

CLAIMS

What is claimed is:

1. An antibody, or an antigen-binding portion thereof, that binds to sialyl Lewis A (sLeA) and sialyl Lewis C (sLeC), wherein the binding affinity of such antibody or antigen-binding portion to sLeA is of K_D of 60 μ M or less and the binding affinity to sLeC is of K_D 100 μ M or less.
2. The antibody or antigen-binding portion of claim 1, wherein the antibody or antigen-binding portion does not bind to sialyl Lewis X (sLeX).
3. The antibody or antigen-binding portion of claim 1 or claim 2, wherein the antibody or antigen-binding portion is a humanized antibody or humanized antigen-binding portion.
4. An antibody, or an antigen-binding portion thereof, that binds to sLeA and sLeC, comprising a heavy chain variable region and a light chain variable region, wherein
the heavy chain variable region comprises a sequence having a 90-100% sequence identity to SEQ ID NO:1, SEQ ID NO: 2, SEQ ID NO:3, or SEQ ID NO: 4; and
the light chain variable region comprises a sequence having a 90-100% sequence identity to SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO:8, SEQ ID NO: 9, SEQ ID NO: 10, or SEQ ID NO: 11.
5. The antibody or antigen-binding portion of claim 4, wherein the antibody or antigen-binding portion does not bind to sLeX.
6. The antibody or antigen-binding portion of claim 4 or claim 5, wherein the heavy chain variable region comprises a CDR-H1 comprising the sequence of SEQ ID NO:12, a CDR-H2 comprising the sequence of SEQ ID NO:13, and a CDR-H3 comprising the sequence of SEQ ID NO:14; and wherein the light chain variable region comprises a CDR-L1 comprising a sequence selected from the group consisting of SEQ ID NOs:15-17, a CDR-L2 comprising the sequence of SEQ ID NO:18, and a CDR-L3 comprising the sequence of SEQ ID NO:19.

7. The antibody or antigen-binding portion of claim 4, wherein the heavy chain variable region comprises the sequence of SEQ ID NO:3, and wherein the light chain variable region comprises a sequence selected from the group consisting of SEQ ID Nos:5-8.
8. The antibody or antigen-binding portion of claim 7, wherein the light chain variable region comprises the sequence of SEQ ID NO:8.
9. The antibody or antigen-binding portion of claim 4, wherein the heavy chain variable region comprises the sequence of SEQ ID NO:4, and wherein the light chain variable region comprises a sequence selected from the group consisting of SEQ ID Nos:9-10.
10. An antibody, or an antigen-binding portion thereof, that binds to sLeA and sLeC, comprising a heavy chain variable region, wherein the heavy chain variable region comprises a sequence having a 90-100% sequence identity to SEQ ID NO: 3.
11. The antibody or antigen-binding portion of claim 10, wherein the antibody or antigen-binding portion comprises a light chain variable region, wherein the light chain variable region comprises a sequence having a 90-100% sequence identity to a sequence selected from the group consisting of SEQ ID Nos:5-11.
12. An antibody, or an antigen-binding portion thereof, that binds to sLeA and sLeC, comprising a heavy chain variable region and a light chain variable region, wherein the heavy chain variable region comprises a CDR-H1 comprising the sequence of SEQ ID NO:12, a CDR-H2 comprising the sequence of SEQ ID NO:13, and a CDR-H3 comprising the sequence of SEQ ID NO:14; and wherein the light chain variable region comprises a CDR-L1 comprising a sequence selected from the group consisting of SEQ ID NOs:15-17, a CDR-L2 comprising the sequence of SEQ ID NO:18, and a CDR-L3 comprising the sequence of SEQ ID NO:19.
13. A polynucleotide encoding the antibody or antigen-binding portion thereof of any one of claims 1-12.
14. A vector comprising the polynucleotide of claim 13.
15. A host cell comprising the polynucleotide of claim 13 or the vector of claim 14.

16. A method of producing an antibody, the method comprising culturing the host cell of claim 15 such that the antibody is produced.
17. The method of claim 16, further comprising recovering the antibody from the host cell.
18. A pharmaceutical composition comprising the antibody or antigen-binding portion thereof of any one of claims 1-12 and a pharmaceutically acceptable carrier.
19. A method of treating or ameliorating a symptom of a digestive disease or disorder wherein said method comprises administering to an individual with said digestive disease or disorder an effective amount of the antibody or antigen-binding portion of any one of claims 1-12 or the pharmaceutical composition of claim 18.
20. The method of claim 19, wherein the digestive disease or disorder is selected from the group consisting of inflammatory bowel disease, irritable bowel syndrome, pancreatic cancer and colon cancer.
21. The method of claim 20, wherein the digestive disease or disorder is inflammatory bowel disease.
22. The method of claim 21, wherein the inflammatory bowel disease is Crohn's Disease or ulcerative colitis.
23. The method of any one of claims 19-22, wherein the individual is a human.