CLAIMS

1. An isolated peptide consisting of an amino acid sequence set forth in SEQ ID No. 91; or a pharmaceutically acceptable salt of the peptide.

2. The isolated peptide according to claim 1, wherein said peptide maintains the ability to bind to a molecule of the human major histocompatibility complex (MHC) class-I, and wherein said peptide is capable of stimulating CD8 T cells.

3. The isolated peptide according to any one of claims 1 to 2, wherein said peptide includes non-peptide bonds.

4. The isolated peptide according to any one of claims 1 to 3, wherein said peptide is part of a fusion protein, in particular comprising N-terminal amino acids of the HLA-DR antigen-associated invariant chain (Ii).

5. An *in vitro* method for producing activated cytotoxic T lymphocytes (CTL), the method comprising contacting *in vitro* CTL 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 CTL in an antigen specific manner, wherein said antigen is a peptide according to any one of claims 1 to 4.

6. An activated cytotoxic T lymphocyte (CTL), produced by the method according to claim 5, that selectively recognises a cell which aberrantly expresses a polypeptide comprising an amino acid sequence as defined in any one of claims 1 to 3.

7. Use of an effective number of cytotoxic T lymphocytes (CTL) according to claim 6 in the manufacture of a medicament for killing target cancer cells in a patient which target cancer cells aberrantly express a polypeptide consisting of an amino acid sequence of SEQ ID No. 91.

8. An isolated antibody that specifically recognizes the peptide according to any one of claims 1 to 4, preferably a peptide according to any one of claims 1 to 3 that is bound to an MHC molecule.

9. An isolated peptide according to any one of claims 1 to 4, the activated cytotoxic T lymphocyte according to claim 6 or the antibody according to claim 8, for use in the treatment of cancer, wherein said cancer is breast cancer, or a cancer which shows an over-presentation of a peptide consisting of SEQ ID No. 91.

10. The isolated peptide according to any one of claims 1 to 4, the activated cytotoxic T lymphocyte according to claim 6, or the antibody according to claim 8, for use in a method of treating cancer in a subject, wherein the isolated peptide, the activated cytotoxic T lymphocyte or the antibody is to be administered to the subject, and wherein said cancer is breast cancer, or a cancer which shows an over-presentation of a peptide consisting of SEQ ID No. 91.

11. The isolated peptide, the activated cytotoxic T lymphocyte according to claim 6 or the antibody for use according to claim 8 or claim 9, wherein said cancer which shows an over-presentation of a peptide consisting of SEQ ID No. 91 is derived from is selected from astrocytoma, pilocytic astrocytoma, dysembryoplastic neuroepithelial tumor, oligodendrogliomas, ependymoma, glioblastoma multiforme, mixed gliomas, oligoastrocytomas, medulloblastoma, retinoblastoma, neuroblastoma, germinoma, teratoma, gangliogliomas, gangliocytoma, central gangliocytoma, primitive neuroectodermal tumors (PNET, e.g. medulloblastoma, medulloepithelioma, neuroblastoma, retinoblastoma, ependymoblastoma), tumors of the pineal parenchyma (e.g. pineocytoma, pineoblastoma), ependymal cell tumors, choroid plexus tumors, neuroepithelial tumors of uncertain origin (e.g. gliomatosis cerebri, astroblastoma), glioblastoma prostate tumor, esophageal cancer, colorectal cancer, clear cell renal cell carcinoma, lung cancer, CNS, ovarian, melanoma pancreatic cancer, squamous cell carcinoma, leukemia medulloblastoma, colon, rectum, stomach, kidney, lung, pancreas, prostate, and skin.

12. A kit comprising:

(a) a container comprising a pharmaceutical composition containing the isolated peptide according to any one of claims 1 to 4, the activated cytotoxic T lymphocyte according to claim 6, or the antibody according to claim 8, 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 90, and SEQ ID No. 92 to 131, and
(d) optionally, instructions for (i) use of the solution or (ii) reconstitution and/or use of the lyophilized formulation, and
optionally further comprising one or more of (iii) a buffer, (iv) a diluent, (v) a filter, (vi) a needle, or (vii) a syringe.

13. An isolated T-cell receptor that is reactive with an HLA ligand
wherein the HLA ligand consists of the amino acid sequence set forth in SEQ ID No. 91.

14. A fusion protein, comprising:
(a) an amino acid sequence consisting of SEQ ID No. 91; and
(b) N-terminal amino acids 1-80 of HLA-DR antigen-associated invariant chain (Ii.

15. An isolated nucleic acid linked to a heterologous promoter sequence, encoding for:
(a) the peptide according to any one of claims 1 to 4;
(b) the T cell receptor according to claim 13; or
(c) the fusion protein according to claim 14,
optionally wherein the isolated nucleic acid is DNA, cDNA, PNA, RNA, or combinations thereof.

16. An expression vector comprising a nucleic acid according to claim 15.

17. The isolated peptide according to any one of claims 1 to 4, the nucleic acid according to claim 15, or the expression vector according to claim 16, for use in medicine.

18. A host cell comprising the nucleic acid according to claim 15, or the expression vector according to claim 16, optionally wherein the host cell is an antigen presenting cell, for example a dendritic cell.

19. A method for producing: (a) the peptide according to any one of claims 1 to 4; or (b) the T cell receptor according to claim 13; or (c) the fusion protein according to claim 14, said method comprising culturing the host cell according to claim 18, and isolating said peptide, said T cell receptor, or said fusion protein, from said host cell and/or its culture medium.

20. The method according to claim 5, wherein said antigen-presenting cell comprises an expression vector capable of expressing the peptide according to any one of claims 1 to 4.

21. An activated cytotoxic T lymphocyte (CTL), produced by the method according to claim 5 or claim 20.

22. Use of the peptide according to any one of claims 1 to 4, the T cell receptor according to claim 13, the fusion protein according to claim 14, the nucleic acid according to claim 15, the expression vector according to claim 16, the host cell according to claim 18, or the activated cytotoxic T lymphocyte according to claim 21 in the manufacture of a medicament for treating cancer, wherein said cancer is breast cancer, or a cancer which shows an over-presentation of a peptide consisting of SEQ ID No. 91.