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Anti-CD3 Immunotoxin A-dmDT390-bisFv(UCHT1)

National Cancer Institute

Source

National Cancer Institute. *Anti-CD3 Immunotoxin A-dmDT390-bisFv(UCHT1)*. NCI Thesaurus. Code C74004.

A bivalent recombinant fusion protein immunotoxin derived from the anti-CD3 monoclonal antibody UCHT 1 with potential antineoplastic activity. Anti-CD3 immunotoxin A-dmDT390-bisFv(UCHT 1) consists of 1-390 amino acid residues of chain A diphtheria toxin (DT) joined via a spacer to the Fv fragment of UCHT 1, which is connected to a second UCHT 1 Fv fragment via a disulfide bond (hence the "bisFv" designation); the addition of the second Fv fragment overcomes the steric hindrance of immunotoxin binding due to the large N-terminal DT domain. Once inside target T cells, the DT moiety catalyzes the transfer of the ADP-ribose moiety of NAD to diphthamide, a posttranslationally modified histidine residue found in elongation factor 2 (EF-2); inactivation of EF-2, disruption of polypeptide chain elongation, and cell death ensue. CD3 is a complex of five cell-surface polypeptides associated with the T cell receptor (TCR) complex.