CLAIMS

1. A recombinant antigen recognizing construct specifically and/or selectively binding to the amino acid sequence of SEQ ID NO: 1, comprising a peptide of 9 to 14 amino acid length and in complex with a human leucocyte antigen (HLA) class I molecule, wherein said antigen recognizing construct comprises a binding portion of a T cell receptor (TCR) compromising
   (i) the complementary determining region (CDR) 1 according to SEQ ID NO: 58, CDR2 according to SEQ ID NO: 59 and CDR3 according to SEQ ID NO: 60 and CDR1 according to SEQ ID NO: 66, CDR2 according to SEQ ID NO: 67 and CDR3 according to SEQ ID NO: 68; or
   (ii) CDR1 according to SEQ ID NO: 42, CDR2 according to SEQ ID NO: 43 and CDR3 according to SEQ ID NO: 44 and CDR l according to SEQ ID NO: 50, CDR2 according to SEQ ID NO: 51 and CDR3 according to SEQ ID NO: 52, or
   (iii) CDR1 according to SEQ ID NO: 74, CDR2 according to SEQ ID NO: 75 and CDR3 according to SEQ ID NO: 76 and CDR1 according to SEQ ID NO: 82, CDR2 according to SEQ ID NO: 83 and CDR3 according to SEQ ID NO: 84.

2. The antigen recognizing construct according to claim 1, wherein the antigen recognizing construct is an α/β-TCR, or fragment or derivative thereof, or the construct is a γ/δ-TCR, or a fragment or derivative thereof.

3. The antigen recognizing construct according to any one of claims 1 or 2, wherein said antigen recognizing construct is capable of inducing an immune response in a subject, optionally wherein the immune response is characterized by an increase in interferon (IFN) γ levels.

4. The antigen recognizing construct according to any of claims 1 to 3, wherein the construct is humanized, chimerized and/or murinized.

5. The antigen recognizing construct according to any of claims 1 to 4, comprising a TCR α or γ chain; and/or a TCR β or δ chain,
   (i) wherein said TCR α or γ chain sequence comprises the CDR1 to CDR3 sequences having the amino acid sequences of SEQ ID NO: 58 to 60, and said TCR β or δ chain sequence comprises the CDR1 to CDR3 sequences having the amino acid sequences of SEQ ID NO: 66 to 68; or
   (ii) wherein the TCR α or γ chain comprises the CDR1 to CDR3 sequences having the amino acid sequences of SEQ ID NO: 42 to 44, and said TCR β or δ chain sequence comprises the CDR1 to CDR3 sequences having the amino acid sequences of SEQ ID NO: 50 to

52; or

(iii) wherein said TCR α or γ chain sequence comprises the CDR1 to CDR3 sequences having the amino acid sequences of SEQ ID NO: 74 to 76, and said TCR β or δ chain sequence comprises the CDR1 to CDR3 sequences having the amino acid sequences of SEQ ID NO: 82 to 84.

6. The antigen recognizing construct according to any of claims 1 to 5, wherein the construct is a TCR, or a fragment thereof, comprising at least one TCR α and one TCR β chain sequence,

(i) wherein said TCR α chain sequence comprises a variable region sequence having the amino acid sequence of SEQ ID NO: 57 or a variable region at least 90% identical to the amino acid sequence of SEQ ID NO: 57, wherein said variable region sequence at least 90% identical to the amino acid sequence of SEQ ID NO: 57 comprises the CDRs having the amino acid sequence of SEQ ID NO: 58, SEQ ID NO: 59 and SEQ ID NO: 60, and wherein said TCR β chain sequence comprises a variable region sequence having the amino acid sequence of SEQ ID NO: 65 or a variable region at least 90% identical to the amino acid sequence of SEQ ID NO: 65, wherein said variable region sequence at least 90% identical to the amino acid sequence of SEQ ID No. 65 comprises the CDRs having the amino acid sequence of SEQ ID NO: 66, SEQ ID NO: 67 and SEQ ID NO: 68; or

