

Claims

1. A peptide consisting of the amino acid sequence of SEQ ID No. 14, wherein said peptide binds to molecule(s) of the major histocompatibility complex (MHC) and/or induces T cells cross-reacting with said peptide; or a pharmaceutically acceptable salt thereof.
2. The peptide according to claim 1, wherein said peptide includes non-peptide bonds.
3. An isolated antibody, in particular a soluble or membrane-bound antibody, that specifically recognizes the peptide according to claims 1 or claim 2 when bound to an MHC molecule.
4. A recombinant, soluble or membrane-bound T-cell receptor that is reactive with an HLA ligand, wherein said ligand consists of SEQ ID No. 14, when said ligand is bound to an HLA molecule.
5. The T-cell receptor according claim 4, wherein said T-cell receptor is provided as a soluble molecule and optionally carries a further effector function, such as an immune stimulating domain or toxin.
6. A nucleic acid, encoding for a peptide according to claim 1, or encoding for a TCR according to claim 4 or 5, optionally linked to a heterologous promoter sequence.
7. An expression vector expressing the nucleic acid according to claim 6.
8. A recombinant host cell comprising the peptide according to claim 1 or claim 2, the nucleic acid according to claim 6 or the expression vector according to claim 7, wherein said host cell for example is an antigen presenting cell such as a dendritic cell, or wherein said host cell for example is a T cell or NK cell.
9. A method for producing the peptide according to claim 1, or the TCR according to claim 4 or 5, said method comprising culturing a host cell according to Claim 8, and isolating said peptide or TCR from said host cell and/or its culture medium.
10. 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 said T cells in an antigen specific manner, wherein said antigen is a peptide according to claim 1 or 2.

11. An isolated activated T lymphocyte comprising a membrane-bound T cell receptor that selectively recognizes a cell which presents a peptide comprising an amino acid sequence given in claim 1 or 2.

12. The peptide according to claim 1 or claim 2, the antibody according to claim 3, the TCR according to claim 4 or 5, the nucleic acid according to claim 6, the expression vector according to claim 7, or the host cell according to claim 8 for use in therapy.

13. Use of the peptide according to claim 1 or claim 2, the antibody according to claim 3, the TCR according to claim 4 or 5, the nucleic acid according to claim 6, the expression vector according to claim 7, the host cell according to claim 8, or the activated T lymphocyte according to claim 11 in the manufacture of a medicament for the treatment of cancer selected from the group of gastric cancer (GC), non-small cell lung cancer (NSCLC), colorectal cancer, pancreatic cancer (PC), oesophageal carcinoma, small cell lung cancer (SCLC), urinary bladder cancer (UBC), uterine cancer (UEC), gallbladder adenocarcinoma and cholangiocarcinoma and melanoma.

14. A kit comprising:

- a) a container comprising a pharmaceutical composition containing the peptide according to claim 1 or claim 2, the antibody according to claim 3, the TCR according to claim 4 or 5, the nucleic acid according to claim 6, the expression vector according to claim 7, the host cell according to claim 8, or the activated T lymphocyte according to claim 12, in solution or in lyophilized form;
- b) optionally, a second container containing a diluent or reconstituting solution for the lyophilized formulation; and
- c) optionally, instructions for (i) use of the solution or (ii) reconstitution and/or use of the lyophilized formulation.

15. The kit according to claim 14, further comprising one or more of (iii) a buffer, (iv) a diluent, (v) a filter, (vi) a needle, or (vii) a syringe.

16. A pharmaceutical composition comprising at least one active ingredient selected from the group consisting of the peptide according to claim 1 or claim 2, the antibody according to claim 3, the TCR according to claim 4 or 5, the nucleic acid according to

claim 6, the expression vector according to claim 7, the host cell according to claim 8, or the activated T lymphocyte according to claim 11, and a pharmaceutically acceptable carrier, and optionally additional pharmaceutically acceptable excipients and/or stabilizers.