iii) HVR-L3 comprising the amino acid sequence of SEQ ID NO:105. In a further embodiment, the antibody comprises a heavy chain variable region comprising the amino acid sequence of SEQ ID NO:108; and/or a light chain variable region comprising the amino acid sequence of SEQ ID NO:111. In any of the embodiments herein, the antibody may comprise a heavy chain variable region and a light chain variable region, wherein the heavy chain variable region comprises (i) HVR-H1 comprising the amino acid sequence of SEQ ID NO:61, (ii) HVR-H2 comprising the amino acid sequence of SEQ ID NO:62, and (iii) HVR-H3 comprising the amino acid sequence of SEQ ID NO:63; and/or wherein the light chain variable region comprises (i) HVR-L1 comprising the amino acid sequence of SEQ ID NO:64, (ii) HVR-L2 comprising the amino acid sequence of SEQ ID NO:65, and (iii) HVR-L3 comprising the amino acid sequence of SEQ ID NO:66. In any of the embodiments herein, the antibody may comprise a heavy chain variable region and a light chain variable region, wherein the heavy chain variable region comprises (i) HVR-H1 comprising the amino acid sequence of SEQ ID NO:61, (ii) HVR-H2 comprising the amino acid sequence of SEQ ID NO:62, and (iii) HVR-H3 comprising the amino acid sequence selected from SEQ ID NOs:67-70; and/or wherein the light chain variable region comprises (i) HVR-L1 comprising the amino acid sequence of SEQ ID NO:64, (ii) HVR-L2 comprising the amino acid sequence of SEQ ID NO:65, and (iii) HVR-L3 comprising the amino acid sequence of SEQ ID NO:71. In any of the embodiments herein, the subject can be a human.

[0018] Provided herein is an antibody that binds to a human Siglec-8 and a non-human primate Siglec-8. In any of the embodiments herein, the antibody may comprise a heavy chain variable region comprising a heavy chain variable region comprising (i)

comprising the amino acid sequence of SEQ ID NO:99, (ii) HVR-L2 comprising the amino acid sequence of SEQ ID NO:102, and (iii) HVR-L3 comprising the amino acid sequence of SEQ ID NO:105. In any of the embodiments herein, the antibody may comprise a heavy chain Fc region comprising a human IgG Fc region. In further embodiments, the human IgG Fc region comprises a human IgG1 or IgG4. In some embodiments, the human IgG1 comprises the amino acid sequence of SEQ ID NO:78. In some embodiments, the human IgG4 comprises the amino acid sequence of SEQ ID NO:79. In any of the embodiments herein, the antibody may comprise a heavy chain comprising the amino acid sequence of SEQ ID NO:75; and/or a light chain comprising the amino acid sequence selected from SEQ ID NOs:76 or 77. In some embodiments, the human IgG4 comprises the amino acid substitution S228P, wherein the amino acid residues are numbered according to the EU index as in Kabat. In any of the embodiments herein, the antibody may comprise a heavy chain comprising the amino acid sequence of SEQ ID NO:87; and/or a light chain comprising the amino acid sequence of SEQ ID NO:76.

[0021] In another aspect, provided herein is a nucleic acid encoding any antibody described above and herein. In yet another aspect, provided herein is a vector comprising a nucleic acid described herein. In one embodiment, the vector is an expression vector. In yet another aspect, provided herein is a host cell comprising a nucleic acid described herein. In some embodiments, the host cell expresses and produces the antibody.

[0022] In another aspect, provided herein is a method of producing an antibody comprising culturing a host cell comprising one or more nucleic acids encoding an antibody described herein under a condition that produces the antibody. In some embodiments, the method further comprises recovering the antibody produced by the host cell. Provided herein is an anti-Siglec-8 antibody produced by the method described herein. Also provided herein is an antigen-binding fragment of an anti-Siglec-8 antibody described herein.

[0023] In another aspect, provided herein is a pharmaceutical composition comprising an antibody described above and herein and a pharmaceutically acceptable carrier. In yet another aspect, provided herein is a kit comprising an antibody described above and herein.

