

CLAIMS

1. A pharmaceutically acceptable salt of a peptide comprising the amino acid sequence of SEQ ID NO: 256, wherein the peptide has an overall length of up to 11 amino acids.
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2. The pharmaceutically acceptable salt of claim 1, wherein the peptide consists of the amino acid sequence of SEQ ID NO: 256.
3. The pharmaceutically acceptable salt according to claim 1 or 2, wherein the salt is a chloride or a trifluoroacetate salt.
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4. A peptide comprising the amino acid sequence of SEQ ID NO: 256, or a pharmaceutically acceptable salt thereof, for use in therapy, wherein the peptide has an overall length of up to 11 amino acids.
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5. The peptide for use of claim 4, wherein the peptide has the ability to bind to an MHC class-I molecule, and wherein the peptide, when bound to said MHC, is capable of being recognized by CD8 T cells.
6. The peptide for use of claim 4 or 5, wherein the peptide consists of the amino acid sequence of SEQ ID NO: 256.
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7. A peptide as defined in any of claims 4 to 6, wherein said peptide is modified and/or includes non-peptide bonds.
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8. A fusion protein, comprising the peptide defined in any of claims 4 to 7, in particular comprising N-terminal amino acids of the HLA-DR antigen-associated invariant chain (Ii).
9. Use of a peptide comprising the amino acid of SEQ ID NO: 256, or a pharmaceutically acceptable salt thereof, in the manufacture of a medicament for the treatment of cancer, wherein the peptide has an overall length of up to 11 amino acids.
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10. A binding molecule that specifically recognizes the peptide defined in any of claims 4 to 7, or the peptide defined in any of claims 4 to 7 when bound to an MHC molecule.
11. The binding molecule of claim 10, being
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 - (i) an antibody, in particular a soluble or membrane-bound antibody, or
 - (ii) a T-cell receptor that is reactive with an HLA ligand, wherein the ligand is the peptide defined in any of claims 4 to 7, or the peptide defined in any of claims 4 to 7 when bound to an MHC molecule.

12. The binding molecule of claim 11, wherein the antibody is a monoclonal antibody or a fragment thereof and/or wherein the T-cell receptor is soluble or membrane-bound.
- 5 13. The binding molecule according to claim 12, wherein the T-cell receptor is provided as a soluble molecule and carries a further effector function such as an immune stimulating domain or toxin.
- 10 14. A nucleic acid, encoding for the peptide defined in any of claims 4 to 7, a binding molecule of any of claims 10 to 13, optionally linked to a heterologous promoter sequence, or an expression vector expressing said nucleic acid.
- 15 15. A recombinant host cell comprising the peptide defined in any one of claims 4 to 8, the binding molecule according to any of claims 10 to 13, or the nucleic acid or the expression vector according to claim 14, wherein said host cell optionally is selected from an antigen presenting cell, such as a dendritic cell, a T cell or an NK cell.
- 20 16. An *in vitro* method for producing activated T lymphocytes, the method comprising contacting *in vitro* T cells with antigen loaded human class I MHC molecules expressed on the surface of a suitable antigen-presenting cell or an artificial construct mimicking an antigen-presenting cell for a period of time sufficient to activate the T cells in an antigen specific manner, wherein the antigen is a peptide defined in any of claims 4 to 6.
- 25 17. An activated T lymphocyte, produced by the method according to claim 16, that selectively recognizes a cell which presents a polypeptide comprising an amino acid sequence given in any one of claims 4 to 6.
- 30 18. A pharmaceutical composition comprising at least one active ingredient selected from the group consisting of the peptide defined in any of claims 4 to 8, the binding molecule of any of claims 10 to 13, the nucleic acid or the expression vector according to claim 14, the recombinant host cell according to claim 15, or the activated T lymphocyte according to claim 17, or a conjugated or labelled active ingredient, and a pharmaceutically acceptable carrier.
- 35 19. The pharmaceutical composition of claim 18, wherein (i) the pharmaceutical composition further comprises pharmaceutically acceptable excipients and/or stabilizers, and/or (ii) wherein the pharmaceutical composition is a vaccine.
20. A method for producing the peptide defined in any of claims 4 to 8, or the binding molecule of any of claims 10 to 13, the method comprising culturing the recombinant host

cell according to claim 15, and isolating the peptide, or the binding molecule from said host cell and/or its culture medium.

21. The peptide defined in any of claims 4 to 8, the binding molecule according to any of claims 10 to 13, the nucleic acid or the expression vector according to claim 14, the recombinant host cell according to claim 15, or the activated T lymphocyte according to claim 17 for use in diagnosis and/or treatment of cancer.

22. Use of the peptide defined in any of claims 4 to 8, the binding molecule according to any of claims 10 to 13, the nucleic acid or the expression vector according to claim 14, the recombinant host cell according to claim 15, or the activated T lymphocyte according to claim 17 in the manufacture of a medicament for treatment of cancer.

23. The use of claim 22, wherein the treatment is a cellular therapy.

24. The use of claim 22 or 23, wherein said cancer is selected from the group of colorectal cancer, glioblastoma, gastric cancer, hepatocellular carcinoma, renal cell carcinoma, chronic lymphocytic leukaemia, chronic myeloid leukaemia and acute myeloid leukaemia, and other lymphoid neoplasms, for example, Non-Hodgkin lymphoma, post-transplant lymphoproliferative disorders (PTLD) as well as other myeloid neoplasms, such as primary myelofibrosis, essential thrombocytopenia, polycythaemia vera, as well as other neoplasms such as oesophageal cancer, non-small cell lung cancer, small cell lung cancer, pancreatic cancer, prostate cancer, melanoma, breast cancer, gallbladder cancer and cholangiocarcinoma, urinary bladder cancer, uterine cancer, head and neck squamous cell carcinoma, mesothelioma and other tumours that show an over-expression of a protein from which a peptide comprising an amino acid sequence of SEQ ID NO: 256 is derived.

25. A kit comprising:

(a) a container comprising a pharmaceutical composition containing the peptide defined in any of claims 4 to 8, the binding molecule according to any of claims 10 to 13, the nucleic acid or the expression vector according to claim 14, the host cell according to claim 15, or the activated T lymphocyte according to claim 17, in solution or in lyophilized form;

(b) optionally, a second container containing a diluent or reconstituting solution for the lyophilized formulation;

(c) optionally, at least one more peptide selected from the group consisting of SEQ ID NO: 1 to SEQ ID NO: 268, and

(d) optionally, instructions for (i) use of the solution or (ii) reconstitution and/or use of the lyophilized formulation,

wherein the kit optionally further comprising one or more of (iii) a buffer, (iv) a diluent, (v) a filter, (vi) a needle, or (vii) a syringe.