What is claimed is:

1. A pharmaceutical composition comprising an anti-IL-6R antibody or antigen-binding fragment thereof for use in inhibiting or attenuating the growth of an anti-VEGF-resistant tumor in a subject.

2. A pharmaceutical composition comprising an anti-IL-6R antibody or antigen-binding fragment thereof for use in inhibiting or attenuating the growth of a tumor in a subject, wherein the tumor exhibits increased IL-6/STAT3 signaling.

3. The pharmaceutical composition of claim 1 or 2, wherein the anti-IL-6R antibody or antigen-specific binding fragment thereof comprises a heavy chain variable region (HCVR) and a light chain variable region (LCVR), wherein the HCVR comprises the complementarity determining regions (CDRs) of SEQ ID NO:2, and wherein the LCVR comprises the CDRs of SEQ ID NO:3.

4. The pharmaceutical composition of claim 3, wherein the HCVR comprises CDRs having the amino acid sequences of SEQ ID NOs:4, 5, and 6; and wherein LCVR comprises CDRs having the amino acid sequences of SEQ ID NOs:7, 8 and 9.

5. The pharmaceutical composition of any one of claims 1 to 4, further comprising an EGFR antagonist.

6. The pharmaceutical composition of claim 5, wherein the EGFR antagonist is selected from the group consisting of an anti-EGFR antibody, an anti-EGFRvIII antibody, an anti-ErbB2 antibody, an anti-ErbB3 antibody, and an anti-ErbB4 antibody.

7. The pharmaceutical composition of any one of claims 1 to 4, further comprising a VEGF antagonist.

8. The pharmaceutical composition of claim 7, wherein the VEGF antagonist is an antigen-specific binding protein that specifically binds VEGF.

9. The pharmaceutical composition of claim 8, wherein the antigen-specific binding protein is fusion protein comprising Ig domain 2 of VEGFR1, Ig domain 3 of VEGFR2, and a multimerizing domain.

10. The pharmaceutical composition of claim 9, wherein the Ig domain 2 of VEGFR1 comprises amino acids 27 to 129 of SEQ ID NO:11, the Ig domain 3 of VEGFR2 comprises amino acids 130 to 231 of SEQ ID NO:11, and the multimerizing domain comprises amino acids 232 to 457 of SEQ ID NO:11.

11. A method for inhibiting or attenuating the growth of an anti-VEGF-resistant tumor in a subject, the method comprising administering to the subject an IL-6 antagonist and a VEGF antagonist.

12. A method of cancer therapy comprising: (i) measuring the level of IL-6/STAT3 signaling in a tumor biopsy from a subject; and (ii) administering an IL-6 antagonist to the subject if the tumor biopsy exhibits increased IL-6/STAT3 signaling.

13. The method of claim 12, further comprising administering to the subject a VEGF antagonist.

14. The method of claim 11 or 12, wherein the IL-6 antagonist is an antigen-specific binding protein that specifically binds IL-6.

15. The method of claim 14, wherein the antigen-specific binding protein is an anti-IL-6 antibody or antigen-binding fragment thereof.

16. The method of claim 11 or 12, wherein the IL-6 antagonist is an antigen-specific binding protein that specifically binds IL-6 receptor (IL-6R).

17. The method of claim 16, wherein the antigen-specific binding protein is an anti-IL-6R antibody or antigen-binding fragment thereof.

18. The method of claim 17, wherein the anti-IL-6R antibody or antigen-specific binding fragment thereof comprises a heavy chain variable region (HCVR) and a light chain variable region (LCVR), wherein the HCVR comprises the complementarity determining regions (CDRs) of SEQ ID NO:2, and wherein the LCVR comprises the CDRs of SEQ ID NO:3.

19. The method of claim 18, wherein the HCVR comprises CDRs having the amino acid sequences of SEQ ID NOs:4, 5, and 6; and wherein LCVR comprises CDRs having the amino acid sequences of SEQ ID NOs:7, 8 and 9.

20. The method of claim 11 or 13, wherein the VEGF antagonist is an antigen-specific binding protein that specifically binds a VEGF receptor.

