In one aspect, the present invention refers to the use of an antibody-drug conjugate for the preparation of a medicament for treating a CLDN18.2-expressing cancer wherein the antibody-drug conjugate is to be administered to a patient, said antibody-drug conjugate comprising an antibody having the ability of binding to CLDN18.2 covalently attached to at least one toxin drug moiety, wherein the antibody-drug conjugate, upon binding to cells expressing CLDN18.2 is internalized into the cells, wherein

(a) the antibody comprising an antibody heavy chain comprising an amino acid sequence represented by SEQ ID NO: 32 and an antibody light chain comprising an amino acid sequence represented by SEQ ID NO: 39 or wherein the antibody recognizes the same epitope as said antibody; or

(b) the antibody comprising an antibody heavy chain comprising an amino acid sequence represented by SEQ ID NO: 30 and an antibody light chain comprising an amino acid sequence represented by SEQ ID NO: 35 or wherein the antibody recognizes the same epitope as said antibody,

wherein said antibody which recognizes the same epitope comprises an amino acid substitution in the CDR of said antibody heavy chain or said antibody light chain that does not affect the ability of the antibody to bind to CLDN18.2,

wherein the toxin drug moiety is $N^{2'}$-deacetyl-$N^{2'}$-(4-methyl-4-mercapto-1-oxopentyl)-maytansine (DM4) or monomethyl auristatin E (MMAE).

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CLAIMS

1. Use of an antibody-drug conjugate for the preparation of a medicament for treating a CLDN18.2-expressing cancer by administering the antibody-drug conjugate to a patient, said antibody-drug conjugate comprising an antibody having the ability of binding to CLDN18.2 covalently attached to at least one toxin drug moiety, wherein the antibody-drug conjugate, upon binding to cells expressing CLDN18.2 is internalized into the cells, wherein

(a) the antibody comprising an antibody heavy chain comprising an amino acid sequence represented by SEQ ID NO: 32 and an antibody light chain comprising an amino acid sequence represented by SEQ ID NO: 39 or wherein the antibody recognizes the same epitope as said antibody; or

(b) the antibody comprising an antibody heavy chain comprising an amino acid sequence represented by SEQ ID NO: 30 and an antibody light chain comprising an amino acid sequence represented by SEQ ID NO: 35 or wherein the antibody recognizes the same epitope as said antibody,

wherein said antibody which recognizes the same epitope comprises an amino acid substitution in the CDR of said antibody heavy chain or said antibody light chain that does not affect the ability of the antibody to bind to CLDN18.2,

wherein the toxin drug moiety is $N^{2'}$-deacetyl-$N^{2'}$-(4-methyl-4-mercapto-1-oxopentyl)-maytansine (DM4) or monomethyl auristatin E (MMAE).

2. The use of claim 1, wherein the antibody comprises an antibody heavy chain comprising an amino acid sequence represented by SEQ ID NO: 32 and an antibody light chain comprising an amino acid sequence represented by SEQ ID NO: 39.

3. The use of claim 1 or 2, wherein the antibody comprises an antibody heavy chain comprising an amino acid sequence represented by SEQ ID NO: 17 or 51 and an antibody light chain comprising an amino acid sequence represented by SEQ ID NO: 24.

4. The use of claim 1, wherein the antibody comprises an antibody heavy chain comprising an amino acid sequence represented by SEQ ID NO: 30 and an antibody light chain comprising an amino acid sequence represented by SEQ ID NO: 35.

5. The use of any one of claims 1 to 4, wherein the antibody having the ability of binding to CLDN18.2 is covalently attached to the toxin drug moiety by a linker, wherein the linker is preferably a cleavable linker.

6. The use of claim 5, wherein the linker is cleavable by an intracellular protease.

7. The use of claims 5 or 6, wherein the linker is a cathepsin-cleavable linker.

8. The use of any one of claims 5 to 7, wherein the linker comprises a dipeptide.

9. The use of claim 8, wherein the dipeptide is valine-citrulline (val-cit) or phenylalanine-lysine (phe-lys).

10. The use of any one of claims 1 to 9 which further comprises administering surgery, chemotherapy and/or radiation therapy.

11. The use of any one of claims 1 to 10, wherein the cancer is an adenocarcinoma, in particular an advanced adenocarcinoma.

12. The use of any one of claims 1 to 11, wherein the cancer is selected from the group consisting of gastric cancer, esophageal cancer, pancreatic cancer, lung cancer such as non small cell lung cancer (NSCLC), breast cancer, ovarian cancer, colon cancer, hepatic cancer, head-neck cancer, cancer of the gallbladder and the metastasis thereof, a Krukenberg tumor, peritoneal metastasis and/or lymph node metastasis.

13. The use of any one of claims 1 to 12, wherein the cancer is selected from the group consisting of cancer of the stomach, cancer of the esophagus, in particular the lower esophagus, cancer of the eso-gastric junction and gastroesophageal cancer.