WHAT IS CLAIMED IS:

1. An antibody or antigen-binding fragment thereof that binds to EGFR (epidermal growth factor receptor) comprising:

a heavy chain variable region (VH) comprising complementarity determining regions (CDRs) 1, 2, and 3, wherein the VH CDR1 region comprises an amino acid sequence that is at least 80% identical to a selected VH CDR1 amino acid sequence, the VH CDR2 region comprises an amino acid sequence that is at least 80% identical to a selected VH CDR2 amino acid sequence, and the VH CDR3 region comprises an amino acid sequence that is at least 80% identical to a selected VH CDR3 amino acid sequence; and

a light chain variable region (VL) comprising CDRs 1, 2, and 3, wherein the VL CDR1 region comprises an amino acid sequence that is at least 80% identical to a selected VL CDR1 amino acid sequence, the VL CDR2 region comprises an amino acid sequence that is at least 80% identical to a selected VL CDR2 amino acid sequence, and the VL CDR3 region comprises an amino acid sequence that is at least 80% identical to a selected VL CDR3 amino acid sequence,

wherein the selected VH CDRs 1, 2, and 3 amino acid sequences and the selected VL CDRs, 1, 2, and 3 amino acid sequences are one of the following:

(1) the selected VH CDRs 1, 2, 3 amino acid sequences are set forth in SEQ ID NOs: 7-9; SEQ ID NOs: 4-6; SEQ ID NOs: 10-12; SEQ ID NOs: 13-15; SEQ ID NOs: 16-18; SEQ ID NOs: 82-84; SEQ ID NOs: 85-87; SEQ ID NOs: 88-90; or SEQ ID NOs: 91-93, respectively, and the selected VL CDRs 1, 2, 3 amino acid sequences are set forth in SEQ ID NOs: 1-3, respectively; and

(2) the selected VH CDRs 1, 2, 3 amino acid sequences are set forth in SEQ ID NOs: 37-39; SEQ ID NOs: 34-36; SEQ ID NOs: 40-42; SEQ ID NOs: 43-45; SEQ ID NOs: 46-48; SEQ ID NOs: 94-96; SEQ ID NOs: 97-99; SEQ ID NOs: 100-102; or SEQ ID NOs: 103-105, respectively, and the selected VL CDRs 1, 2, 3 amino acid sequences are set forth in SEQ ID NOs: 1-3, respectively.

2. The antibody or antigen-binding fragment thereof of claim 1, wherein:
(1) the VH comprises CDRs 1, 2, 3 with the amino acid sequences set forth in SEQ ID NOs: 7-9; SEQ ID NOs: 4-6; SEQ ID NOs: 10-12; SEQ ID NOs: 13-15; SEQ ID NOs: 16-18; SEQ ID NOs: 82-84; SEQ ID NOs: 85-87; SEQ ID NOs: 88-90; or SEQ ID NOs: 91-93, respectively, and the VL comprises CDRs 1, 2, 3 with the amino acid sequences set forth in SEQ ID NOs: 1-3, respectively, according to the Kabat numbering scheme; or
(2) the VH comprises CDRs 1, 2, 3 with the amino acid sequences set forth in SEQ ID NOs: 37-39; SEQ ID NOs: 34-36; SEQ ID NOs: 40-42; SEQ ID NOs: 43-45; SEQ ID NOs: 46-48; SEQ ID NOs: 94-96; SEQ ID NOs: 97-99; SEQ ID NOs: 100-102; or SEQ ID NOs: 103-105, respectively, and the VL comprises CDRs 1, 2, 3 with the amino acid sequences set forth in SEQ ID NOs: 1-3, respectively, according to the Chothia numbering scheme.

3. An antibody or antigen-binding fragment thereof that binds to EGFR comprising

a heavy chain variable region (VH) comprising an amino acid sequence that is at least 90% identical to a selected VH sequence, and a light chain variable region (VL) comprising an amino acid sequence that is at least 90% identical to a selected VL sequence, wherein:

the selected VH sequence is any one of SEQ ID NOs: 63, 62, 64-66, 106-109, and the selected VL sequence is SEQ ID NO: 61.

