CLAIMS

1. A monoclonal antibody capable of binding to human GDF-15, or an antigen-binding portion thereof, wherein the heavy chain variable domain comprises:

a CDR1 region comprising the amino acid sequence of SEQ ID NO: 3;

a CDR2 region comprising the amino acid sequence of SEQ ID NO: 4;

and

a CDR3 region comprising the amino acid sequence of SEQ ID NO: 5 or an amino acid sequence at least 90% identical thereto,

and wherein the light chain variable domain comprises:

a CDR1 region comprising the amino acid sequence of SEQ ID NO: 6;

a CDR2 region comprising the amino acid sequence of ser-ala-ser;

and

a CDR3 region comprising the amino acid sequence of SEQ ID NO: 7 or an amino acid sequence at least 85% identical thereto.

2. The monoclonal antibody or antigen-binding portion thereof according to claim 1, wherein the antibody is the antibody to human GDF-15 obtainable from the cell line B1-23 deposited with the Deutsche Sammlung fur Mikroorganismen und Zellkulturen GmbH (DMSZ) under the accession No. DSM ACC3142 or an antigen-binding portion thereof.

3. The monoclonal antibody or antigen-binding portion thereof according to claim 1 or claim 2, wherein the antibody is capable of inhibiting cancer growth in a mammal, preferably a human patient.

4. The monoclonal antibody or antigen-binding portion thereof according to any one of claims 1 to 3, wherein the human GDF-15

is recombinant human GDF-15 having the amino acid sequence represented by SEQ ID No: 8.

5. The monoclonal antibody or antigen-binding portion thereof according to any one of claims 1 to 4, wherein the binding is binding to a conformational or discontinuous epitope on human GDF-15.

6. The monoclonal antibody or antigen-binding portion thereof according to claim 5, wherein the binding to a conformational or discontinuous epitope on human GDF-15 is binding to a conformational or discontinuous epitope comprised by the amino acid sequences of SEQ ID No: 25 and SEQ ID No: 26.

7. A monoclonal antibody capable of binding to human GDF-15, or an antigen-binding portion thereof, wherein the binding is binding to a conformational or discontinuous epitope on human GDF-15 comprised by the amino acid sequences of SEQ ID No : 25 and SEQ ID No : 26.

8. The monoclonal antibody or antigen-binding portion thereof according to claim 7, wherein the antibody or antigen-binding portion thereof is an antibody or antigen-binding portion thereof as defined in any one of claims 1 to 4.

9. A pharmaceutical composition comprising the antibody or antigen-binding portion thereof according to any one of claims 1 to 8.

10. Use of an antibody or antigen-binding portion thereof according to any one of claims 1 to 8 or a pharmaceutical composition according to claim 9 in the manufacture of a medicament for the treatment of cancer in a mammal.

11. The use according to claim 10, wherein the mammal is a human patient.

12. The use according to claim 10 or claim 11, wherein the medicament inhibits cancer growth.

13. The use according to claim 11 or claim 12, wherein the medicament induces the killing of cancer cells by NK cells and CD8+ T cells in the human patient.

14. A kit comprising a pharmaceutical composition according to claim 9.

15. An expression vector comprising a nucleotide sequence encoding an antibody or antigen-binding portion thereof according to any one of claims 1 to 8.

16. A cell line capable of producing an antibody or antigen-binding portion thereof according to any one of claims 1 to 8.

17. The cell line according to claim 16, wherein the cell line is the cell line B1-23 deposited with the Deutsche Sammlung fur Mikroorganismen und Zellkulturen GmbH (DMSZ) under the accession No. DSM ACC3142.