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Autologous Anti-mesothelin CAR-CD3zeta-4-1-BB-expressing T-cells

National Cancer Institute

Source

National Cancer Institute. *Autologous Anti-mesothelin CAR-CD3zeta-4-1-BB-expressing T-cells*. NCI Thesaurus. Code C155909.

A preparation of autologous T-lymphocytes transduced with a lentiviral vector expressing a chimeric antigen receptor (CAR) consisting of an anti-mesothelin M5 single chain variable fragment (scFv) fused to the costimulatory domains of 4-1BB (CD137) and the zeta chain of the TCR/CD3 complex (TCRzeta; CD247; CD3zeta), with potential immunomodulating and antineoplastic activities. After isolation, transduction, expansion in culture and reintroduction into the patient, the autologous anti-mesothelin CAR-CD3zeta-4-1BB-expressing T-cells specifically target and induce selective toxicity in mesothelin-expressing tumor cells. Mesothelin, a cell surface glycoprotein involved in cell adhesion, is overexpressed in a variety of cancer cell types.