

CLAIMS

1. An immunoconjugate comprising an anti-CEACAM5-antibody for use for treating cancer in combination with trifluoridine and tipiracil (TAS-102).
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2. The immunoconjugate for the use of claim 1, wherein the anti-CEACAM5-antibody comprises a CDR-H1 consisting of SEQ ID NO: 1, CDR-H2 consisting of SEQ ID NO: 2, CDR-H3 consisting of SEQ ID NO: 3, CDR-L1 consisting of SEQ ID NO: 4, CDR-L2 consisting of amino acid sequence NTR, and CDR-L3 consisting of SEQ ID NO: 5.
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3. The immunoconjugate for the use of claim 1 or 2, wherein the anti-CEACAM5-antibody comprises a variable domain of a heavy chain (VH) consisting of SEQ ID NO: 6 and a variable domain of a light chain (VL) consisting of SEQ ID NO: 7.
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4. The immunoconjugate for the use of any of claims 1 to 3, wherein the anti-CEACAM5-antibody comprises a heavy chain (VH) consisting of SEQ ID NO: 8 and a light chain (VL) consisting of SEQ ID NO: 9.
- 20 5. The immunoconjugate for the use of any of claims 1 to 4, wherein the immunoconjugate comprises at least one cytostatic agent.
6. The immunoconjugate for the use of claim 5, wherein the cytostatic agent is selected from the group consisting of radioisotopes, protein toxins, small molecule toxins, and combinations thereof.
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7. The immunoconjugate for the use of claim 6, wherein the small molecule toxins are selected from antimetabolites, DNA-alkylating agents, DNA-cross-linking agents, DNA-intercalating agents, anti-microtubule agents, topoisomerase inhibitors, and combinations thereof.
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8. The immunoconjugate for the use of claim 7, wherein the anti-microtubule agent is selected from the group consisting of taxanes, vinca alkaloids, maytansinoids, colchicine, podophyllotoxin, griseofulvin, and combinations thereof.
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9. The immunoconjugate for the use of claim 8, wherein the maytansinoids are selected from the group consisting of N2'-deacetyl-N2'-(3-mercapto-1-oxopropyl)-

maytansine (DM1) or N2'-deacetyl-N-2'(4-methyl-4-mercapto-1-oxopentyl)-maytansine (DM4), and combinations thereof.

- 5 10. The immunoconjugate for the use of any of claims 1 to 9, wherein the anti-CEACAM5-antibody is covalently attached via a cleavable or non-cleavable linker to the at least one cytotoxic agent.
- 10 11. The immunoconjugate for the use of claim 10, wherein said linker is selected from the group consisting of N-succinimidyl pyridyldithiobutyrate (SPDB), 4-(pyridin-2-yl)disulfanyl-2-sulfo-butyric acid (sulfo-SPDB), and succinimidyl(N-maleimidomethyl) cyclohexane-1-carboxylate (SMCC).
- 15 12. The immunoconjugate for the use of any of claims 1 to 11, comprising an CEACAM5-antibody, which comprises a heavy chain (VH) consisting of SEQ ID NO: 8 and a light chain (VL) consisting of SEQ ID NO: 9 (huMAb2-3), and which is covalently linked to N2'-deacetyl-N-2'(4-methyl-4-mercapto-1-oxopentyl)-maytansine (DM4) via N-succinimidyl pyridyldithiobutyrate (SPDB).
- 20 13. The immunoconjugate for the use of any of claims 1 to 12, wherein the immunoconjugate is characterised by a drug-to-antibody ratio (DAR) ranging from 1 to 10.
- 25 14. The immunoconjugate for the use of any of claims 1 to 13, wherein the cancer is selected from the group consisting of colorectal, and stomach cancer.
15. The immunoconjugate for the use of any of claims 1 to 14, wherein the immunoconjugate and TAS-102 are administered simultaneously to a subject in need thereof.
- 30 16. The immunoconjugate for the use of claim 15, wherein the immunoconjugate and TAS-102 are formulated (i) in a single pharmaceutical composition comprising the immunoconjugate and TAS-102, or (ii) in the form of at least two separate pharmaceutical compositions, wherein at least one pharmaceutical composition comprises the immunoconjugate, and one or more pharmaceutical compositions
35 comprise trifluoridine and tipiracil, in separate or combined formulations.

17. The immunoconjugate for the use of any of claims 1 to 14, wherein the immunoconjugate and TAS-102 are administered separately or sequentially to a subject in need thereof.
- 5 18. The immunoconjugate for the use of claim 17, wherein the immunoconjugate and TAS-102 are formulated in the form of at least two separate pharmaceutical compositions, wherein (i) at least one pharmaceutical composition comprises the immunoconjugate, and (ii) one or more pharmaceutical compositions comprise trifluoridine and tipiracil, in separate or combined formulations.
- 10 19. The immunoconjugate for the use of any of claims 1 to 18, wherein the immunoconjugate comprising an anti-CEACAM5-antibody, and trifluoridine and tipiracil (TAS-102) are administered in 3 to 6 cycles, wherein one cycle comprises: administering the immunoconjugate at a dose of from 60 to 210 mg/m², at least once
15 in the cycle;
administering TAS-102 at a dose of from 10 to 100 mg/m², wherein TAS-102 comprises trifluoridine and tipiracil in a molar ratio of from 1:0.4 to 1:0.6, at least once in the cycle.
- 20 20. A pharmaceutical composition comprising the immunoconjugate of any of claims 1 to 14, and trifluoridine and tipiracil.
21. A kit comprising (i) a pharmaceutical composition of the immunoconjugate of any of claims 1 to 14 and (ii) one or more pharmaceutical compositions comprising
25 trifluoridine and tipiracil, in separate or combined formulations.
22. The pharmaceutical composition according to claim 20 or the kit according to claim 21 for the use for treating cancer.