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Autologous BCMA/TACI-targeted CAR T Cells AUTO2

National Cancer Institute

Source

National Cancer Institute. *Autologous BCMA/TACI-targeted CAR T Cells AUTO2*. NCI Thesaurus. Code C150509.

A preparation of autologous T-lymphocytes that are genetically engineered to contain a dual-targeted chimeric antigen receptor (CAR), which includes the natural protein a proliferation-inducing ligand (APRIL; TNFSF13), that targets the tumor-associated antigens (TAAs) B-cell maturation antigen (BCMA; TNFRSF17) and transmembrane activator and calcium modulator and cyclophilin ligand interactor (TACI; TNFRSF13B), with potential immunomodulating and antineoplastic activities. Upon administration, the autologous BCMA/TACI-targeted CAR T-cells AUTO2 bind to BCMA and TACI expressed on tumor cells and induce selective cytotoxicity in those cells. In addition, AUTO2 carries the universal RQR8 safety "off" switch, which allows selective removal of the T-cells through both complement-dependent cytotoxicity (CDC) and antibody-dependent cellular cytotoxicity (ADCC) following administration of rituximab if unacceptable side-effects occur.