CLAIMS

1. A T lymphocyte expressing: (i) a B cell zone homing receptor not normally expressed by the T lymphocyte, (ii) a skin homing receptor or a gastrointestinal homing receptor, and (iii) a chimeric antigen receptor (CAR).

2. The T lymphocyte of claim 1, wherein the B cell zone homing receptor is CXCR5.

3. The T lymphocyte of claim 1, wherein the B cell homing receptor is encoded by the nucleotide sequence of SEQ ID NO:1 or SEQ ID NO:2, or comprises the amino acid sequence of SEQ ID NO:3 or SEQ ID NO:4.

4. The T lymphocyte of any one of claims 1-3, wherein the T lymphocyte comprises a skin homing receptor.

5. The T lymphocyte of claim 4, wherein the skin homing receptor is CLA, CCR4, or CCR10.

6. The T lymphocyte of any one of claims 1-3, wherein the T lymphocyte comprises a gastrointestinal homing receptor.

7. The T lymphocyte of claim 6, wherein said gastrointestinal homing receptor is integrin α4β7 or CCR9.

8. A T lymphocyte comprising: (i) a B cell zone homing receptor not normally expressed by the T lymphocyte; (ii) a skin homing receptor or a gastrointestinal homing receptor, and (iii) a CAR, wherein said T lymphocyte is for use in the treatment of cancer or a tumor in an individual, wherein said T lymphocyte is to be administered to the individual.

9. The T lymphocyte for use according to claim 8, wherein the B cell zone homing receptor is CXCR5.

10. The T lymphocyte for use according to claim 8, wherein the B cell zone homing receptor is encoded by the nucleotide sequence of SEQ ID NO:1 or SEQ ID NO:2, or comprises the amino acid sequence of SEQ ID NO:3 or SEQ ID NO:4.

11. The T lymphocyte for use according to claim 8, wherein the T lymphocyte comprises a skin homing receptor.

12. The T lymphocyte for use according to claim 11, wherein said skin homing receptor is CLA, CCR4, or CCR10.

13. The T lymphocyte for use according to claim 8, wherein the T lymphocyte comprises a gastrointestinal homing receptor.

14. The T lymphocyte for use according to claim 13, wherein said gastrointestinal homing receptor is integrin α4β7 or CCR9.

15. The T lymphocyte of any one of claims 1-3, or the T lymphocyte for use according to any one of claims 8-10, wherein said CAR comprises an extracellular domain, and said extracellular domain binds an antigen selected from the group consisting of: Her2, prostate stem cell antigen (PSCA), alpha-fetoprotein (AFP), carcinoembryonic antigen (CEA), cancer antigen-125 (CA-125), CA19-9, calretinin, MUC-1, epithelial membrane protein (EMA), epithelial tumor antigen (ETA), tyrosinase, melanoma-associated antigen (MAGE), CD 19, CD34, CD45, CD99, CD117, chromogranin, cytokeratin, desmin, glial fibrillary acidic protein (GFAP), gross cystic disease fluid protein (GCDFP-15), HMB-45 antigen, high molecular weight melanoma-associated antigen (HMW-MAA), protein melan-A (melanoma antigen recognized by T lymphocytes; MART-1), myo-D1, muscle-specific actin (MSA), neurofilament, neuron-specific enolase (NSE), placental alkaline phosphatase, synaptophysis, thyroglobulin, thyroid transcription factor-1, the dimeric form of the pyruvate kinase isoenzyme type M2 (tumor M2-PK), an abnormal ras protein, an abnormal p53 protein, fuc-GM1, GM2 (oncofetal antigen-immunogenic-1; OFA-I-1); GD2 (OFA-I-2), GM3, GD3, alpha-actinin-4, Bage-1, BCR-ABL, Bcr-Abl fusion protein, beta-catenin, CA 15-3 (CA 27.29\BCAA), CA 195, CA 242, CA-50, CAM43, Casp-8, cdc27, cdk4, cdkn2a, coa-1, dek-can fusion protein, EBNA, EF2, Epstein Barr-virus antigens, ETV6-AML1 fusion protein, HLA-A2, HLA-A11, hsp70-2, KIAA0205, Mart2, Mum-1, 2, and 3, neo-PAP, myosin class I, OS-9, pml-RARα fusion protein, PTPRK, triosephosphate isomerase, Gage 3,4,5,6,7, GnTV, Herv-K-mel, Lage-1, NA-88, NY-Eso-1/Lage-2, SP17, SSX-2, TRP2-Int2, gp100 (Pmel 17), tyrosinase, TRP-1, TRP-2, MAGE-1, MAGE-3, RAGE, GAGE-1, GAGE-2, p15(58), RAGE, SCP-1, Hom/Mel-40, PRAME, HER-2/neu, E2A-PRL, H4-RET, IGH-IGK, MYL-RAR, human papillomavirus (HPV) antigens E6 and E7, TSP-180, p185erbB2, p180erbB-3, c-met, nm-23H1, PSA, TAG-72-4, CA 19-9, CA 72-4, CAM 17.1, NuMa, 13-Catenin, Mum-1, p16, TAGE, PSMA, CT7, telomerase, 43-9F, 5T4, 791Tgp72, 13HCG, BCA225, BTAA,

CD68\KP1, CO-029, FGF-5, G250, Ga733 (EpCAM), HTgp-175, M344, MA-50, MG7-Ag, MOV18, NB\70K, NY-CO-1, RCAS1, SDCCAG16, TA-90, TAAL6, TAG72, TLP, TPS, CD19, CD22, CD27, CD30, CD70, EGFRvIII (epidermal growth factor variant III), sperm protein 17 (Sp 17), mesothelin, PAP (prostatic acid phosphatase), prostein, TARP (T cell receptor gamma alternate reading frame protein), Trp-p8, STEAP1 (six-transmembrane epithelial antigen of the prostate 1), integrin avβ3 (CD61), galectin, and Rat-B.

16. The T lymphocyte of any one of claims 1, 4, and 5, or the T lymphocyte for use according to any one of claims 8, 11, and 12, wherein said CAR comprises an extracellular domain, and said extracellular domain binds an antigen selected from the group consisting of: HMW-MAA, Her2, GD2, GD3, CEA, and SPAG9.

17. The T lymphocyte of claim 16, wherein said extracellular domain binds HMW-MAA.

18. The T lymphocyte of any one of claims 1, 6, and 7, or the T lymphocyte for use according to any one of claims 8, 13, and 14, wherein said CAR comprises an extracellular domain, and said extracellular domain binds an antigen selected from the group consisting of: CEA, Her2, CA242, MUCI, CA125, and CA19-9.

19. The T lymphocyte of claim 18, wherein said extracellular domain binds CEA.