

The antibody may include a heavy chain variable domain (VH) with an amino acid sequence selected from the group consisting of SEQ ID NOs: 7 and 9; and a light chain variable domain (VL) with an amino acid sequence selected from the group consisting of SEQ ID NOs: 8 and 10. The antibody may be an antibody-drug conjugate. The antibody may be conjugated with monomethyl auristatin E (MMAE). The antibody may be administered intravenously.

**[0007a]** In a first aspect, there is provided use of an antibody-drug conjugate (ADC) in the manufacture of a medicament for treating a platinum refractory cancer in a subject, wherein the platinum refractory cancer (i) is selected from breast cancer, melanoma, colorectal cancer, liver cancer, lung cancer, bladder cancer, cervical cancer, stomach cancer, and prostate cancer, (ii) is resistant to cisplatin or oxaliplatin, or (iii) is ovarian cancer and is resistant to cisplatin, wherein said ADC comprises: a) an anti-STn antibody, wherein said anti-STn antibody comprises: 1) a heavy chain variable domain (VH) with the amino acid sequence of SEQ ID NO: 7 and a light chain variable domain (VL) with the amino acid sequence of SEQ ID NO: 8; 2) a VH with the amino acid sequence of SEQ ID NO: 9 and a VL with the amino acid sequence of SEQ ID NO: 10; or 3) a VH with the amino acid sequence of SEQ ID NO: 11 and a VL with the amino acid sequence of SEQ ID NO: 12; and b) a cytotoxic agent conjugated to the anti-STn antibody.

**[0008]** In some examples, the present disclosure provides a method of treating colorectal cancer by administering an anti-STn antibody to a subject with colorectal cancer, wherein the anti-STn antibody includes a heavy chain variable domain (VH) with an amino acid sequence selected from the group consisting of SEQ ID NOs: 7, 9, and 11; and a light chain variable domain (VL) with an amino acid sequence selected from the group consisting of SEQ ID NOs: 8, 10, and 12. The colorectal cancer may be resistant to treatment with at least one of cetuximab, panitumumab, bevacizumab, ramucirumab, trastuzumab, ponatinib, sorafenib, 5-fluorouracil, cisplatin, docetaxel, gemcitabine, irinotecan, paclitaxel, and oxaliplatin. The anti-STn antibody may include an antibody drug conjugate (ADC). The ADC may include at least one conjugate, wherein the at least one conjugate is selected from one or more of an auristatin, a maytansine, a tubulysin, a vinca alkaloid, a pyrrolobenzodiazepine dimer, a camptothecin, a duocarmycin, an amanitin, a phosphoinositide 3-kinase (PI3K) inhibitor, and a mitogen-activated protein kinase kinase (MEK) inhibitor. The ADC may include one or more polymer, wherein the one or more polymer connects the anti-STn antibody and the at least one conjugate. The one or more polymer may include one or more of a poly(ethylene glycol) (PEG), a poly(N-(2-hydroxypropyl)methacrylamide) (polyHPMA), a poly( $\alpha$ -amino acid), a carbohydrate polymer, a glycopolysaccharide, a glycolipid, a glycoconjugate, a polyglycerol, a polyvinyl alcohol, a poly(acrylic acid), a polyketal, and a polyacetal. The one or more polymer may include a poly(1-hydroxymethylethylene hydroxymethylformal) (PHF). The anti-STn

## CLAIMS

What is claimed is:

1. Use of an antibody-drug conjugate (ADC) in the manufacture of a medicament for treating a platinum refractory cancer in a subject, wherein the platinum refractory cancer (i) is selected from breast cancer, melanoma, colorectal cancer, liver cancer, lung cancer, bladder cancer, cervical cancer, stomach cancer, and prostate cancer, (ii) is resistant to cisplatin or oxaliplatin, or (iii) is ovarian cancer and is resistant to cisplatin, wherein said ADC comprises:
  - a) an anti-STn antibody, wherein said anti-STn antibody comprises:
    - 1) a heavy chain variable domain (VH) with the amino acid sequence of SEQ ID NO: 7 and
    - a light chain variable domain (VL) with the amino acid sequence of SEQ ID NO: 8;
    - 2) a VH with the amino acid sequence of SEQ ID NO: 9 and a VL with the amino acid sequence of SEQ ID NO: 10; or
    - 3) a VH with the amino acid sequence of SEQ ID NO: 11 and a VL with the amino acid sequence of SEQ ID NO: 12; and
  - b) a cytotoxic agent conjugated to the anti-STn antibody.
2. The use of claim 1, wherein the cytotoxic agent is selected from an auristatin, a maytansine, a tubulysin, a vinca alkaloid, a pyrrolobenzodiazepine dimer, a camptothecin, a duocarmycin, an amanitin, a phosphoinositide 3-kinase (PI3K) inhibitor, and a mitogen-activated protein kinase kinase (MEK) inhibitor.
3. The use of claim 1 or 2, wherein the cytotoxic agent is conjugated to the anti-STn antibody via a linker.
4. The use of claim 3, wherein the linker is a cleavable linker.
5. The use of claim 3 or 4, wherein the linker comprises one or more polymers selected from a poly(ethylene glycol) (PEG), a poly(N-(2-hydroxypropyl)methacrylamide) (polyHPMA), a poly( $\alpha$ -amino acid), a carbohydrate polymer, a glycopolysaccharide, a glycolipid, a glycoconjugate, a polyglycerol, a polyvinyl alcohol, a poly(acrylic acid), a polyketal, a polyacetal, and a poly(1-hydroxymethylethylene hydroxymethylformal) (PHF).
6. The use of any one of claims 3-5, wherein the linker comprises valine-citrulline.

7. The use of any one of claims 1-6, wherein the anti-STn antibody comprises a VH with the amino acid sequence of SEQ ID NO: 7 and a VL with the amino acid sequence of SEQ ID NO: 8.
8. The use of any one of claims 1-7, wherein the platinum refractory cancer is ovarian cancer and is resistant to cisplatin.
9. The use of any one of claims 1-7, wherein the platinum refractory cancer is colorectal cancer.
10. The use of claim 9, wherein said colorectal cancer is resistant to treatment with at least one of cetuximab, panitumumab, bevacizumab, ramucirumab, trastuzumab, ponatinib, sorafenib, 5-fluorouracil, docetaxel, gemcitabine, irinotecan, or paclitaxel.
11. The use of any one of claims 1-10, wherein the cytotoxic agent comprises MMAE.
12. The use of any one of claims 1-11, wherein the the anti-STn antibody comprises a VH with the amino acid sequence of SEQ ID NO: 7 and a VL with the amino acid sequence of SEQ ID NO: 8 and the cytotoxic agent comprises MMAE.
13. The use of any one of claims 1-12, wherein the ADC is to be administered at a dose of from 1 mg/kg to 6 mg/kg.