with high affinity and neutralize human Ang2, but do not bind with high affinity or neutralize human Ang1.

Summary

In one aspect of the present disclosure, there is provided an antibody, comprising a light chain (LC) and a heavy chain (HC), wherein the light chain comprises a light chain variable region (LCVR) and the heavy chain comprises a heavy chain variable region (HCVR), wherein the LCVR has the amino acid sequence given in SEQ ID NO: 3, and the HCVR has the amino acid sequence given in SEQ ID NO: 1.

In another aspect of the present disclosure, there is provided a pharmaceutical composition, comprising the antibody disclosed herein, and an acceptable carrier, diluent, or excipient.

In a further aspect of the present disclosure, there is provided a use of an antibody disclosed herein in the manufacture of a medicament for treating cancer.

In another aspect of the present disclosure, there is provided the antibody disclosed herein, for use in therapy.

Description

Accordingly, an embodiment of the present invention provides an antibody, comprising a light chain (LC) and a heavy chain (HC), wherein the light chain comprises a light chain variable region (LCVR) and the heavy chain comprises a heavy chain variable region (HCVR), wherein the LCVR has the amino acid sequence given in SEQ ID NO: 3, and the HCVR has the amino acid sequence given in SEQ ID NO: 1.

Certain antibodies of the present invention bind human Ang-2 with a high affinity that is greater than human Ang2 antibodies known in the art. Furthermore, certain antibodies of the present invention demonstrate a positive response in tumor xenograft models, such as EL 1997 for triple negative breast cancer, SKOV3x.1 for ovarian cancer, and PC3 for prostate cancer, indicating potential as a cancer therapeutic. Additionally, certain antibodies of the invention selectively bind human Ang-2 over human Ang-1, and avoid potential off-target liabilities for human Ang1.

In a further embodiment, the present invention provides an antibody, wherein the LC has the amino acid sequence given in SEQ ID NO: 4, and the HC has the amino acid sequence given in SEQ ID NO: 2.

In a further embodiment, the present invention provides an antibody, comprising two light chains and two heavy chains, wherein each light chain has the amino acid

WE CLAIM:

1. An antibody, comprising a light chain (LC) and a heavy chain (HC), wherein the light chain comprises a light chain variable region (LCVR) and the heavy chain comprises a heavy chain variable region (HCVR), wherein the LCVR has the amino acid sequence given in SEQ ID NO: 3, and the HCVR has the amino acid sequence given in SEQ ID NO: 1.
2. The antibody of Claim 1, wherein the LC has the amino acid sequence given in SEQ ID NO: 4, and the HC has the amino acid sequence given in SEQ ID NO: 2.
3. The antibody of any one of Claims 1-2, comprising two light chains and two heavy chains, wherein each light chain has the amino acid sequence given in SEQ ID NO: 4, and each heavy chain has the amino acid sequence given in SEQ ID NO: 2.
4. The antibody of any one of Claims 1-3, wherein one of the heavy chains forms an inter-chain disulfide bond with one of the light chains, and the other heavy chain forms an inter-chain disulfide bond with the other light chain, and one of the heavy chains forms two inter-chain disulfide bonds with the other heavy chain.

5. The antibody of any one of Claims 1-4, wherein the antibody is glycosylated.
6. A pharmaceutical composition, comprising the antibody of any one of Claims 1-5, and an acceptable carrier, diluent, or excipient.
7. Use of an antibody of any one of Claims 1-5 in the manufacture of a medicament for treating cancer in a patient.
8. The use of Claim 7, wherein the cancer is breast cancer, ovarian cancer, gastric cancer, colorectal cancer, or hepatocellular carcinoma.
9. The antibody of any one of Claims 1-5, for use in therapy.