

Claims

1. A tumour specific T-cell receptor (TCR) having an α chain and a β chain and characterised by having complementarity-determining regions comprising or consisting of the amino acid sequences: CAYRSAVNARLMF (SEQ ID NO: 1) or a sequence that shares at least 88% identity therewith as CDR3 α ; and CASSEARGLAFTDTQYF (SEQ ID No: 2) or a sequence that shares at least 88% identity therewith as CDR3 β .
2. The tumour specific T-cell receptor (TCR) according to claim 1 wherein said TCR comprises of one or more, including any combination, of the following complementarity-determining region sequences:

TSESDYY (SEQ ID NO:3) as CDR1 α ;
ATEN (SEQ ID NO:4) as CDR2 α ;
MGHDK (SEQ ID NO:5) as CDR1 β ; and
SYGVNS (SEQ ID NO:6) as CDR2 β .
3. The tumour specific T-cell receptor (TCR) according to claim 1 having an α chain and a β chain and characterised by having complementarity-determining regions comprising or consisting of the amino acid sequences: CAYRSAVNARLMF (SEQ ID NO: 1) or a sequence that shares at least 88% identity therewith as CDR3 α , CASSEARGLAFTDTQYF (SEQ ID NO: 2) or a sequence that shares at least 88% identity therewith as CDR3 β , TSESDYY (SEQ ID NO: 3) as CDR1 α , ATEN (SEQ ID NO: 4) as CDR2 α , MGHDK (SEQ ID NO: 5) as CDR1 β ; and SYGVNS (SEQ ID NO: 6) as CDR2 β .
4. The tumour specific T-cell receptor (TCR) according to claim 3 having an α chain and a β chain and characterised by having complementarity-determining regions comprising or consisting of the amino acid sequences: CAYRSAVNARLMF (SEQ ID NO: 1) as CDR3 α , CASSEARGLAFTDTQYF (SEQ ID NO: 2) as CDR3 β , TSESDYY (SEQ ID NO:3) as CDR1 α , ATEN (SEQ ID NO:4) as CDR2 α , MGHDK (SEQ ID NO:5) as CDR1 β ; and SYGVNS (SEQ ID NO:6) as CDR2 β .
5. The tumour specific T-cell receptor (TCR) according to any one of claims 1-4 wherein said TCR is not a TCR expressed by or associated with a mucosal-associated invariant T cell (MAIT cell).

6. The tumour specific T-cell receptor (TCR) according to any one of claims 1-5 wherein said TCR has an α chain comprising or consisting of the amino acid sequence:

AQTVTQSQPEMSVQEAETVTLSCITYD**TSESDYY**LFWYKQPPSRQMILVIRQ
EAYKQQN**ATEN**RFSVNFQKAASFSLKISDSQLGDAAMYF**CAYRSAVNARL**
MFGDGTQLVVKPNIQNPDPVYQLRDSKSSDKSVCLFTDFDSQTNVSQSKD
SDVYITDKCVLDMRSMDFKSNSAVAWSNKSDFACANAFNNSIIPEDTFFPSP
ESS (SEQ ID NO:7) or a sequence that shares at least 88% identity therewith.

7. The tumour specific T-cell receptor (TCR) according to any one of claims 1-6 wherein said TCR has a β chain comprising or consisting of the amino acid sequence:

EADYQTPRYLVIGTGKKITLECSQT**MGHDK**MYWYQQDPGMELHLIHY**SYG**
VNSTEKGDLSSESTVSRIRTEHFPLTLESARPSHTSQYL**CASSEARGLAFT**
DTQYFGPGTRLTVLEDLKNVFPPEVAVFEPSEAEISHTQKATLVCLATGFYPD
HVELSWWVNGKEVHSGVCTDPQPLKEQPALNDSRYALSSRLRVSATFWQD
PRNHFRQCQVQFYGLSENDEWTQDRAKPVTQIVSAEAWGRAD (SEQ ID
NO:8) or a sequence that shares at least 88% identity therewith.

8. The tumour specific T-cell receptor (TCR) according to any one of claims 1-7 wherein said TCR is in a soluble form.

9. The tumour specific T-cell receptor (TCR) according to any one of claims 1-7 wherein said TCR is in a membrane compatible form and has a transmembrane region and an intracellular region.

10. The tumour specific T-cell receptor (TCR) according to any one of claims 1-9 wherein said TCR is MR1-restricted.

11. A T-cell expressing said TCR according to any one of claims 1-10.

12. A T-cell clone expressing said TCR according to any one of claims 1-10.

13. The T-cell clone according to claim 12 wherein said clone is a MC.7.G5 clone.

14. A vector encoding the TCR according to any one of claims 1-10.

15. A bispecific comprising a TCR according to any one of claims 1-10 and an immune cell activating component or ligand that binds and so activates an immune cell, such as a Killer T-cell.
16. A pharmaceutical composition comprising said TCR according to any one of claims 1-10 or said cell according to claim 11 or said clone according to claims 12 or 13 or said vector according to claim 14.
17. Use of a TCR according to any one of claims 1-10 or cell according to claim 11 or clone according to claims 12 or 13 or vector according to claim 14 or bispecific according to claim 15 or pharmaceutical composition according to claim 16 for the manufacture of a medicament for the treatment of cancer.
18. The use according to claim 17 wherein said cancer is selected from the group consisting of colorectal, lung, kidney, prostate, cervical, melanoma (skin), bone, ovarian, breast and blood cancers.
19. A combination therapeutic for the treatment of cancer comprising:
- a) said TCR according to claims 1-10 or said cell according to claim 11 or said clone according to claims 12 or 13 or said vector according to claim 14 or said bispecific according to claim 15 or said pharmaceutical composition according to claim 16 in combination with
 - b) a further cancer therapeutic agent.