WHAT IS CLAIMED IS:

1. An antibody or antigen-binding fragment thereof that specifically binds to an epitope of FOLR1, wherein said epitope comprises at least one, at least two, or three N-glycoslated amino acids.

2. An antibody or antigen-binding fragment thereof that specifically binds to the same FOLR1 epitope as an antibody selected from the group consisting of:

(a) an antibody comprising the polypeptide of SEQ ID NO:27 and the polypeptide of SEQ ID NO:28;

(b) an antibody comprising the polypeptide of SEQ ID NO:29 and the polypeptide of SEQ ID NO:30;

(c) an antibody comprising the polypeptide of SEQ ID NO:31 and the polypeptide of SEQ ID NO:32;

(d) an antibody comprising the polypeptide of SEQ ID NO:62 and the polypeptide of SEQ ID NO:63 or SEQ ID NO:64; and

(e) an antibody comprising the polypeptide of SEQ ID NO:65 and the polypeptide of SEQ ID NO:66 or SEQ ID NO:67.

3. The antibody or antigen-binding fragment of claim 2, wherein the epitope comprises an N-glycosylated amino acid.

4. An antibody or antigen-binding fragment thereof that specifically binds to FOLR1, wherein said antibody or fragment thereof competitively inhibits binding to FOLR1 of an antibody selected from the group consisting of:

(a) an antibody comprising the polypeptide of SEQ ID NO:27 and the polypeptide of SEQ ID NO:28;

(b) an antibody comprising the polypeptide of SEQ ID NO:29 and the polypeptide of SEQ ID NO:30;

(c) an antibody comprising the polypeptide of SEQ ID NO:31 and the polypeptide of SEQ ID NO:32;

(d) an antibody comprising the polypeptide of SEQ ID NO:62 and the polypeptide of SEQ ID NO:63 or SEQ ID NO:64; and

(e) an antibody comprising the polypeptide of SEQ ID NO:65 and the polypeptide of SEQ ID NO:66 or SEQ ID NO:67.

5. The antibody or antigen-binding fragment thereof of any one of claims 1-4, wherein the antibody or fragment thereof comprises the VH CDR1-3 and VL CDR1-3 polypeptide sequences selected from the group consisting of:

(a) SEQ ID NOs:3-8, respectively;

(b) SEQ ID NOs:9-14, respectively;

(c) SEQ ID NOs:15-20, respectively;

(d) SEQ ID NOs:21-26, respectively;

(e) SEQ ID NOs: 3-5 and SEQ ID NOs: 59, 7, and 8, respectively;

(f) SEQ ID NOs: 3, 60, and 5 and SEQ ID NOs: 6-8, respectively;

(g) SEQ ID NOs: 3, 61, and 5 and SEQ ID NOs: 6-8, respectively;

(h) SEQ ID NOs: 3, 60, and 5 and SEQ ID NOs: 59, 7, and 8, respectively; and

(i) SEQ ID NOs: 3, 61, and 5 and SEQ ID NOs: 59, 7, and 8, respectively.

6. The antibody or antigen-binding fragment thereof of any one of claims 1-5, wherein the antibody or fragment thereof comprises polypeptide sequences that are at least 90% identical, at least 95% identical, or at least 99% identical to polypeptide sequences selected from the group consisting of:

(a) SEQ ID NO:27 and SEQ ID NO:28;

(b) SEQ ID NO:29 and SEQ ID NO:30;

(c) SEQ ID NO:31 and SEQ ID NO:32;

(d) SEQ ID NO:62 and SEQ ID NO:63 or SEQ ID NO:64;

(e) SEQ ID NO:65 and SEQ ID NO:66 or SEQ ID NO:67;

(f) SEQ ID NO:68 and SEQ ID NO:69.

7. The antibody or antigen-binding fragment thereof of claim 6, wherein the polypeptide sequences comprise the amino acids of sequences selected from the group consisting of:

(a) SEQ ID NO:27 and SEQ ID NO:28;

(b) SEQ ID NO:29 and SEQ ID NO:30;

(c) SEQ ID NO:31 and SEQ ID NO:32;

(d) SEQ ID NO:62 and SEQ ID NO:63 or SEQ ID NO:64;

(e) SEQ ID NO:65 and SEQ ID NO:66 or SEQ ID NO:67;

(f) SEQ ID NO:68 and SEQ ID NO:69.