4. The antibody or antigen-binding fragment thereof of claim 3, wherein the VH comprises the sequence of any one of SEQ ID NO: 63, 62, 64-66, 106-109, and the VL comprises the sequence of SEQ ID NO: 61.

5. An antibody or antigen-binding fragment thereof that binds to EGFR comprising

a heavy chain variable region (VH) comprising VH CDR1, VH CDR2, and VH CDR3 that are identical to VH CDR1, VH CDR2, and VH CDR3 of a selected VH sequence; and a light chain variable region (VL) comprising VL CDR1, VL CDR2, and VL CDR3 that are identical to VL CDR1, VL CDR2, and VL CDR3 of a selected VL sequence, wherein:

the selected VH sequence is any one of SEQ ID NOs: 63, 62, 64-66, 106-109, and the selected VL sequence is SEQ ID NO: 61.

6. The antibody or antigen-binding fragment thereof of any one of claims 1-5, which has one or more features selected from the group consisting of:

(i) the antibody or antigen-binding fragment thereof specifically binds to human or monkey EGFR；

(ii) the antibody or antigen-binding fragment thereof is a human or humanized antibody or antigen-binding fragment thereof;

(iii) the antibody or antigen-binding fragment is a single-chain variable fragment (scFV);

(iv) the antibody or antigen-binding fragment thereof is a multispecific antibody (e.g., a bispecific antibody) or an antigen-binding fragment thereof;

(v) the antibody or antigen-binding fragment thereof further specifically binds to MET.

7. A nucleic acid comprising a polynucleotide encoding a polypeptide comprising:

(1) an immunoglobulin heavy chain or a fragment thereof comprising a heavy chain variable region (VH) comprising complementarity determining regions (CDRs) 1, 2, and 3 comprising the amino acid sequences set forth in SEQ ID NOs: 7-9; SEQ ID NOs: 4-6; SEQ ID NOs: 10-12; SEQ ID NOs: 13-15; SEQ ID NOs: 16-18; SEQ ID NOs: 82-84; SEQ ID NOs: 85-87; SEQ ID NOs: 88-90; SEQ ID NOs: 91-93; SEQ ID NOs: 37-39; SEQ ID NOs: 34-36; SEQ ID NOs: 40-42; SEQ ID NOs: 43-45; SEQ ID NOs: 46-48; SEQ ID NOs: 94-96; SEQ ID NOs: 97-99; SEQ ID NOs: 100-102; or SEQ ID NOs: 103-105, respectively, and wherein the VH, when paired with a light chain variable region (VL) comprising the amino acid sequence set forth in SEQ ID NO: 61, binds to EGFR; or

(2) an immunoglobulin light chain or a fragment thereof comprising a light chain variable region (VL) comprising complementarity determining regions (CDRs) 1, 2, and 3 comprising the amino acid sequences set forth in SEQ ID NOs: 1-3, respectively, and wherein the VL, when paired with a heavy chain variable region (VH) comprising the amino acid sequence set forth in any one of SEQ ID NO: 63, 62, 64-66, 106-109, binds to EGFR.

8. An antibody or antigen-binding fragment thereof that binds to MET (tyrosine-protein kinase Met) comprising:

a heavy chain variable region (VH) comprising complementarity determining regions (CDRs) 1, 2, and 3, wherein the VH CDR1 region comprises an amino acid sequence that is at least 80% identical to a selected VH CDR1 amino acid sequence, the VH CDR2 region comprises an amino acid sequence that is at least 80% identical to a selected VH CDR2 amino acid sequence, and the VH CDR3 region comprises an amino acid sequence that is at least 80% identical to a selected VH CDR3 amino acid sequence; and

