

In another aspect, the present disclosure refers to a composition comprising an antibody or antigen binding fragment as disclosed, or a cell as disclosed herein, and at least one pharmaceutically-acceptable carrier.

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In another aspect, the present disclosure refers to an antibody or antigen binding fragment as disclosed herein, a cell as disclosed herein, or a composition as disclosed, for use in therapy, or in a method of medical treatment, wherein the cell as disclosed herein is a CAR T cell or a CAR NK cell.

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In another aspect, the present disclosure refers to a use of an antibody or antigen binding fragment as disclosed, a cell as disclosed or a composition as disclosed herein, in the manufacture of a medicament for treating a HER2-positive cancer, wherein the cell as disclosed herein is a CAR T cell or a CAR NK cell. ~~use in the treatment of cancer.~~

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In another aspect, the present disclosure refers to a method comprising contacting, *in vitro*, a sample containing, or suspected to contain, HER2 with an antibody or antigen binding fragment as disclosed herein, and detecting the formation of a complex comprising the antibody or antigen binding fragment and HER2.

In yet another aspect, the present disclosure refers to a method of diagnosing a HER2-positive cancer in a subject, the method comprising contacting, *in vitro*, a sample from the subject with an antibody or antigen binding

Claims:

1. An antibody or antigen binding fragment which is capable of binding to HER2, optionally isolated, wherein the antibody or antigen binding fragment comprises:
 - a light chain variable region incorporating the following CDRs:
 - LC-CDR1: GLSSGSVSTGHYAS (SEQ ID NO:15)
 - LC-CDR2: NTNTRSS (SEQ ID NO:16)
 - LC-CDR3: VLYVGDIWV (SEQ ID NO:17); and
 - a heavy chain variable region incorporating the following CDRs:
 - HC-CDR1: SYYIH (SEQ ID NO:18)
 - HC-CDR2: IINPGNGDTNYAQRFGG (SEQ ID NO:19)
 - HC-CDR3: EIASYSGSYYDY (SEQ ID NO:20).
2. The antibody or antigen binding fragment according to claim 1, wherein the antibody or antigen binding fragment comprises:
 - a light chain variable region having at least 85% sequence identity to the light chain variable region sequence of SEQ ID NO:1; and
 - a heavy chain variable region having at least 85% sequence identity to the heavy chain variable region sequence of SEQ ID NO:5.
3. The antibody or antigen binding fragment according to claim 1 or claim 2, wherein the antibody or antigen binding fragment binds specifically to human, rhesus macaque or murine HER2.
4. The antibody or antigen binding fragment according to any one of claim 1 to 3, conjugated to a drug moiety or a detectable moiety.
5. The antibody or antigen binding fragment according to claim 4, wherein the drug moiety comprises an anti-cancer drug moiety.
6. A chimeric antigen receptor (CAR) comprising an antibody or antigen binding fragment according to any one of claims 1 to 3.
7. An *in vitro* complex, optionally isolated, comprising an antibody or antigen binding fragment according to any one of claims 1 to 5, or a CAR according to claim 6, bound to HER2.
8. A nucleic acid, optionally isolated, encoding an antibody or antigen binding fragment according to any one of claims 1 to 5, or a CAR according to claim 6.
9. A vector comprising the nucleic acid according to claim 8.

10. A cell comprising the nucleic acid according to claim 8, or the vector according to claim 9.
11. A method for making an antibody or antigen binding fragment according to any one of claims 1 to 5, or a CAR according to claim 6, comprising culturing a cell according to claim 10 under conditions suitable for the expression of the antibody, antigen binding fragment or CAR from the nucleic acid or vector.
12. A composition comprising an antibody or antigen binding fragment according to any one of claims 1 to 5, or a cell according to claim 10, and at least one pharmaceutically-acceptable carrier.
13. An antibody or antigen binding fragment according to any one of claims 1 to 5, a cell according to claim 10, or a composition according to claim 12, for use in therapy, or in a method of medical treatment, wherein the cell according to claim 10 is a CAR T cell or a CAR NK cell.
14. Use of an antibody or antigen binding fragment according to any one of claims 1 to 5, a cell according to claim 10, or a composition according to claim 12, in the manufacture of a medicament for use in the treatment of treating a HER2-positive cancer, wherein the cell according to claim 10 is a CAR T cell or a CAR NK cell.
- ~~15. The use according to claim 14, wherein the cancer is a HER2-positive cancer.~~
- ~~156.~~ The use according to claim ~~145~~, wherein the cancer comprises a HER2-positive tumour cell.
- ~~167.~~ A method comprising contacting, *in vitro*, a sample containing, or suspected to contain, HER2 with an antibody or antigen binding fragment according to any one of claims 1 to 5, and detecting the formation of a complex comprising the antibody or antigen binding fragment and HER2.
- ~~178.~~ A method of diagnosing a HER2-positive cancer in a subject, the method comprising contacting, *in vitro*, a sample from the subject with an antibody or antigen binding fragment according to any one of claims 1 to 5, and detecting the formation of a complex comprising the antibody or antigen binding fragment and HER2.