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Anti-EGFRvIII CAR-transduced Allogeneic T-lymphocytes

National Cancer Institute

Source

National Cancer Institute. *Anti-EGFRvIII CAR-transduced Allogeneic T-lymphocytes*. NCI Thesaurus. Code C111565.

Allogeneic human T-lymphocytes transduced with a retroviral vector encoding an anti-epidermal growth factor receptor (EGFR) variant III (EGFRvIII) mutant chimeric T cell receptor (chimeric antigen receptor or CAR) gene coupled to the signaling domains from CD8, CD28, 4-1BB (CD137) and CD3 zeta, with potential immunostimulatory and antineoplastic activities. Upon administration, the anti-EGFRvIII CAR-transduced allogeneic T lymphocytes bind to the EGFRvIII antigen on tumor cell surfaces; subsequently, EGFRvIII-expressing tumor cells may be lysed. EGFRvIII, an in-frame deletion of exons 2-7 in the EGFR gene, is overexpressed by a variety of cancer cell types and absent in normal, healthy cells; it plays a key role in tumor cell proliferation, tumor angiogenesis and radio- and chemoresistance.