CLAIMS

WHAT IS CLAIMED IS:

1. An antibody or antigen-binding fragment that specifically binds to a TL1A polypeptide, comprising: a heavy chain comprising complementarity determining regions (CDRs) of SEQ ID NOs: 6 - 8 and a light chain comprising complementarity determining regions (CDRs) of SEQ ID NOs: 14 – 16.
2. An antibody or antigen-binding fragment that specifically binds to a TL1A polypeptide, comprising: a heavy chain comprising complementarity determining regions (CDRs) of SEQ ID NOs: 22-24 and a light chain comprising complementarity determining regions (CDRs) of SEQ ID NOs: 30-32.
3. The antibody or antigen-binding fragment of claim 1 or claim 2, provided that the antibody or antigen-binding fragment is: a monoclonal antibody, a chimeric antibody, a CDR- grafted antibody, a humanized antibody, a Fab, a Fab', a F(ab')2, a Fv, a disulfide linked Fv, a scFv, a single domain antibody, a diabody, a multispecific antibody, a dual specific antibody, an anti-idiotypic antibody, a bispecific antibody, or a combination thereof.
4. A pharmaceutical composition comprising: a therapeutically effective amount of the antibody or antigen-binding fragment of claim 1 or claim 2, and a pharmaceutically acceptable carrier.
5. A method of treating inflammatory bowel disease in a subject in need thereof, comprising: administering to the subject a therapeutically effective amount of the antibody or an antigen-binding fragment of claim 1 or claim 2.
6. The method of claim 5, provided that the inflammatory bowel disease comprises Crohn's Disease, ulcerative colitis, medically refractive-ulcerative colitis, or a combination thereof.
7. The method of claim 5, provided that prior to administering the antibody or antigen-binding fragment to the subject, the subject over-expresses TL1A.
8. The method of claim 5, provided that the subject comprises a risk variant associated with the inflammatory bowel disease.
9. A polypeptide comprising: one or more complementarity determining regions selected from the group consisting of SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 30, SEQ ID NO: 31, and SEQ ID NO: 32.
10. An antibody or antigen binding fragment that binds to the same region of human TL1A as a reference antibody comprising the heavy chain complementarity determining regions (CDRs) of SEQ ID NOs: 6 - 8 and the light chain complementarity determining regions (CDRs) of SEQ ID NOs: 14 - 16.

11. The antibody or antigen binding fragment of claim 10, provided that the reference antibody comprises a heavy chain variable domain of SEQ ID NO: 5 and a light chain variable domain of SEQ ID NO: 13.
12. An antibody or antigen binding fragment that binds to the same region of human TL1A as a reference antibody comprising the heavy chain complementarity determining regions (CDRs) of SEQ ID NOs: 22 - 24 and the light chain complementarity determining regions (CDRs) of SEQ ID NOs: 30 - 32.
13. The antibody or antigen binding fragment of claim 12, provided that the reference antibody comprises a heavy chain variable domain of SEQ ID NO: 21 and a light chain variable domain of SEQ ID NO: 29.
14. The antibody or antigen-binding fragment of any of claims 10-13, provided that the antibody or antigen-binding fragment is: a monoclonal antibody, a chimeric antibody, a CDR- grafted antibody, a humanized antibody, a Fab, a Fab', a F(ab')2, a Fv, a disulfide linked Fv, a scFv, a single domain antibody, a diabody, a multispecific antibody, a dual specific antibody, an anti-idiotypic antibody, a bispecific antibody, or a combination thereof.
15. A pharmaceutical composition comprising: a therapeutically effective amount of the antibody or antigen-binding fragment of any of claims 10-14, and a pharmaceutically acceptable carrier.
16. A method of treating inflammatory bowel disease in a subject in need thereof, comprising: administering to the subject a therapeutically effective amount of the antibody or an antigen-binding fragment of any of claims 10-14.
17. The method of claim 16, provided that the inflammatory bowel disease comprises Crohn's Disease, ulcerative colitis, medically refractive-ulcerative colitis, or a combination thereof.
18. The method of claim 16 or claim 17, provided that prior to administering the antibody or antigen-binding fragment to the subject, the subject over-expresses TL1A.
19. The method of claim 16 or claim 17, provided that the subject comprises a risk variant associated with the inflammatory bowel disease.
20. A composition comprising a peptide having SEQ ID NO: 7.
21. The composition of claim 20, further comprising one or more peptides selected from SEQ ID NOs: 6, 8, and 14-16.
22. A composition comprising a peptide having SEQ ID NO: 23.
23. The composition of claim 22, further comprising one or more peptides selected from SEQ ID NOs: 22, 24 and 30-32.
24. A method of treating a subject having an inflammatory bowel disease, the method comprising administering to the subject an effective amount of the composition of any of claims 20-23.

25. A method of treating an inflammatory bowel disease in a subject in need thereof, the method comprising administering to the subject an effective amount of an anti-TL1A antibody, provided that the subject comprises one or more risk variants at the TNFSF15 locus, and provided that the anti-TL1A antibody comprises a heavy chain comprising complementarity determining regions (CDRs) of SEQ ID NOs: 6 - 8 and a light chain comprising complementarity determining regions (CDRs) of SEQ ID NOs: 14 – 16.
26. A method of treating an inflammatory bowel disease in a subject in need thereof, the method comprising administering to the subject an effective amount of an anti-TL1A antibody, provided that the subject comprises one or more risk variants at the TNFSF15 locus, and provided that the anti-TL1A antibody comprises a heavy chain comprising complementarity determining regions (CDRs) of SEQ ID NOs: 22-24 and a light chain comprising complementarity determining regions (CDRs) of SEQ ID NOs: 30-32.
27. A method of treating an inflammatory bowel disease in a subject in need thereof, the method comprising administering to the subject an effective amount of an anti-TL1A antibody, provided that the subject over-express TL1A, and provided that the anti-TL1A antibody comprises a heavy chain comprising complementarity determining regions (CDRs) of SEQ ID NOs: 6 - 8 and a light chain comprising complementarity determining regions (CDRs) of SEQ ID NOs: 14 – 16.
28. A method of treating an inflammatory bowel disease in a subject in need thereof, the method comprising administering to the subject an effective amount of an anti-TL1A antibody, provided that the subject over-express TL1A, and provided that the anti-TL1A antibody comprises a heavy chain comprising complementarity determining regions (CDRs) of SEQ ID NOs: 22-24 and a light chain comprising complementarity determining regions (CDRs) of SEQ ID NOs: 30-32.
29. The method of any of claims 25-28, provided that the anti-TL1A antibody is: a monoclonal antibody, a chimeric antibody, a CDR- grafted antibody, a humanized antibody, a Fab, a Fab', a F(ab')2, a Fv, a disulfide linked Fv, a scFv, a single domain antibody, a diabody, a multispecific antibody, a dual specific antibody, an anti-idiotypic antibody, a bispecific antibody, or a combination thereof.
30. The method of any of claims 25-29, provided that the inflammatory bowel disease comprises Crohn's Disease, ulcerative colitis, medically refractive-ulcerative colitis, or a combination thereof.