What is claimed is:

1. An isolated antibody or antigen-binding fragment thereof that specifically binds human EGFRvIII, wherein the antibody or fragment thereof comprises a heavy chain variable region (HCVR) and a light chain variable region (LCVR), and wherein the HCVR comprises three complementarity determining regions (CDRs), HCDR1, HCDR2 and HCDR3, contained in the amino acid sequence of SEQ ID NO:34 and the LCVR comprises three CDRs, LCDR1, LCDR2 and LCDR3, contained in the amino acid sequence of SEQ ID NO:42.

2. The antibody or antigen-binding fragment of claim 1, wherein the antibody or antigen-binding fragment is conjugated to a cytotoxin.

3. The antibody or antigen-binding fragment of claim 2, wherein the cytotoxin is selected from the group consisting of biotoxins, chemotherapeutic agents and radioisotopes.

4. The antibody or antigen-binding fragment of claim 2, wherein the cytotoxin is selected from the group consisting of maytansinoids, auristatins, tomaymycins, duocarmycins, 225Ac, 227Th, and any derivatives thereof.

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

6. The pharmaceutical composition of claim 5, further comprising one or more additional therapeutic agents selected from the group consisting of a chemotherapeutic agent, anti-inflammatory agents, and analgesics.

7. The antibody or antigen-binding fragment of claim 1, wherein the HCVR comprises an amino acid sequence of SEQ ID NO: 34.

8. The antibody or antigen-binding fragment of claim 1, wherein the LCVR comprises an amino acid sequence of SEQ ID NO: 42.

9. The antibody or antigen-binding fragment of claim 1, wherein the antibody or antigen-binding fragment comprises a HCVR/LCVR sequence pair of SEQ ID NO:34/42.