a light chain variable region (VL) comprising CDRs 1, 2, and 3, wherein the VL CDR1 region comprises an amino acid sequence that is at least 80% identical to a selected VL CDR1 amino acid sequence, the VL CDR2 region comprises an amino acid sequence that is at least 80% identical to a selected VL CDR2 amino acid sequence, and the VL CDR3 region comprises an amino acid sequence that is at least 80% identical to a selected VL CDR3 amino acid sequence,

wherein the selected VH CDRs 1, 2, and 3 amino acid sequences and the selected VL CDRs, 1, 2, and 3 amino acid sequences are one of the following:

(1) the selected VH CDRs 1, 2, 3 amino acid sequences are set forth in SEQ ID NOs: 19-21; SEQ ID NOs: 22-24; SEQ ID NOs: 25-27; SEQ ID NOs: 28-30; SEQ ID NOs: 112-114; SEQ ID NOs: 115-117; SEQ ID NOs: 118-120; SEQ ID NOs: 121-123; SEQ ID NOs: 124-126; or SEQ ID NOs: 127-129, respectively, and the selected VL CDRs 1, 2, 3 amino acid sequences are set forth in SEQ ID NOs: 1-3, respectively;

(2) the selected VH CDRs 1, 2, 3 amino acid sequences are set forth in SEQ ID NOs: 49-51; SEQ ID NOs: 52-54; SEQ ID NOs: 55-57; SEQ ID NOs: 58-60; SEQ ID NOs: 130-132; SEQ ID NOs: 133-135; SEQ ID NOs: 136-138; SEQ ID NOs: 139-141; SEQ ID NOs: 142-144; or SEQ ID NOs: 145-147, respectively, and the selected VL CDRs 1, 2, 3 amino acid sequences are set forth in SEQ ID NOs: 1-3, respectively.

9. The antibody or antigen-binding fragment thereof of claim 8, wherein:
(1) the VH comprises CDRs 1, 2, 3 with the amino acid sequences set forth in SEQ ID NOs: 19-21; SEQ ID NOs: 22-24; SEQ ID NOs: 25-27; SEQ ID NOs: 28-30; SEQ ID NOs: 112-114; SEQ ID NOs: 115-117; SEQ ID NOs: 118-120; SEQ ID NOs: 121-123; SEQ ID NOs: 124-126; or SEQ ID NOs: 127-129, respectively, and the VL comprises CDRs 1, 2, 3 with the amino acid sequences set forth in SEQ ID NOs: 1-3, respectively, according to the Kabat numbering scheme; or
(2) the VH comprises CDRs 1, 2, 3 with the amino acid sequences set forth in SEQ ID NOs: 49-51; SEQ ID NOs: 52-54; SEQ ID NOs: 55-57; SEQ ID NOs: 58-60; SEQ ID NOs: 130-132; SEQ ID NOs: 133-135; SEQ ID NOs: 136-138; SEQ ID NOs: 139-141; SEQ ID NOs: 142-144; or SEQ ID NOs: 145-147, respectively, and the VL comprises CDRs 1, 2, 3 with the amino acid sequences set forth in SEQ ID NOs: 1-3, respectively, according to the Chothia numbering scheme.

10. An antibody or antigen-binding fragment thereof that binds to MET comprising

a heavy chain variable region (VH) comprising an amino acid sequence that is at least 90% identical to a selected VH sequence, and a light chain variable region (VL) comprising an amino acid sequence that is at least 90% identical to a selected VL sequence, wherein:

the selected VH sequence is any one of SEQ ID NOs: 67-70, 148-153, and the selected VL sequence is SEQ ID NO: 61.

11. The antibody or antigen-binding fragment thereof of claim 10, wherein the VH comprises the sequence of any one of SEQ ID NOs: 67-70, 148-153 and the VL comprises the sequence of SEQ ID NO: 61.

