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Recombinant Adenovirus 5 Encoding Tumor Necrosis Factor-related Apoptosis-Inducing Ligand

National Cancer Institute

Source

National Cancer Institute. *Recombinant Adenovirus 5 Encoding Tumor Necrosis Factor-related Apoptosis-Inducing Ligand*. NCI Thesaurus. Code C116879.

An adenovirus type 5 (Ad5) encoding human tumor necrosis factor-related apoptosis-inducing ligand (TRAIL), with potential apoptosis-inducing and antineoplastic activities. Upon administration of recombinant Ad5 encoding TRAIL, the adenovirus selectively infects tumor cells and expresses TRAIL. The virally expressed TRAIL binds to and activates its receptors TRAIL receptor-1 (TRAIL-R1, death receptor 4, DR4) and TRAIL receptor-2 (TRAIL-R2, death receptor 5, DR5), which subsequently activate caspases and induce apoptosis in TRAIL-R1/R2-expressing tumor cells. The pro-apoptotic cell surface receptors TRAIL-R1 and -R2, members of the TNF receptor family, are overexpressed by a variety of cancer cell types.