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# Autologous BCMA-4-1BBz-targeted CAR T-cells

National Cancer Institute

## Source

National Cancer Institute. *Autologous BCMA-4-1BBz-targeted CAR T-cells*. NCI Thesaurus. Code C148506.

A preparation of autologous T-lymphocytes that have been ex vivo transduced with a retroviral vector expressing a chimeric antigen receptor (CAR) containing a single chain variable fragment (scFv) specific for the human tumor-associated antigen (TAA) B-cell maturation antigen (BCMA; tumor necrosis factor receptor superfamily member 17; TNFRSF17) fused to the co-stimulatory domain of 4-1BB (CD137), and the CD3-zeta (CD3z) T-cell signaling domain (4-1BBz), with potential immunostimulating and antineoplastic activities. Upon administration, the autologous BCMA-4-1BBz-targeted CAR T-cells specifically recognize and induce selective toxicity in BCMA-expressing tumor cells. BCMA, a receptor for both a proliferation-inducing ligand (APRIL) and B-cell activating factor (BAFF), is a member of the tumor necrosis factor receptor superfamily (TNFRSF). BCMA is found on the surfaces of plasma cells; it is overexpressed on malignant plasma cells, and plays a key role in plasma cell survival.