[0024] Provided herein is a composition comprising an antibody that specifically binds to human Siglec-8, wherein the antibody comprises a Fc region and N-glycoside-linked carbohydrate chains linked to the Fc region, wherein less than 50% of the N-glycoside-linked carbohydrate chains contain a fucose residue. In some embodiments, substantially none of the N-glycoside-linked carbohydrate chains contain a fucose residue. In some embodiments, the antibody is a humanized antibody, a chimeric antibody or a human antibody. In some embodiments, the antibody comprises a heavy chain variable region and a light chain variable region, wherein the heavy chain variable region

comprises (i) HVR-H1 comprising the amino acid sequence of SEQ ID NO:61, (ii) HVR-H2 comprising the amino acid sequence of SEQ ID NO:62, and (iii) HVR-H3 comprising the amino acid sequence of SEQ ID NO:63; and/or wherein the light chain variable region comprises (i) HVR-L1 comprising the amino acid sequence of SEQ ID NO:64, (ii) HVR-L2 comprising the amino acid sequence of SEQ ID NO:65, and (iii) HVR-L3 comprising the amino acid sequence of SEQ ID NO:66. In some embodiments, the antibody comprises a heavy chain variable region comprising the amino acid sequence of SEQ ID NOs:2-10; and/or a light chain variable region comprising the amino acid sequence of SEQ ID NOs:16-22. In some embodiments, the antibody comprises a heavy chain variable region and a light chain variable region, wherein the heavy chain variable region comprises (i) HVR-H1 comprising the amino acid sequence of SEQ ID NO:61, (ii) HVR-H2 comprising the amino acid sequence of SEQ ID NO:62, and (iii) HVR-H3 comprising the amino acid sequence selected from SEQ ID NOs:67-70; and/or wherein the light chain variable region comprises (i) HVR-L1 comprising the amino acid sequence of SEQ ID NO:64, (ii) HVR-L2 comprising the amino acid sequence of SEQ ID NO:65, and (iii) HVR-L3 comprising the amino acid sequence of SEQ ID NO:71. In some embodiments, the antibody comprises a heavy chain variable region comprising the amino acid sequence selected from SEQ ID NOs:11-14; and/or a light chain variable region comprising the amino acid sequence selected from SEQ ID NOs:23-24. In some embodiments, the antibody comprises a heavy chain variable region comprising the amino acid sequence selected from SEQ ID NOs:2-14; and/or a light chain variable region comprising the amino acid sequence selected from SEQ ID NOs:16-24. In any of the embodiments herein, the composition may further comprise a pharmaceutically acceptable carrier. In any of the embodiments herein, the binding affinity and/or binding avidity of the antibody to a human Siglec-8 can be higher than the binding affinity and/or binding avidity of antibody 2E2 or 2C4 to the human Siglec-8. In any of the embodiments herein, the antibody may have a Tm of at least about 70°C to at least about 72°C in a thermal shift assay. In some embodiments, the antibody has a Tm of about 70°C, about 71°C, or about 72°C. In some embodiments, the antibody has the same or higher Tm as compared to a chimeric 2C4 antibody. In some embodiments, the antibody has the same or higher Tm as compared to an antibody having a heavy chain comprising the amino acid sequence of SEQ ID NO:84 and a light chain comprising the amino acid sequence of SEQ ID NO:85.

[0025] Provided herein is a method of treating or preventing a disease mediated by cells expressing Siglec-8 in a subject, the method comprising administering to the subject an effective amount of an antibody described herein or an antigen-binding fragment thereof or a composition described herein. In one aspect, provided herein is an antibody described herein for use in the treatment or prevention of a disease mediated by cells expressing Siglec-8 in a subject. In some embodiments, the disease is an eosinophil mediated-disease. In some embodiments, the disease is a mast cell mediated-disease. In some

embodiments, the disease is selected from the group consisting of asthma, allergic rhinitis, nasal polyposis, atopic dermatitis, chronic urticaria, mastocytosis, eosinophilic leukemia, and hypereosinophilic syndrome. In some embodiments, the disease is selected from the group consisting of pauci granulocytic asthma, acute or chronic airway hypersensitivity, eosinophilic esophagitis, Churg-Strauss syndrome, inflammation associated with a cytokine, inflammation associated with cells expressing Siglec-8, malignancy associated with cells expressing Siglec-8, physical urticaria, cold urticaria, pressure-urticaria, bullous pemphigoid, food allergy, and allergic bronchopulmonary aspergillosis (ABPA). In some embodiments, the antibody inhibits one or more symptoms of an allergic reaction. In some embodiments, the allergic reaction is a Type I hypersensitivity reaction. In any of the embodiments herein, the subject may be suffering from asthma that is not adequately controlled by an inhaled corticosteroid, a short acting β2 agonist, a long acting β2 agonist, or a combination thereof.

