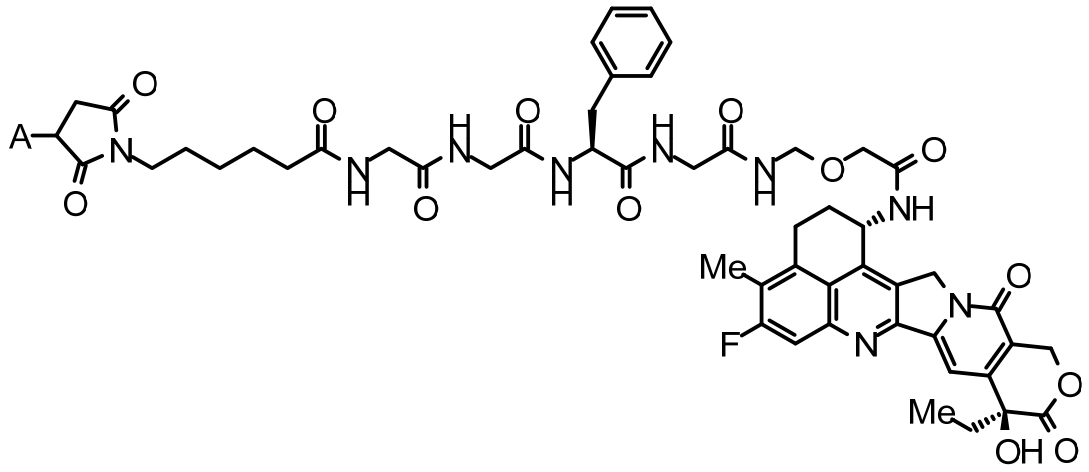
Claims

[Claim 1]

Use of an antibody-drug conjugate in the manufacture of a medicament for treating cancer, wherein the antibody-drug conjugate is to be administered in combination with a PARP inhibitor, wherein the antibody-drug conjugate is an antibody-drug conjugate in which a drug-linker represented by the following formula:

[Formula 1]




wherein A represents a connecting position to an antibody,

is conjugated to the antibody via a thioether bond.

[Claim 2]

The use according to claim 1, wherein the antibody in the antibody-drug conjugate is an anti-HER2 antibody, an anti-HER3 antibody, an anti-TROP2 antibody, an anti-B7-H3 antibody, an anti-GPR20 antibody, or an anti-CDH6 antibody.

[Claim 3]

The use according to claim 2, wherein the antibody in the antibody-drug conjugate is an anti-HER2 antibody.

[Claim 4]

The use according to claim 3, wherein the anti-HER2 antibody is:

(a) an antibody comprising a heavy chain comprising CDRH1 consisting of an amino acid sequence consisting of amino acid residues 26 to 33 of SEQ ID NO: 1, CDRH2 consisting of an amino acid sequence consisting of amino acid residues 51 to 58 of SEQ ID NO: 1, and CDRH3 consisting of an amino acid sequence consisting of amino acid residues 97 to 109 of SEQ ID NO: 1, and a light chain comprising CDRL1 consisting of an amino acid sequence consisting of amino acid residues 27 to 32 of SEQ ID NO: 2, CDRL2 consisting of an amino acid sequence consisting of amino acid residues 50 to 52 of SEQ ID NO: 2, and CDRL3 consisting of an amino acid sequence consisting of amino acid residues 89 to 97 of SEQ ID NO: 2; or

(b) an antibody comprising a heavy chain comprising a heavy chain variable region consisting of an amino acid sequence consisting of amino acid residues 1 to 120 of SEQ ID NO: 1 and a light chain comprising a light chain variable region consisting of an amino acid sequence consisting of amino acid residues 1 to 107 of SEQ ID NO: 2; or

(c) an antibody comprising a heavy chain consisting of an amino acid sequence represented by SEQ ID NO: 1 and a light chain consisting of an amino acid sequence represented by SEQ ID NO: 2; or

(d) an antibody comprising a heavy chain consisting of an amino acid sequence consisting of amino acid residues 1 to 449 of SEQ ID NO: 1 and a light chain consisting of an amino acid sequence consisting of amino acid residues 1 to 214 of SEQ ID NO: 2.

[Claim 5]

The use according to claim 2, wherein the antibody in the antibody-drug conjugate is an anti-HER3 antibody.

[Claim 6]

The use according to claim 5, wherein the anti-HER3 antibody is an antibody comprising a heavy chain consisting of an amino acid sequence represented by SEQ ID NO: 3 and a light chain consisting of an amino acid sequence represented by SEQ ID NO: 4,

optionally wherein the anti-HER3 antibody lacks a lysine residue at the carboxyl terminus of the heavy chain.