21. The method of claim 20, wherein the VEGF receptor is VEGFR1 or VEGFR2.

22. The method of claim 21, wherein the antigen-specific binding protein is an anti-VEGFR1 antibody or antigen-binding fragment thereof.

23. The method of claim 21, wherein the antigen-specific binding protein is an anti-VEGFR2 antibody or antigen-binding fragment thereof.

24. The method of claim 11 or 13, wherein the VEGF antagonist is an antigen-specific binding protein that specifically binds VEGF.

25. The method of claim 24, wherein the antigen-specific binding protein is an anti-VEGF antibody.

26. The method of claim 24, wherein the antigen-specific binding protein is fusion protein comprising Ig domain 2 of VEGFR1, Ig domain 3 of VEGFR2, and a multimerizing domain.

27. The method of claim 24, wherein the Ig domain 2 of VEGFR1 comprises amino acids 27 to 129 of SEQ ID NO:11, the Ig domain 3 of VEGFR2 comprises amino acids 130 to 231 of SEQ ID NO:11, and the multimerizing domain comprises amino acids 232 to 457 of SEQ ID NO:11.

28. A method for inhibiting or attenuating the growth of an anti-VEGF-resistant tumor in a subject, the method comprising administering to the subject an IL-6 antagonist and a VEGF antagonist;

wherein the IL-6 antagonist is an anti-IL-6R antibody or antigen-specific binding fragment thereof comprising heavy chain complementarity determining regions (HCDRs) comprising the amino acid sequences of SEQ ID NOs:4, 5, and 6; and light chain complementarity determining regions comprising the amino acid sequences of SEQ ID NOs:7, 8 and 9; and

wherein the VEGF antagonist is an VEGF-specific binding protein comprises amino acids 27-457 of SEQ ID NO:11.

29. A method for determining if a tumor-bearing patient has an anti-VEGF-resistant tumor, the method comprising measuring the level of IL-6/STAT3 signaling in a tumor biopsy from the patient, wherein increased IL-6/STAT3 signaling in the tumor biopsy identifies the patient as having an anti-VEGF-resistant tumor.

30. The method of claim 29, said method further comprising administering to the patient an IL-6 antagonist if the tumor biopsy is found to exhibit increased IL-6/STAT3 signaling.

31. The method of claim 29, said method further comprising administering to the patient an IL-6 antagonist and a VEGF antagonist if the tumor biopsy is found to exhibit increased IL-6/STAT3 signaling.

32. A method for inhibiting or attenuating the growth of a tumor in a subject, the method comprising administering to the subject an IL-6 antagonist and an EGFR antagonist.

33. The method of claim 32, wherein the IL-6 antagonist is an antigen-specific binding protein that specifically binds IL-6.

34. The method of claim 33, wherein the antigen-specific binding protein is an anti-IL-6 antibody or antigen-binding fragment thereof.

35. The method of claim 32, wherein the IL-6 antagonist is an antigen-specific binding protein that specifically binds IL-6 receptor (IL-6R).

36. The method of claim 35, wherein the antigen-specific binding protein is an anti-IL-6R antibody or antigen-binding fragment thereof.

37. The method of claim 36, wherein the anti-IL-6R antibody or antigen-specific binding fragment thereof comprises a heavy chain variable region (HCVR) and a light chain variable region (LCVR), wherein the HCVR comprises the complementarity determining regions (CDRs) of SEQ ID NO:2, and wherein the LCVR comprises the CDRs of SEQ ID NO:3.

38. The method of claim 37, wherein the HCVR comprises CDRs having the amino acid sequences of SEQ ID NOs:4, 5, and 6; and wherein LCVR comprises CDRs having the amino acid sequences of SEQ ID NOs:7, 8 and 9.

39. The method of claim 32, wherein the EGFR antagonist is selected from the group consisting of an anti-EGFR antibody, an anti-EGFRvIII antibody, an anti-ErbB2 antibody, an anti-ErbB3 antibody, and an anti-ErbB4 antibody.

