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Anti-EGFRvIII/CD3 BiTE Antibody AMG 596

National Cancer Institute

Source

National Cancer Institute. *Anti-EGFRvIII/CD3 BiTE Antibody AMG 596*. NCI Thesaurus. Code C146824.

A proprietary recombinant bispecific T-cell engager (BiTE) antibody composed of two single-chain variable fragments (scFv), one that is directed against a tumor-associated antigen (TAA), the epidermal growth factor receptor (EGFR) deletion-mutant form, EGFR variant III (EGFRvIII), and one that is directed against the CD3 antigen found on T-lymphocytes, with potential immunostimulating and antineoplastic activities. Upon administration of anti-EGFRvIII/CD3 BiTE antibody AMG 596, the bispecific antibody binds to both the CD3 antigen on cytotoxic T-lymphocytes (CTLs) and EGFRvIII found on EGFRvIII-expressing tumor cells. This activates and crosslinks CTLs with EGFRvIII-expressing tumor cells, which results in the CTL-mediated cell death of EGFRvIII-expressing tumor cells. EGFRvIII, a mutation in the EGFR gene where exons 2-7 have been deleted, is overexpressed by a variety of cancers, but is absent in normal, healthy cells. It plays a key role in tumor cell proliferation, tumor angiogenesis and resistance to both radio- and chemotherapy.