What is claimed is:

1. An isolated antibody or antigen-binding fragment thereof that specifically binds dimeric human epidermal growth factor receptor (hEGFR) with a binding dissociation equilibrium constant (K_D) of less than about 20 pM as measured in a surface plasmon resonance assay at 37°C.

2. The antibody or antigen-binding fragment of claim 1, wherein the antibody or antigen-binding fragment thereof specifically binds dimeric hEGFR with a dissociation half-life (t½) of greater than 400 minutes as measured in a surface plasmon resonance assay at 37°C.

3. The antibody or antigen-binding fragment of claim 1 or 2, wherein the antibody or antigen-binding fragment thereof inhibits *in vitro* proliferation of cells expressing EGFR.

4. The antibody or antigen-binding fragment of claim 3, wherein the antibody or antigen-binding fragment thereof inhibits *in vitro* proliferation of cells expressing EGFR with an IC_{50} of less than 200 pM.

5. The antibody or antigen-binding fragment of any one of claims 1 to 4, wherein the antibody or antigen-binding fragment thereof induces antibody-dependent cell-mediated cytotoxicity (ADCC) of EGFR-expressing cells in the presence of peripheral blood mononuclear cells (PBMCs) with an EC_{50} of less than 3.0 pM.

6. The antibody or antigen-binding fragment of any one of claims 1 to 5, wherein the antibody or antigen-binding fragment thereof competes for binding to hEGFR with a reference antibody comprising an HCVR/LCVR sequence pair having SEQ ID NOs: 130/138.

7. The antibody or antigen-binding fragment of any one of claims 1 to 5, wherein the antibody or antigen-binding fragment thereof binds to the same epitope on hEGFR as a reference antibody comprising an HCVR/LCVR sequence pair having SEQ ID NOs: 130/138.

8. The antibody or antigen-binding fragment of any one of claims 1 to 3, wherein the antibody or antigen-binding fragment thereof competes for binding to hEGFR with a reference antibody comprising an HCVR/LCVR sequence pair having SEQ ID NOs: 98/106.

9. The antibody or antigen-binding fragment of any one of claims 1 to 3, wherein the antibody or antigen-binding fragment thereof binds to the same epitope on hEGFR as a reference antibody comprising an HCVR/LCVR sequence pair having SEQ ID NOs: 98/106.

10. An isolated antibody, or antigen-binding fragment thereof, that specifically binds human epidermal growth factor receptor (hEGFR), wherein the antibody or antigen-binding

fragment comprises: (a) the complementarity determining regions (CDRs) of a heavy chain variable region (HCVR) having an amino acid sequence selected from the group consisting of SEQ ID NOs: 2, 18, 34, 50, 66, 82, 98, 114, 130, 146, 162, 178, 194, 210, 226, 242, 258, 274, 290, 306, 322, 338, 354 and 370; and (b) the CDRs of a light chain variable region (LCVR) having an amino acid sequence selected from the group consisting of SEQ ID NOs: 10, 26, 42, 58, 74, 90, 106, 122, 138, 154, 170, 186, 202, 218, 234, 250, 266, 282, 298, 314, 330, 346, 362 and 378.

11. The isolated antibody or antigen-binding fragment of claim 10, wherein the antibody or antigen-binding fragment comprises the heavy and light chain CDRs of a HCVR/LCVR amino acid sequence pair selected from the group consisting of: SEQ ID NOs: 2/10, 18/26, 34/42, 50/58, 66/74, 82/90, 98/106, 114/122, 130/138, 146/154, 162/170, 178/186, 194/202, 210/218, 226/234, 242/250, 258/266, 274/282, 290/298, 306/314, 322/330, 338/346, 354/362 and 370/378.

12. The isolated antibody or antigen-binding fragment of claim 11, wherein the antibody or antigen-binding fragment comprises HCDR1-HCDR2-HCDR3-LCDR1-LCDR2-LCDR3 domains, respectively, selected from the group consisting of: SEQ ID NOs: 4-6-8-12-14-16; 20-22-24-28-30-32; 36-38-40-44-46-48; 52-54-56-60-62-64; 68-70-72-76-78-80; 84-86-88-92-94-96; 100-102-104-108-110-112; 116-118-120-124-126-128; 132-134-136-140-142-144; 148-150-152-156-158-160; 164-166-168-172-174-176; 180-182-184-188-190-192; 196-198-200-204-206-208; 212-214-216-220-222-224; 228-230-232-236-238-240; 244-246-248-252-254-256; 260-262-264-268-270-272; 276-278-280-284-286-288; 292-294-296-300-302-304; 308-310-312-316-318-320; 324-326-328-332-334-336; 340-342-344-348-350-352; 356-358-360-364-366-368; and 372-374-376-380-382-384.

