Claims

1. An expression vector expressing a nucleic acid encoding a peptide consisting of the amino acid sequence of GLIDEVMVL (SEQ ID NO: 22) or FLDANGHFV (SEQ ID NO: 23).

2. A recombinant host cell comprising the peptide according to claim 1.

3. A recombinant host cell comprising the nucleic acid according to claim 1.

4. A recombinant host cell presenting HLA-A*02 on its surface comprising the expression vector according to claim 1, wherein said host cell is optionally an antigen presenting cell.

5. A method for producing a peptide consisting of the amino acid sequence of GLIDEVMVL (SEQ ID NO: 22) or FLDANGHFV (SEQ ID NO: 23), comprising culturing the host cell according to claim 3, and isolating the peptide from the host cell or its culture medium.

6. An in vitro method for producing activated T lymphocytes, comprising contacting in vitro T cells with antigen loaded human HLA-A*0201 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 consisting of the amino acid sequence of GLIDEVMVL (SEQ ID NO: 22) or FLDANGHFV (SEQ ID NO: 23).

7. The method of claim 6, wherein said antigen is a peptide consisting of the amino acid sequence of GLIDEVMVL (SEQ ID NO: 22).

8. The method of claim 6, wherein said antigen is a peptide consisting of the amino acid sequence of FLDANGHFV (SEQ ID NO: 23).

9. A pharmaceutical composition comprising a peptide consisting of the amino acid sequence of GLIDEVMVL (SEQ ID NO: 22) or FLDANGHFV (SEQ ID NO: 23) in the form of a pharmaceutically acceptable salt and an immunogenicity enhancing amount of at least one adjuvant.

10. The composition of claim 9, wherein the at least one adjuvant is selected from anti-CD40 antibody, imiquimod, resiquimod, GM-CSF, cyclophosphamide, interferon-alpha, interferon-beta, CpG oligonucleotides and derivatives, poly-(I:C) and derivatives, RNA, sildenafil, particulate formulations with poly(lactide coglycolide) (PLG), virosomes, interleukin (IL)-1, IL-2, IL-4, IL-7, IL-12, IL-13, IL-15, IL-21, and IL-23.

11. The composition of claim 9, wherein the least one adjuvant comprises IL-21.

12. The pharmaceutical composition of claim 9, comprising a peptide consisting of the amino acid sequence of GLIDEVMVL (SEQ ID NO: 22) in the form of a pharmaceutically acceptable salt and an immunogenicity enhancing amount of at least one adjuvant.

13. The pharmaceutical composition of claim 9, comprising a peptide consisting of the amino acid sequence of FLDANGHFV (SEQ ID NO: 23) in the form of a pharmaceutically acceptable salt and an immunogenicity enhancing amount of at least one adjuvant.