CLAIMS

1. An isolated monoclonal antibody, or antigen binding portion thereof, that binds to human ErbB3, comprising: a heavy chain variable region CDR1 comprising SEQ ID NO:7; a heavy chain variable region CDR2 comprising SEQ ID NO:8; a heavy chain variable region CDR3 comprising SEQ ID NO:9; a light chain variable region CDR1 comprising SEQ ID NO:10; a light chain variable region CDR2 comprising SEQ ID NO:11; and a light chain variable region CDR3 comprising SEQ ID NO:12.

2. An isolated monoclonal antibody, or antigen binding portion thereof, that binds to human ErbB3, comprising:

(a) a heavy chain variable region CDR1 comprising SEQ ID NO:7 or conservative sequence modifications thereof;

(b) a heavy chain variable region CDR2 comprising SEQ ID NO:8 or conservative sequence modifications thereof;

(c) a heavy chain variable region CDR3 comprising SEQ ID NO:9 or conservative sequence modifications thereof;

(d) a light chain variable region CDR1 comprising SEQ ID NO:10 or conservative sequence modifications thereof;

(e) a light chain variable region CDR2 comprising SEQ ID NO:11 or conservative sequence modifications thereof; and

(f) a light chain variable region CDR3 comprising SEQ ID NO:12 or conservative sequence modifications thereof.

3. An isolated monoclonal antibody, or antigen binding portion thereof, that binds to human ErbB3, comprising a heavy chain variable region comprising SEQ ID NO:1 and a light chain variable region comprising SEQ ID NO:2.

4. An isolated antibody, or antigen binding portion thereof, that binds to an epitope which is same or overlapping with the epitope bound by the antibody of claim 3.

5. An isolated antibody, or antigen binding portion thereof, that competes for binding to human ErB3 with the antibody of claim 3.

6. The antibody, or antigen binding portion thereof, of any one of claims 1-5, wherein the antibody is selected from the group consisting of a human antibody, a humanized antibody, a bispecific antibody and a chimeric antibody.

7. The antibody, or antigen binding portion thereof, of any one of claims 1-6, wherein the antibody or antigen binding portion thereof is selected from the group consisting of a Fab, Fab'2, ScFv and a domain antibody.

8. The antibody, or antigen binding portion thereof, of any one of claims 1-7, wherein the antibody isotype is selected from the group consisting of an IgGl, an IgG2, an IgG3, an IgG4, an IgM, an IgAl , an IgA2, an IgAsec, an IgD, and an IgE antibody.

9. The antibody, or antigen binding portion thereof, of claim 8, wherein the antibody is an IgG2 isotype antibody.

10. A composition comprising the antibody, or antigen binding portion thereof, of any one of claims 1-9 in a pharmaceutically acceptable carrier.

11. The composition of claim 10, wherein the composition is a sterile aqueous composition.

12. The composition of claim 10, further comprising a molecule that targets EGFR.

13. A host cell which produces an antibody, or antigen binding portion thereof, of any one of claims 1-9.

14. Use of an isolated monoclonal antibody, or antigen binding portion thereof, of any one of claims 1-9 for the manufacture of a medicament for inhibiting human ErbB3 signaling.

15. Use of an isolated monoclonal antibody, or antigen binding portion thereof, of any one of claims 1-9 for the manufacture of a medicament for treating cancer.