



TNF Ligand Receptor Superfamily Member 12A, human recombinant (rHuTNFRSF12A)

Catalog No: 97573
Lot No: XXXXX
Source: *E. coli*
Synonyms: Tumor necrosis factor receptor superfamily member 12A, FN14, CD266 antigen, TweakR, tweak-receptor, Fibroblast growth factor-inducible immediate-early response protein 14, FGF-inducible 14, type I transmembrane protein Fn14

Background

The gene for TNFRSF12A was initially recognized as a fibroblast growth factor inducible immediate early response gene Fn14 in mouse NIH 3T3 fibroblasts. Human TNFRSF12A cDNA encodes a 129 amino acid residue type I transmembrane protein with a 27 aa signal peptide, a 53 aa extracellular domain, a 21 aa transmembrane domain and a 28 aa cytoplasmic domain. Human and mouse TNFRSF12A hold 82% aa sequence identity. TNFRSF12 is the tiniest member of the TNF receptor superfamily and has only one cysteine rich region in its extracellular domain. The TNFRSF12A cytoplasmic domain holds one TRAF binding motif which binds TRAFs 1, 2, and 3. TNFRSF12A binds its ligand TWEAK/TNFSF12A with high affinity to initiate a signal transduction cascade which subject to the cell type, causes different cellular responses such as cell death, cell proliferation, and angiogenesis.

Description

TNFRSF12A human recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 53 amino acids and having a molecular mass of 5.6 kDa. TNFRSF12A is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.

Solubility

It is recommended to reconstitute the lyophilized TNFRSF12A in sterile 18 MΩ-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized TNFRSF12A, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution TNFRSF12A should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 97.0% as determined by (a) Analysis by HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

EQAPGTAPCS RGSSWSADLD KCMDCASCRA RPHSDFCLGC AAAPPAPFRL LWP

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Activity

The TNFRSF12A biological activity is determined by its ability to inhibit TWEAK-induced weak cell death of HT29 cells. The expected ED50 for this effect is 1.0 - 5.0 µg/ml in the presence of 1 µg/ml rhTWEAK.

Usage

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