8. An antibody or antigen-binding fragment thereof that specifically binds to FOLR1, wherein the antibody or fragment thereof comprises

a humanized heavy chain variable region comprising CDR1, CDR2, and CDR3 regions comprising the amino acids of SEQ ID NO:51, SEQ ID NO:52 or 53, and SEQ ID NO:54, respectively,
a humanized light chain variable region comprising CDR1, CDR2, and CDR3 regions comprising the amino acids of SEQ ID NO:48, SEQ ID NO:49, and SEQ ID NO:50, respectively, and
a murine constant region.

9. The antibody or antigen-binding fragment thereof claim 8, wherein the humanized heavy chain variable region comprises the amino acids of SEQ ID NO:45 and the humanized light chain variable region comprises the amino acids of SEQ ID NO:47.

10. The antibody or antigen-binding fragment thereof of any one of claims 1-9, wherein the antibody is recombinantly produced.

11. The antibody or antigen-binding fragment thereof of any one of claims 1-10, wherein said antibody or antigen-binding fragment thereof is murine, non-human, humanized, chimeric, resurfaced, or human.

12. The antibody or antigen-binding fragment thereof of any one of claims 1-11, wherein said antibody binds to human FOLR1 but not FOLR2 or FOLR3.

13. The antibody or antigen-binding fragment thereof of any one of claims 1-12, which is a full length antibody.

14. The antibody or antigen-binding fragment thereof of any one of claims 1-13, which is an antigen-binding fragment.

15. A polypeptide that specifically binds FOLR1, wherein said polypeptide comprises sequences selected from the group consisting of:

(a) SEQ ID NOs:3-8, respectively;

(b) SEQ ID NOs:9-14, respectively;

(c) SEQ ID NOs:15-20, respectively;

(d) SEQ ID NOs:21-26, respectively;

(e) SEQ ID NOs: 3-5 and SEQ ID NOs: 59, 7, and 8, respectively;

(f) SEQ ID NOs: 3, 60, and 5 and SEQ ID NOs: 6-8, respectively;

(g) SEQ ID NOs: 3, 61, and 5 and SEQ ID NOs: 6-8, respectively

(h) SEQ ID NOs: 3, 60, and 5 and SEQ ID NOs: 59, 7, and 8, respectively;

(i) SEQ ID NOs: 3, 61, and 5 and SEQ ID NOs: 59, 7, and 8, respectively;

and

(j) variants of (a) to (i) comprising 1, 2, 3, or 4 conservative amino acid substitutions.

16. The polypeptide of claim 20, wherein said polypeptide comprises sequences that are at least 90% identical, at least 95% identical, or at least 99% identical to sequences selected from the group consisting of:

(a) SEQ ID NO:27 and SEQ ID NO:28;

(b) SEQ ID NO:29 and SEQ ID NO:30;

(c) SEQ ID NO:31 and SEQ ID NO:32

(d) SEQ ID NO:62 and SEQ ID NO:63 or SEQ ID NO:64;

(e) SEQ ID NO:65 and SEQ ID NO:66 or SEQ ID NO:67; and

(f) SEQ ID NO:68 and SEQ ID NO:69.

17. The polypeptide of claim 16, wherein the sequences comprise the amino acids of sequences selected from the group consisting of:

(a) SEQ ID NO:27 and SEQ ID NO:28;

(b) SEQ ID NO:29 and SEQ ID NO:30;

(c) SEQ ID NO:31 and SEQ ID NO:32;

(d) SEQ ID NO:62 and SEQ ID NO:63 or SEQ ID NO:64;

(e) SEQ ID NO:65 and SEQ ID NO:66 or SEQ ID NO:67; and

(f) SEQ ID NO:68 and SEQ ID NO:69.

18. The antibody, antigen-binding fragment thereof, or polypeptide of any one of claim 1-17, which binds to a human folate receptor 1 with a Kd of about 0.5 to about 10 nM.

19. The antibody, antigen-binding fragment thereof, or polypeptide of any one of claims 1-18, which binds to a human folate receptor 1 with a Kd of about 1.0 nM or better.

20. The antibody or fragment thereof or polypeptide of any one of claims 4-7 or 10-19, wherein the antibody, fragment, or polypeptide binds to an epitope of FOLR1 comprising an amino acid that is N-glycosylated.