

CLAIMS

1. Use of an antibody that is capable of binding a soluble extracellular domain human CD39 (NTPDase1) protein and inhibiting the ATPase activity thereof in the preparation of a medicament for the treatment of cancer, in which the antibody is to be administered in
5 combination with a platinum agent.
2. Use according to Claim 1, in which the antibody is capable of causing a decrease in the ATPase activity of the human extracellular domain CD39 protein in solution by more than 70%, in which the antibody inhibits the ATPase activity of the soluble extracellular domain human CD39 protein in the presence of exogenously added ATP, optionally in which added
10 ATP is at a concentration of 20 μ M.
3. Use according to Claim 1 or 2, in which the antibody is capable of causing an increase in expression of a cell surface marker of activation in monocyte-derived dendritic cells, when such moDC are incubated *in vitro* with the antibody and ATP, optionally in which exogenously added ATP is provided at 0.125 mM, 0.25 mM or 0.5mM.
- 15 4. Use according to Claim 1, 2 or 3, in which the platinum agent is oxaliplatin, cisplatin, carboplatin, nedaplatin, phenanthriplatin, picoplatin or satraplatin.
5. Use according to any preceding claim, in which the platinum agent is to be administered 1 to 48 hours after the administration of the antibody that is capable of binding and inhibiting the ATPase activity of CD39.
- 20 6. Use according to any preceding claim, in which the cancer is an ovarian cancer.
7. Use according to any preceding claim, in which the cancer is a gastric or esophageal cancer.
8. Use according to any preceding claim, in which the cancer is a lung cancer.
9. Use according to any preceding claim in which the cancer is a colon cancer.
- 25 10. Use according to any preceding claim, in which the cancer is a head and neck cancer.
11. Use according to any preceding claim, in which the cancer is a platinum-resistant cancer.

12. Use according to any preceding claim, in which the antibody substantially lacks binding to human CD16, CD32a, CD32b and/or CD64 polypeptides.

13. Use according to any preceding claim, in which the antibody has reduced binding to:

(a) a mutant CD39 polypeptide comprising the mutations Q96A, N99A, E143A and R147E (with reference to SEQ ID NO: 1);

(b) a mutant CD39 polypeptide comprising the mutations R138A, M139A and E142K (with reference to SEQ ID NO: 1);

(c) a mutant CD39 polypeptide comprising the mutations K87A, E100A and D107A (with reference to SEQ ID NO: 1); and/or

(d) a mutant CD39 polypeptide comprising the mutations N371K, L372K, E375A, K376G and V377S, and an insertion of a valine between residues 376 and 377 (with reference to SEQ ID NO: 1);

in each case, relative to binding between the antibody and a wild-type CD39 polypeptide comprising the amino acid sequence of SEQ ID NO: 1.

14. Use according to any preceding claim, in which the antibody comprises a HCDR1 comprising an amino acid sequence DYNMH (SEQ ID NO: 5); a HCDR2 comprising an amino acid sequence YIVPLNGGSTFNQKFKG (SEQ ID NO: 6); a HCDR3 comprising an amino acid sequence GGTRFAY (SEQ ID NO: 7); a LCDR1 comprising an amino acid sequence RASESVDNFGVVSFMY (SEQ ID NO: 8); a LCDR2 region comprising an amino acid sequence GASNQGS (SEQ ID NO: 9); and a LCDR3 region comprising an amino acid sequence QQTKEVPYT (SEQ ID NO: 10).

15. Use according to any preceding claim, in which the platinum agent is to be administered in a combination regimen comprising a platinum agent, in which the combination regimen comprising a platinum agent comprises folinic acid, 5-Fu and oxaliplatin.