12. An antibody or antigen-binding fragment thereof that binds to MET comprising

a heavy chain variable region (VH) comprising VH CDR1, VH CDR2, and VH CDR3 that are identical to VH CDR1, VH CDR2, and VH CDR3 of a selected VH sequence; and a light chain variable region (VL) comprising VL CDR1, VL CDR2, and VL CDR3 that are identical to VL CDR1, VL CDR2, and VL CDR3 of a selected VL sequence, wherein:

the selected VH sequence is any one of SEQ ID NOs: 67-70, 148-153, and the selected VL sequence is SEQ ID NO: 61.

13. The antibody or antigen-binding fragment thereof of any one of claims 8-12, which has one or more features selected from the group consisting of:

(i) the antibody or antigen-binding fragment thereof specifically binds to human, monkey or dog MET;

(ii) the antibody or antigen-binding fragment is a human or humanized antibody or antigen-binding fragment thereof;

(iii) the antibody or antigen-binding fragment thereof is a single-chain variable fragment (scFV);

(iv) the antibody or antigen-binding fragment thereof is a multispecific antibody (e.g., a bispecific antibody) or an antigen-binding fragment thereof;

(v) the antibody or antigen-binding fragment thereof further specifically binds to EGFR.

14. A nucleic acid comprising a polynucleotide encoding a polypeptide comprising:

(1) an immunoglobulin heavy chain or a fragment thereof comprising a heavy chain variable region (VH) comprising complementarity determining regions (CDRs) 1, 2, and 3 comprising the amino acid sequences set forth in SEQ ID NOs: 19-21; SEQ ID NOs: 22-24; SEQ ID NOs: 25-27; SEQ ID NOs: 28-30; SEQ ID NOs: 112-114; SEQ ID NOs: 115-117; SEQ ID NOs: 118-120; SEQ ID NOs: 121-123; SEQ ID NOs: 124-126; SEQ ID NOs: 127-129; SEQ ID NOs: 49-51; SEQ ID NOs: 52-54; SEQ ID NOs: 55-57; SEQ ID NOs: 58-60; SEQ ID NOs: 130-132; SEQ ID NOs: 133-135; SEQ ID NOs: 136-138; SEQ ID NOs: 139-141; SEQ ID NOs: 142-144; or SEQ ID NOs: 145-147, respectively, and wherein the VH, when paired with a light chain variable region (VL) comprising the amino acid sequence set forth in SEQ ID NO: 61, binds to MET; or

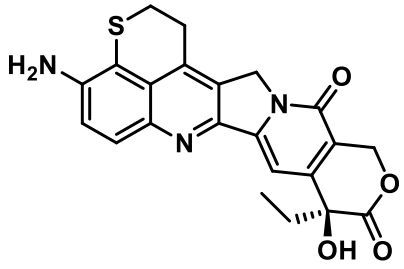
(2) an immunoglobulin light chain or a fragment thereof comprising a light chain variable region (VL) comprising complementarity determining regions (CDRs) 1, 2, and 3 comprising the amino acid sequences set forth in SEQ ID NOs: 1-3, respectively, and wherein the VL, when paired with a heavy chain variable region (VH) comprising the amino acid sequence set forth in any one of SEQ ID NOs: 67-70, 148-153, binds to MET.

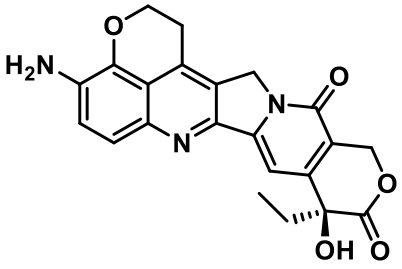
15. An antigen-binding protein construct, comprising: a first antigen-binding domain that specifically binds to EGFR; and a second antigen-binding domain that specially binds to MET; wherein the first antigen-binding domain is the antibody or antigen-binding fragment thereof of any one of claims 1-6.
16. An antigen-binding protein construct, comprising: a first antigen-binding domain that specifically binds to EGFR; and a second antigen-binding domain that specially binds to MET; wherein the second antigen-binding domain is the antibody or antigen-binding fragment thereof of any one of claims 8-13.