[0026] Provided herein is a method of depleting mast cells expressing Siglec-8 in a subject comprising administering to the subject an effective amount of an antibody that binds to human Siglec-8, wherein the antibody kills mast cells expressing Siglec-8 by ADCC activity. Provided herein is an antibody that binds to human Siglec-8 for use in depleting mast cells expressing Siglec-8 in a subject, wherein the antibody kills mast cells expressing Siglec-8 by ADCC activity. In some embodiments, the antibody kills mast cells expressing Siglec-8 *in vitro* (e.g., measured in a cell culture assay as described in Example 2). In some embodiments, the antibody depletes at least about 20% of the mast cells expressing Siglec-8 in a sample obtained from the subject as compared to a baseline level before treatment. In any of the embodiments herein, the sample can be a tissue sample or a biological fluid sample. In some embodiments, the tissue sample is one or more selected from the group consisting of: skin, lung, bone marrow, and nasal polyps. In some embodiments, the biological fluid sample is one or more selected from the group consisting of: blood, bronchoalveolar lavage, and nasal lavage. In any of the embodiments herein, the antibody can be engineered to improve antibody-dependent cell-mediated cytotoxicity (ADCC) activity. In any of the embodiments herein, the antibody may comprise two heavy chains and wherein at least one of the two or both heavy chains of the antibody is non-fucosylated. In further embodiments, the antibody may be produced in a cell line having a alpha1,6-fucosyltransferase (Fut8) knockout. In some further embodiments, the antibody may be produced in a cell line overexpressing β1,4-N-acetylglycosminyltransferase III (GnT-III). In further embodiments, the cell line additionally overexpresses Golgi μ-mannosidase II (ManII). In any of the embodiments herein, the antibody may comprise at least one amino acid substitution in the Fc region that improves ADCC activity. In any of the embodiments herein, the antibody may be a humanized antibody, a chimeric antibody or a human antibody. In some embodiments, the antibody is a human IgG1 antibody. In any of the embodiments herein, the antibody may comprise a heavy chain variable region comprising (i)

CLAIMS

WHAT IS CLAIMED IS:

1. A humanized antibody that binds to a human Siglec-8, wherein the antibody comprises a heavy chain variable region comprising the amino acid sequence of SEQ ID NO:6; and a light chain variable region comprising the amino acid sequence selected from SEQ ID NOs:16 or 21.

2. The antibody of claim 1, wherein the antibody comprises a heavy chain Fc region comprising a human IgG Fc region.

3. The antibody of claim 2, wherein the human IgG Fc region comprises a human IgG1 or a human IgG4.

4. The antibody of claim 3, wherein the human IgG4 comprises the amino acid substitution S228P, and wherein the amino acid residues are numbered according to the EU index as in Kabat.

5. The antibody of any one of claims 1-4, wherein the antibody comprises a heavy chain comprising the amino acid sequence of SEQ ID NO:75; and a light chain comprising the amino acid sequence selected from SEQ ID NOs:76 or 77.

6. The antibody of any one of claims 1-4, wherein the antibody comprises a heavy chain comprising the amino acid sequence of SEQ ID NO:87; and a light chain comprising the amino acid sequence of SEQ ID NO:76.

7. A humanized antibody that binds to a human Siglec-8, wherein the antibody comprises a heavy chain variable region comprising the amino acid sequence selected from SEQ ID NOs:2-14; and a light chain variable region comprising the amino acid sequence selected from SEQ ID NOs:16-24.

8. A humanized antibody that binds to a human Siglec-8, wherein the antibody comprises:
(a) heavy chain variable region comprising:
(1) an HC-FR1 comprising the amino acid sequence selected from SEQ ID NOs:26-29;
(2) an HVR-H1 comprising the amino acid sequence of SEQ ID NO:61;
(3) an HC-FR2 comprising the amino acid sequence selected from SEQ ID NOs:31-36;
(4) an HVR-H2 comprising the amino acid sequence of SEQ ID NO:62;
(5) an HC-FR3 comprising the amino acid sequence selected from SEQ ID NOs:38-43;

(6) an HVR-H3 comprising the amino acid sequence of SEQ ID NO:63; and

(7) an HC-FR4 comprising the amino acid sequence selected from SEQ ID NOs:45-46, and

(b) a light chain variable region comprising:

(1) an LC-FR1 comprising the amino acid sequence selected from SEQ ID NOs:48-49;

(2) an HVR-L1 comprising the amino acid sequence of SEQ ID NO:64;

(3) an LC-FR2 comprising the amino acid sequence selected from SEQ ID NOs:51-53;

(4) an HVR-L2 comprising the amino acid sequence of SEQ ID NO:65;

(5) an LC-FR3 comprising the amino acid sequence selected from SEQ ID NOs:55-58;

(6) an HVR-L3 comprising the amino acid sequence of SEQ ID NO:66; and

(7) an LC-FR4 comprising the amino acid sequence of SEQ ID NO:60.

