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Autologous CD30CAR-CD28-CD3zeta-expressing T-Lymphocytes

National Cancer Institute

Source

National Cancer Institute. *Autologous CD30CAR-CD28-CD3zeta-expressing T-Lymphocytes*. NCI Thesaurus. Code C155294.

A preparation of autologous T-lymphocytes (ATL) that have been transduced with the retroviral vector SFG, a Moloney murine leukemia (Mo-MuLV) virus-based vector, encoding a chimeric antigen receptor (CAR) composed of a single chain single-chain variable fragment (scFv) directed against the CD30 antigen (CAR.CD30) and linked, via the spacer human IgG1 immunoglobulin heavy constant region (hinge-CH2CH3 region), to the co-stimulatory domains of CD28 and the zeta chain of the TCR/CD3 complex (CD3-zeta) (CD28zeta), with potential immunostimulating and antineoplastic activities. Upon administration, the autologous CD30CAR-CD28-CD3zeta-expressing T-lymphocytes specifically recognize and bind to CD30-expressing tumor cells, resulting in specific T-cell-mediated tumor cell lysis. CD30, a cell surface receptor and a member of the tumor necrosis factor (TNF) receptor superfamily, is transiently expressed on activated lymphocytes and is constitutively expressed in hematologic malignancies.