(ii) wherein said TCR α chain sequence comprises a variable region sequence having the amino acid sequence of SEQ ID NO. 41 or a variable region at least 90% identical to the amino acid sequence of SEQ ID NO: 41, wherein said variable region sequence at least 90% identical to the amino acid sequence of SEQ ID No. 41 comprises the CDR1 to CDR3 sequences of SEQ ID NO: 42, SEQ ID NO: 43 and SEQ ID NO: 44 and wherein said TCR β chain sequence comprises a variable region sequence having the amino acid sequence of SEQ ID No. 49 or a variable region at least 90% identical to the amino acid sequence of SEQ ID No. 49, wherein said variable region sequence at least 90% identical to the amino acid sequence of SEQ ID No. 49 comprises the CDRs having the amino acid sequence of SEQ ID NO: 50, SEQ ID NO: 51 and SEQ ID NO: 52; or

(iii) wherein said TCR α chain sequence comprises a variable region sequence having the amino acid sequence of SEQ ID NO: 73 or a variable region at least 90% identical to the amino acid sequence of SEQ ID NO: 73, wherein said variable region sequence at least 90% identical to the amino acid sequence of SEQ ID NO: 73 comprises the CDRs having the amino acid sequence of SEQ ID NO: 74, SEQ ID NO: 75 and SEQ ID NO: 76, and wherein said TCR β chain sequence comprises a variable region sequence having the amino acid sequence of SEQ ID No. 81, or a variable region at least 90% identical to the amino acid sequence of SEQ ID NO: 81, wherein said variable region sequence at least 90% identical to the amino acid sequence of SEQ ID NO: 81 comprises the CDRs having

the amino acid sequence of SEQ ID NO: 82, SEQ ID NO: 83 and SEQ ID NO: 84.

7. The antigen recognizing construct according to any of claims 1 to 6, wherein the construct is a TCR, or a fragment thereof, further comprising a TCR constant region having at least 50%, 60%, 70%, 80%, 90%, 95%, 98%, 99%, or 100% sequence identity to an amino acid sequence selected from SEQ ID Nos. 62, 70, 46, 54, , 78, and 86; preferably wherein the TCR is composed of at least one TCR a and one TCR βchain sequence, wherein the TCR a chain sequence comprises a constant region having at least 50%, 60%, 70%, 80%, 90%, 95%, 98%, 99%, or 100% sequence identity to an amino acid sequence selected from SEQ ID Nos. 62, 46, and 78; and wherein the TCR chain β sequence comprises a constant region having at least 50%, 60%, 70%, 80%, 90%, 95%, 98%, 99%, or 100% sequence identity to an amino acid sequence selected from SEQ ID NOs: 70, 54, and 86.

8. The antigen recognizing construct according to any one of claims 1 to 7, wherein the TCR is a single chain TCR (scTCR).

9. A vector compromising a nucleic acid encoding for an antigen recognizing construct according to any one of claims 1 to 8.

10. A host cell comprising an antigen recognizing construct according to any one of claims 1 to 8, or a vector according to claim 9.

11. A pharmaceutical composition comprising the antigen recognizing construct according to any of claims 1 to 8, or the vector according to claim 9, or the host cell according to claim 10 and a pharmaceutical acceptable carrier, stabilizer and/or excipient.

12. The antigen recognizing construct according to any one of claims 1 to 8, or a vector according to claim 9, or a host cell according to claim 10, or the pharmaceutical composition according to claim 11, for use in medicine.

13. The host cell according to claim 10 for use in the diagnosis, and/or treatment of a MAGEA4-expressing tumor, wherein the host cell is a T cell.

14. Use of the host cell according to claim 10 for the manufacture of a medicament for diagnosing, and/or treating a MAGEA4-expressing tumor, wherein the host cell is a T cell.

15. A method of manufacturing a TAA specific antigen recognizing construct expressing cell line,

comprising

a. providing a suitable host cell,

b. providing a genetic construct comprising a coding sequence encoding the antigen recognizing construct according to any of claims 1 to 8,

c. introducing into said suitable host cell said genetic construct,

d. expressing said genetic construct by said suitable host cell.

16. The method according to claims 15, wherein said antigen recognizing construct is a modified TCR, wherein said modification comprises the addition of a functional domain comprising a label, or an alternative domain comprising a membrane anchor domain.