9. The humanized antibody of claim 8, wherein the antibody comprises:

(a) heavy chain variable region comprising:

(1) an HC-FR1 comprising the amino acid sequence of SEQ ID NO:26;

(2) an HVR-H1 comprising the amino acid sequence of SEQ ID NO:61;

(3) an HC-FR2 comprising the amino acid sequence of SEQ ID NO:34;

(4) an HVR-H2 comprising the amino acid sequence of SEQ ID NO:62;

(5) an HC-FR3 comprising the amino acid sequence of SEQ ID NO:38;

(6) an HVR-H3 comprising the amino acid sequence of SEQ ID NO:63; and

(7) an HC-FR4 comprising the amino acid sequence of SEQ ID NOs:45;

and

(b) a light chain variable region comprising:

(1) an LC-FR1 comprising the amino acid sequence of SEQ ID NO:48;

(2) an HVR-L1 comprising the amino acid sequence of SEQ ID NO:64;

(3) an LC-FR2 comprising the amino acid sequence of SEQ ID NO:51;

(4) an HVR-L2 comprising the amino acid sequence of SEQ ID NO:65;

(5) an LC-FR3 comprising the amino acid sequence of SEQ ID NO:55;

(6) an HVR-L3 comprising the amino acid sequence of SEQ ID NO:66; and

(7) an LC-FR4 comprising the amino acid sequence of SEQ ID NO:60.

10. The humanized antibody of claim 8, wherein the antibody comprises:

(a) heavy chain variable region comprising:

(1) an HC-FR1 comprising the amino acid sequence of SEQ ID NO:26;

(2) an HVR-H1 comprising the amino acid sequence of SEQ ID NO:61;

(3) an HC-FR2 comprising the amino acid sequence of SEQ ID NO:34;
(4) an HVR-H2 comprising the amino acid sequence of SEQ ID NO:62;
(5) an HC-FR3 comprising the amino acid sequence of SEQ ID NO:38;
(6) an HVR-H3 comprising the amino acid sequence of SEQ ID NO:63; and
(7) an HC-FR4 comprising the amino acid sequence of SEQ ID NOs:45;
and
(b) a light chain variable region comprising:
(1) an LC-FR1 comprising the amino acid sequence of SEQ ID NO:48;
(2) an HVR-L1 comprising the amino acid sequence of SEQ ID NO:64;
(3) an LC-FR2 comprising the amino acid sequence of SEQ ID NO:51;
(4) an HVR-L2 comprising the amino acid sequence of SEQ ID NO:65;
(5) an LC-FR3 comprising the amino acid sequence of SEQ ID NO:58;
(6) an HVR-L3 comprising the amino acid sequence of SEQ ID NO:66; and
(7) an LC-FR4 comprising the amino acid sequence of SEQ ID NO:60.

11. The antibody of any one of claims 1-10, wherein the antibody has been engineered to improve antibody-dependent cell-mediated cytotoxicity (ADCC) activity.

12. The antibody of any one of claims 1-10, wherein one or two of the heavy chains of the antibody is non-fucosylated.

13. A nucleic acid encoding the antibody of any one of claims 1-12.

14. A vector comprising the nucleic acid of claim 13.

15. The vector of claim 14, which is an expression vector.

16. A host cell comprising the nucleic acid of claim 13.

17. A method of producing an antibody comprising culturing the host cell of claim 16 under a condition that produces the antibody.

18. The method of claim 17, further comprising recovering the antibody produced by the host cell.

19. The antibody of any one of claims 1-12 for use in the treatment or prevention of a disease mediated by cells expressing Siglec-8 in a subject.

20. The antibody for use of claim 19, wherein the disease is an eosinophil mediated-disease.

21. The antibody for use of claim 19, wherein the disease is a mast cell mediated-disease.

22. The antibody for use of claim 19, wherein the antibody inhibits one or more symptoms of an allergic reaction.

23. The antibody for use of claim 22, wherein the allergic reaction is a Type I hypersensitivity reaction.

24. The antibody for use of claim 19, wherein the disease is selected from the group consisting of: asthma, allergic rhinitis, nasal polyposis, atopic dermatitis, chronic urticaria, mastocytosis, eosinophilic leukemia, and hypereosinophilic syndrome.

25. The antibody for use of claim 19, wherein the disease is selected from the group consisting of: pauci granulocytic asthma, acute or chronic airway hypersensitivity, eosinophilic esophagitis, Churg-Strauss syndrome, inflammation associated with a cytokine, inflammation associated with cells expressing Siglec-8, malignancy associated with cells expressing Siglec-8, physical urticaria, cold urticaria, pressure-urticaria, bullous pemphigoid, food allergy, and allergic bronchopulmonary aspergillosis (ABPA).

26. The antibody for use of any one of claims 19-25, wherein the subject is suffering from asthma that is not adequately controlled by an inhaled corticosteroid, a short acting β2 agonist, a long acting β2 agonist, or a combination thereof.

27. The antibody for use of any one of claims 19-26, wherein the subject is a human.

28. A pharmaceutical composition comprising the antibody of any one of claims 1-12 and a pharmaceutically acceptable carrier.

29. A kit comprising the antibody of any one of claims 1-12.