[Claim 7]

The use according to claim 2, wherein the antibody in the antibody-drug conjugate is an anti-TROP2 antibody.

[Claim 8]

The use according to claim 7, wherein the anti-TROP2 antibody is an antibody comprising a heavy chain

consisting of an amino acid sequence consisting of amino acid residues 20 to 470 of SEQ ID NO: 5 and a light chain consisting of an amino acid sequence consisting of amino acid residues 21 to 234 of SEQ ID NO: 6,

optionally wherein the anti-TROP2 antibody lacks a lysine residue at the carboxyl terminus of the heavy chain.

[Claim 9]

The use according to claim 2, wherein the antibody in the antibody-drug conjugate is an anti-B7-H3 antibody.

[Claim 10]

The use according to claim 9, wherein the anti-B7-H3 antibody is an antibody comprising a heavy chain consisting of an amino acid sequence consisting of amino acid residues 20 to 471 of SEQ ID NO: 7 and a light chain consisting of an amino acid sequence consisting of amino acid residues 21 to 233 of SEQ ID NO: 8,

optionally wherein the anti-B7-H3 antibody lacks a lysine residue at the carboxyl terminus of the heavy chain.

[Claim 11]

The use according to claim 2, wherein the antibody in the antibody-drug conjugate is an anti-GPR20 antibody.

[Claim 12]

The use according to claim 11, wherein the anti-GPR20 antibody is an antibody comprising a heavy chain consisting of an amino acid sequence consisting of amino

acid residues 20 to 472 of SEQ ID NO: 9 and a light chain consisting of an amino acid sequence consisting of amino acid residues 21 to 234 of SEQ ID NO: 10,

optionally wherein the anti-GPR20 antibody lacks a lysine residue at the carboxyl terminus of the heavy chain.

[Claim 13]

The use according to claim 2, wherein the antibody in the antibody-drug conjugate is an anti-CDH6 antibody.

[Claim 14]

The use according to claim 13, wherein the anti-CDH6 antibody is an antibody comprising a heavy chain consisting of an amino acid sequence consisting of amino acid residues 20 to 471 of SEQ ID NO: 11 and a light chain consisting of an amino acid sequence consisting of amino acid residues 21 to 233 of SEQ ID NO: 12,

optionally wherein the anti-CDH6 antibody lacks a lysine residue at the carboxyl terminus of the heavy chain.

[Claim 15]

The use according to any one of the preceding claims, wherein:

(a) when the antibody is an anti-HER2 antibody, an anti-HER3 antibody, an anti-GPR20 antibody or an anti-CDH6 antibody, the average number of units of the drug-linker conjugated per antibody molecule in the antibody-drug conjugate is in the range of from 7 to 8; or

(b) when the antibody is an anti-TROP2 antibody or an anti-B7-H3 antibody, the average number of units of the drug-linker conjugated per antibody molecule in the antibody-drug conjugate is in the range of from 3.5 to 4.5.

[Claim 16]

The use according to any one of claims 1 to 15, wherein the PARP inhibitor is olaparib, rucaparib, niraparib, talazoparib, or veliparib, or a pharmacologically acceptable salt thereof.

[Claim 17]

The use according to any one of claims 1 to 16, wherein the antibody-drug conjugate and the PARP inhibitor are separately contained as active components in different formulations, and are to be administered simultaneously or at different times.

[Claim 18]

The use according to any one of claims 1 to 17, wherein the cancer is at least one selected from the group consisting of breast cancer, gastric cancer, colorectal cancer, lung cancer, esophageal cancer, head-and-neck cancer, gastroesophageal junction adenocarcinoma, biliary tract cancer, Paget's disease, pancreatic cancer, ovarian cancer, bladder cancer, prostate cancer, uterine carcinosarcoma, gastrointestinal stromal tumor, kidney cancer, and sarcoma,

optionally wherein the cancer is at least one selected from the group consisting of breast cancer (e.g. HER2 low-expressing breast cancer), gastric cancer, ovarian cancer, lung cancer, and pancreatic cancer.

[Claim 19]

A pharmaceutical composition comprising an antibody-drug conjugate and a PARP inhibitor, wherein the antibody-drug conjugate and PARP inhibitor are as defined in any one of claims 1 to 16.

[Claim 20]

A kit of parts comprising:

(A) an antibody drug conjugate as defined in any one of claims 1 to 15; and

(B) a PARP inhibitor as defined in claim 1 or 16.