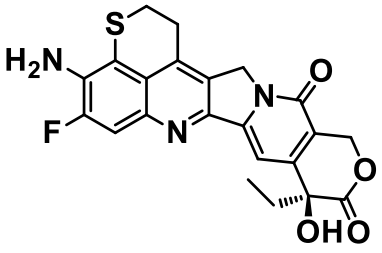
17. A vector comprising one or more of the nucleic acids of claim 7 or 14, a nucleic acid encoding the antibody or antigen-binding fragment thereof of any one of claims 1-6 and 8-13, or a nucleic acid encoding the antigen-binding protein construct of claim 15 or 16.

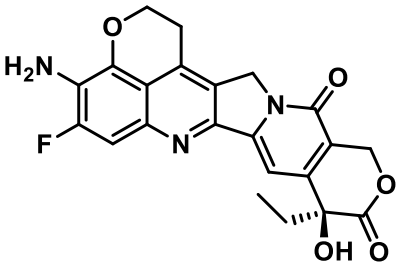
18. A cell comprising: (i) the vector of claim 17; or (ii) one or more of the nucleic acids of claim 7 or 14, or (iii) a nucleic acid encoding the antibody or antigen-binding fragment thereof of any one of claims 1-6 and 8-13, or (iv) a nucleic acid encoding the antigen-binding protein construct of claim 15 or 16.

19. An antibody-drug conjugate (ADC) comprising a therapeutic agent covalently bound to:
(a) the antibody or antigen-binding fragment thereof of any one of claims 1-6 and 8-13; or
(b) the antigen-binding protein construct of claim 15 or 16.
optionally wherein, the antibody-drug conjugate has one or more features selected from the group consisting of:
(1) the therapeutic agent is a cytotoxic or cytostatic agent;
(2) the therapeutic agent is MMAE or MMAF;
(3) the therapeutic agent is selected from:



(CPT-1),


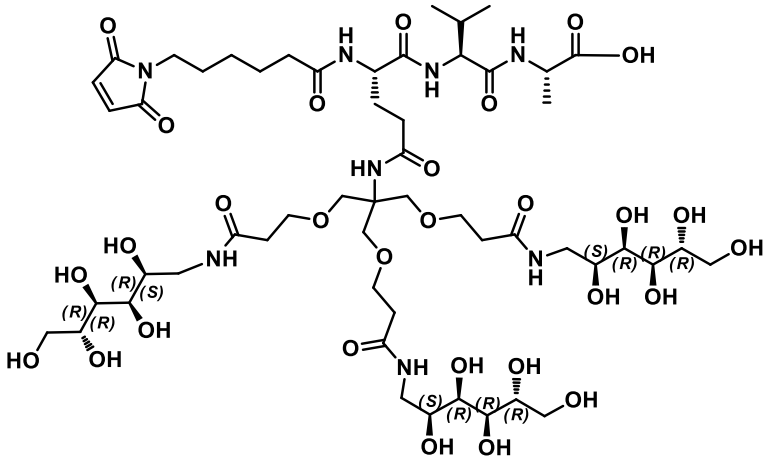
(CPT-2),


(CPT-3), or


(CPT-4).