13. An isolated antibody, or antigen-binding fragment thereof, that specifically binds human epidermal growth factor receptor (hEGFR), wherein the antibody or antigen-binding fragment comprises: (a) a heavy chain variable region (HCVR) having an amino acid sequence selected from the group consisting of SEQ ID NOs: 2, 18, 34, 50, 66, 82, 98, 114, 130, 146, 162, 178, 194, 210, 226, 242, 258, 274, 290, 306, 322, 338, 354 and 370; and (b) a light chain variable region (LCVR) having an amino acid sequence selected from the group consisting of SEQ ID NOs: 10, 26, 42, 58, 74, 90, 106, 122, 138, 154, 170, 186, 202, 218, 234, 250, 266, 282, 298, 314, 330, 346, 362 and 378.

14. The isolated antibody or antigen-binding fragment of claim 13, wherein the antibody or antigen-binding fragment comprises a HCVR/LCVR amino acid sequence pair selected from the group consisting of: SEQ ID NOs: 2/10, 18/26, 34/42, 50/58, 66/74, 82/90, 98/106, 114/122, 130/138, 146/154, 162/170, 178/186, 194/202, 210/218, 226/234, 242/250,

258/266, 274/282, 290/298, 306/314, 322/330, 338/346, 354/362 and 370/378.

15. A pharmaceutical composition comprising the antibody or antigen-binding fragment of any one of claims 1 to 14, and a pharmaceutically acceptable carrier or diluent.

16. A method for inhibiting tumor growth, the method comprising administering the pharmaceutical composition of claim 15 to a subject afflicted with a tumor.

17. The method of claim 16, wherein the tumor is selected from the group consisting of a renal tumor, a pancreatic tumor, a head and neck tumor, a breast tumor, a prostate tumor, a colon tumor, a gastric tumor, and ovarian tumor, a lung tumor, and a skin tumor.

18. A method for inhibiting or attenuating tumor growth in a subject, the method comprising administering to the subject the antibody or antigen-binding fragment of any one of claims 1 to 14 or the pharmaceutical composition of claim 15, and a second therapeutic agent, wherein the second therapeutic agent is an antibody or antigen-binding fragment thereof that specifically binds HER2, ErbB3, ErbB4, cMet, IGF1R, Ang2, PDGFR-α or PDGFR-β.

19. A method for inhibiting or attenuating tumor growth in a subject, the method comprising administering to the subject the antibody or antigen-binding fragment of any one of claims 1 to 14 or the pharmaceutical composition of claim 15, and a second therapeutic agent, wherein the second therapeutic agent is a VEGF antagonist.

What is claimed is:

1. An isolated antibody, or antigen-binding fragment thereof, that specifically binds human epidermal growth factor receptor (hEGFR), wherein the antibody or antigen-binding fragment comprises: (a) the complementarity determining regions (CDRs) of a heavy chain variable region (HCVR) having an amino acid sequence of SEQ ID NO: 130 and (b) the CDRs of a light chain variable region (LCVR) having an amino acid sequence of SEQ ID NO: 138.

2. The isolated antibody or antigen-binding fragment of claim 1, wherein the antibody or antigen-binding fragment comprises the heavy and light chain CDRs of a HCVR/LCVR amino acid sequence pair having SEQ ID NOs: 130/138.

3. The isolated antibody or antigen-binding fragment of claim 2, wherein the antibody or antigen-binding fragment comprises HCDR1-HCDR2-HCDR3-LCDR1-LCDR2-LCDR3 domains, respectively, having SEQ ID NOs: 132-134-136-140-142-144.

4. A pharmaceutical composition comprising the antibody or antigen-binding fragment of claim 1, and a pharmaceutically acceptable carrier or diluent.