40. The method of claim 39, wherein the antigen-specific binding protein is an anti-EGFR antibody or antigen binding fragment thereof.

What is claimed is:

1. A pharmaceutical composition comprising an anti-IL-6R antibody or antigen-binding fragment thereof for use in inhibiting or attenuating the growth of an anti-VEGF-resistant tumor in a subject.

2. A pharmaceutical composition comprising an anti-IL-6R antibody or antigen-binding fragment thereof for use in inhibiting or attenuating the growth of a tumor in a subject, wherein the tumor exhibits increased IL-6/STAT3 signaling.

3. The pharmaceutical composition of claim 1 or 2, wherein the anti-IL-6R antibody or antigen-specific binding fragment thereof comprises a heavy chain variable region (HCVR) and a light chain variable region (LCVR), wherein the HCVR comprises the complementarity determining regions (CDRs) of SEQ ID NO:2, and wherein the LCVR comprises the CDRs of SEQ ID NO:3.

4. The pharmaceutical composition of claim 3, wherein the HCVR comprises CDRs having the amino acid sequences of SEQ ID NOs:4, 5, and 6; and wherein LCVR comprises CDRs having the amino acid sequences of SEQ ID NOs:7, 8 and 9.

5. The pharmaceutical composition of any one of claims 1 to 4, further comprising an EGFR antagonist.

6. The pharmaceutical composition of claim 5, wherein the EGFR antagonist is selected from the group consisting of an anti-EGFR antibody, an anti-EGFRvIII antibody, an anti-ErbB2 antibody, an anti-ErbB3 antibody, and an anti-ErbB4 antibody.

7. The pharmaceutical composition of any one of claims 1 to 4, further comprising a VEGF antagonist.

8. The pharmaceutical composition of claim 7, wherein the VEGF antagonist is an antigen-specific binding protein that specifically binds VEGF.

9. The pharmaceutical composition of claim 8, wherein the antigen-specific binding protein is fusion protein comprising Ig domain 2 of VEGFR1, Ig domain 3 of VEGFR2, and a multimerizing domain.

10. The pharmaceutical composition of claim 9, wherein the Ig domain 2 of VEGFR1 comprises amino acids 27 to 129 of SEQ ID NO:11, the Ig domain 3 of VEGFR2 comprises amino acids 130 to 231 of SEQ ID NO:11, and the multimerizing domain comprises amino acids 232 to 457 of SEQ ID NO:11.

11. A pharmaceutical composition comprising an anti-IL-6R antibody or antigen-binding fragment thereof for use in inhibiting or attenuating the growth of an anti-VEGF-resistant tumor in a subject wherein the tumor exhibits increased IL-6/STAT3 signaling,

wherein the anti-IL-6R antibody or antigen-specific binding fragment thereof comprises a heavy chain variable region (HCVR) and a light chain variable region (LCVR),

wherein the HCVR comprises CDRs having the amino acid sequences of SEQ ID NOs:4, 5, and 6; and wherein LCVR comprises CDRs having the amino acid sequences of SEQ ID NOs:7, 8 and 9.

12. The pharmaceutical composition of claim 11, further comprising an EGFR antagonist selected from the group consisting of an anti-EGFR antibody, an anti-EGFRvIII antibody, an anti-ErbB2 antibody, an anti-ErbB3 antibody, and an anti-ErbB4 antibody.

13. The pharmaceutical composition of claim 11, further comprising an antigen-specific binding protein that specifically binds VEGF.

14. The pharmaceutical composition of claim 13, wherein the antigen-specific binding protein is a fusion protein comprising Ig domain 2 of VEGFR1, Ig domain 3 of VEGFR2, and a multimerizing domain.

15. The pharmaceutical composition of claim 14, wherein the Ig domain 2 of VEGFR1 comprises amino acids 27 to 129 of SEQ ID NO:11, the Ig domain 3 of VEGFR2 comprises amino acids 130 to 231 of SEQ ID NO:11, and the multimerizing domain comprises amino acids 232 to 457 of SEQ ID NO:11.