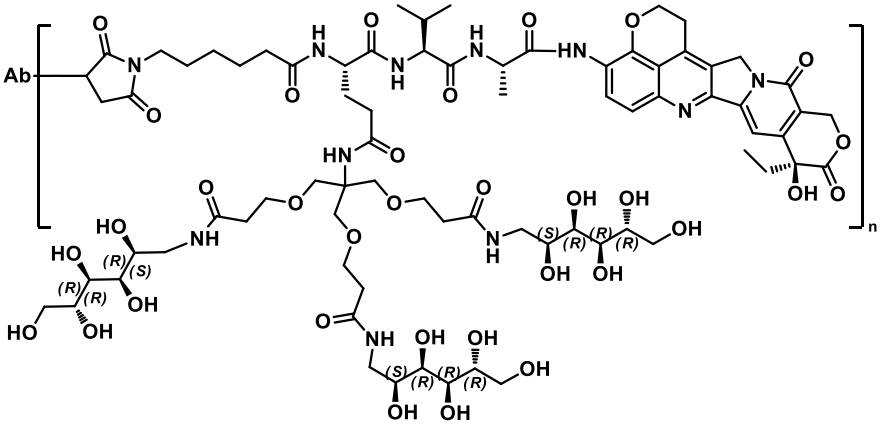
20. The antibody-drug conjugate of claim 19, wherein the therapeutic agent is linked to the antibody or antigen-binding fragment thereof, or the antigen-binding protein construct via a linker;

optionally wherein, the linker has a structure of:

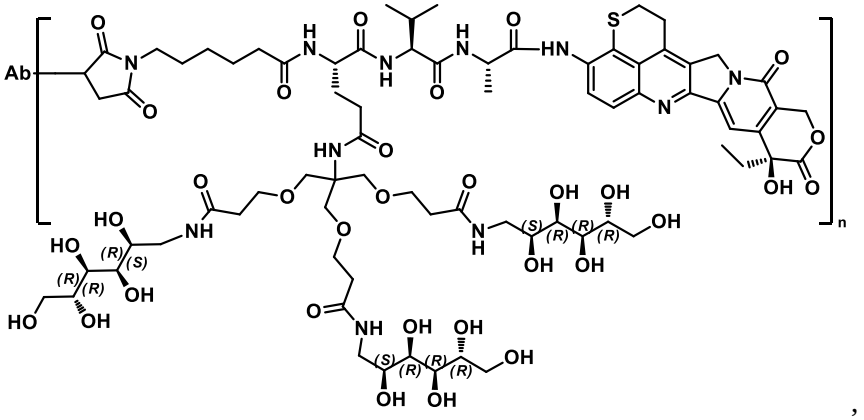


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21. The antibody-drug conjugate of claim 19 or 20, wherein the antibody-drug conjugate has a structure of:



, or



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wherein n = 1, 2, 3, 4, 5, 6, 7, or 8; wherein "Ab" represents the antibody or antigen-binding fragment thereof, or the antigen-binding protein construct.

22. Use of a composition comprising: (i) the antibody or antigen-binding fragment thereof of any one of claims 1-6 and 8-13, or (ii) the antigen-binding protein construct of claim 15 or 16, or (iii) the

antibody-drug conjugate of any one of claims 19-21, in manufacture of a medicament, wherein the medicament is used for:

(a) treating a subject having cancer;

(b) decreasing the rate of tumor growth; and/or

(c) killing a tumor cell.

23. The use of claim 22, which has one or more features selected from the group consisting of:
(I) the subject has a cancer expressing EGFR and/or MET;
(II) the cancer is a solid tumor, lung cancer (e.g., non-small cell lung cancer, lung adenocarcinoma, or lung carcinoma), gastric cancer (e.g., gastric carcinoma), skin cancer (e.g., skin carcinoma), ampullary cancer (e.g., ampullary carcinoma) colorectal cancer, breast cancer, head and neck cancer, ovarian cancer, prostate cancer, thyroid cancer, pancreatic cancer, CNS cancer, liver cancer, nasopharynx cancer, or brain cancer;
(III) the subject is a human;
(IV) the composition is administered in combination with an anti-PD1 antibody;
(V) the composition is administered in combination with a chemotherapy.

24. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and

(a) the antibody or antigen-binding fragment thereof of any one of claims 1-6 and 8-13,

(b) the antigen-binding protein construct of claim 15 or 16, and/or

(c) the antibody-drug conjugate of any one of claims 19-21.