CLAIMS

What is claimed is:

1. An anti-thymic stromal lymphopoietin (TSLP) antibody or antigen-binding fragment thereof comprising:
   a) a heavy chain variable domain (V_H) that comprises a heavy chain complementarity-determining region (HCDR) 1 comprising the amino acid sequence of SEQ ID NO:31, a HCDR2 comprising the amino acid sequence of SEQ ID NO:35, and a HCDR3 comprising the amino acid sequence of SEQ ID NO:50; and
   b) a light chain variable domain (V_L) that comprises a light chain complementarity-determining region (LCDR) 1 comprising the amino acid sequence of SEQ ID NO:60, a LCDR2 comprising the amino acid sequence DDS, and a LCDR3 comprising the amino acid sequence of SEQ ID NO:71.

2. An anti-TSLP antibody or antigen-binding fragment thereof comprising:
   a) a V_H that comprises a HCDR1 consisting of the amino acid sequence of SEQ ID NO:31, a HCDR2 consisting of the amino acid sequence of SEQ ID NO:35, and a HCDR3 consisting of the amino acid sequence of SEQ ID NO:50; and
   b) a V_L that comprises a LCDR1 consisting of the amino acid sequence of SEQ ID NO:60, a LCDR2 consisting of the amino acid sequence DDS, and a LCDR3 consisting of the amino acid sequence of SEQ ID NO:71.

3. The anti-TSLP antibody or antigen-binding fragment thereof of claim 1 or 2, comprising a V_H that is humanized, contains human framework regions, or a combination thereof.

4. The anti-TSLP antibody or antigen-binding fragment thereof of claim 1 or 2, comprising a V_H comprising the amino acid sequence of SEQ ID NO:5.

5. The anti-TSLP antibody or antigen-binding fragment thereof of any one of claims 1-4, comprising a V_L that is humanized, contains human framework regions, or a combination thereof.

6. The anti-TSLP antibody or antigen-binding fragment thereof of any one of claims 1-5, comprising a V_L comprising the amino acid sequence of SEQ ID NO:21.

7. The anti-TSLP antibody or antigen-binding fragment thereof of any one of claims 1-6, wherein the antigen-binding fragment comprises a single-chain fragment variable (scFv), a fragment antigen-binding (Fab), a Fab′ or a $F(ab')_2$.

8. The anti-TSLP antibody or antigen-binding fragment thereof of any one of claims 1-6, comprising an antibody heavy chain constant domain, an antibody light chain constant domain, or both an antibody heavy chain constant domain and an antibody light chain constant domain.

9. The anti-TSLP antibody or antigen-binding fragment thereof of claim 8, wherein the antibody heavy chain constant domain is an IgG1, IgG2, IgG3 or IgG4 constant domain.

10. The anti-TSLP antibody or antigen-binding fragment thereof of claim 8 or 9, wherein the antibody heavy chain constant domain is an IgG1 or IgG2 constant domain.

11. The anti-TSLP antibody or antigen-binding fragment thereof of any one of claims 8-10, wherein the antibody heavy chain constant domain comprises one or more mutations which increase serum half-life of the antibody or antigen-binding fragment thereof in humans.

12. The anti-TSLP antibody or antigen-binding fragment thereof of any one of claims 9-11, wherein the antibody heavy chain constant domain comprises, relative to a wild-type human IgG constant domain, amino acid substitutions with tyrosine, threonine and glutamic acid at amino acid residues 252, 254 and 256, respectively, wherein the amino acid residues are numbered according to the EU index as in Kabat.

13. The anti-TSLP antibody or antigen-binding fragment thereof of any one of claims 8-12, comprising:

a) an antibody heavy chain (HC) comprising the amino acid sequence of SEQ ID NO:106; and

b) an antibody light chain (LC) comprising the amino acid sequence of SEQ ID NO:120.

14. The anti-TSLP antibody or antigen-binding fragment thereof of any one of claims 8-10, comprising:
    a) an antibody heavy chain (HC) comprising the amino acid sequence of SEQ ID NO:92; and
    b) an antibody light chain (LC) comprising the amino acid sequence of SEQ ID NO:120.

15. A composition comprising the anti-TSLP antibody or antigen-binding fragment thereof of any one of claims 1-14, and one or more pharmaceutical excipients, diluents, or carriers.

16. The composition of claim 15, further comprising one or more additional therapeutic agents.

17. A polynucleotide comprising a nucleotide sequence encoding the anti-TSLP antibody or antigen-binding fragment thereof of any one of claims 1-14.

18. A host cell comprising the polynucleotide of claim 17.

19. A method of making the anti-TSLP antibody or antigen-binding fragment thereof of any one of claims 1-14, comprising culturing a host cell comprising a nucleotide sequence encoding the anti-TSLP antibody or antigen-binding fragment thereof under conditions where the anti-TSLP antibody or antigen-binding fragment thereof is expressed in the host cell.

20. The composition of claim 15 or 16 for use as a medicament for the treatment of asthma, atopic dermatitis (AD), allergic conjunctivitis, chronic obstructive pulmonary disease (COPD), chronic spontaneous urticaria (CSU), rheumatoid arthritis (RA), rhinosinusitis (RS), eosinophilic esophagitis (EE), or a food-hypersensitivity reaction in a subject in need thereof.

21. Use of the composition of claim 15 or 16 in the manufacture of a medicament for the treatment of asthma, atopic dermatitis (AD), allergic conjunctivitis, chronic obstructive pulmonary disease (COPD), chronic spontaneous urticaria (CSU), rheumatoid arthritis (RA), rhinosinusitis (RS), eosinophilic esophagitis (EE), or a food-hypersensitivity reaction in a subject in need thereof.