Claims

1. An isolated peptide, comprising a sequence according to SEQ ID No. 88 or a variant thereof which is at least 80%, preferably 90 and more preferred 95% homolog to SEQ ID No. 88 or a variant thereof that induces T cells cross-reacting with said peptide, wherein said peptide is not a full-length polypeptide.

2. The isolated peptide according to Claim 1, wherein said peptide or variant has an overall length of between 8 and 100, preferably between 8 and 30, and most preferred between 8 and 14 amino acids.

3. The isolated peptide according to any of Claims 1 to 2, having the ability to bind to a molecule of the human major histocompatibility complex (MHC) class-I or -II.

4. The isolated peptide according to any one of Claims 1 to 3, wherein the peptide consists or consists essentially of an amino acid sequence according to any one of SEQ ID No. 88.

5. The isolated peptide according to any of Claims 1 to 4, wherein the peptide is modified and/or includes non-peptide bonds.

6. The isolated peptide according to any of Claims 1 to 5, wherein the peptide is a fusion protein, in particular comprising N-terminal amino acids of the HLA-DR antigen-associated invariant chain (Ii).

7. A nucleic acid, encoding a peptide according to any one of Claims 1 to 6, provided, that the peptide is not the full human protein, wherein the nucleic acid is linked to a heterologous promoter sequence.

8. The nucleic acid according to Claim 7 which is DNA, cDNA, PNA, CNA, RNA or combinations thereof.

9. An expression vector which expresses a nucleic acid according to Claim 7 or 8.

10. An isolated peptide according to any one of Claims 1 to 6, a nucleic acid according to Claim 7 or 8 or an expression vector according to Claim 9 for use in medicine.

11. A host cell comprising a nucleic acid according to Claim 7 or 8 or an expression vector according to Claim 9.

12. The host cell according to Claim 11 that is an antigen presenting cell.

13. The host cell according to claim 12, wherein the antigen presenting cell is a dentritic cell.

14. A method of producing a peptide according to any one of Claims 1 to 6, the method comprising culturing the host cell according to Claim 11 and isolating the peptide from the host cell or its culture medium.

15. An in vitro method for producing activated cytotoxic T lymphocytes (CTL), the method comprising contacting in vitro CTL with antigen loaded human class I or II MHC molecules expressed on the surface of a suitable 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 6.

16. The method according to Claim 15, wherein the antigen is loaded onto class I or II MHC molecules expressed on the surface of a suitable antigen-presenting cell by contacting a sufficient amount of the antigen with an antigen-presenting cell.

17. The method according to Claim 15, wherein the antigen-presenting cell comprises an expression vector capable of expressing said peptide containing SEQ ID No. 88 or said variant amino acid sequence.

18. Activated cytotoxic T lymphocytes (CTL), produced by the method according to any one of Claims 15 to 17, which selectively recognise a cell which aberrantly expresses a polypeptide comprising an amino acid sequence given in any one of Claims 1 to 4.

19. Use of a peptide according to any one of claims 1 to 6, a nucleic acid according to claim 7 or 8, an expression vector according to claim 9, a cell according to claim 11 to 13, or an activated cytotoxic T lymphocyte according to claim 18 in the manufacture of a medicament for the treatment of cancer cells.

20. Use according to claim 19, wherein the medicament is a vaccine.

21. Use according to claim 19 or 20, wherein said cancer cells are gastric cancer cells, gastrointestinal, colorectal, pancreatic, lung or renal cells.

22. The cell according to claim 11 to 13, or an activated cytotoxic T lymphocyte according to claim 18 for use in therapy.