

TRAIL/TNFSF10 Protein, Human, Recombinant

General Information

Synonyms:	TL2;CD253;tumor necrosis factor (ligand) superfamily, member 10;Apo-2L;APO2L;TRAIL
Protein Construction:	Recombinant Human TNF-Related Apoptosis-Inducing Ligand is produced by our E.coli expression system and the target gene encoding Arg115-Gly281 is expressed.
Species:	Human
Expression Host:	E. coli
Accession:	P50591
Molecular Weight:	16 kDa (reducing conditions)

QC Testing

Biological Activity:	Measured in a cytotoxicity assay using L-929 mouse fibroblast cells in the presence of the metabolic inhibitor actinomycin D. The ED50 for this effect is 1-10 ng/mL.
Purity:	≥ 95 % as determined by SDS-PAGE. ≥ 95 % as determined by SEC-HPLC.
Endotoxin:	< 0.1 ng/μg (1 EU/μg) as determined by LAL test.
Formulation:	Supplied as a 0.2 μm filtered solution of 40 mM Tris-HCl, 300 mM NaCl, 5% Trehalose, 5% Mannitol, 0.01% Tween 80, 10% Glycerol, pH7.0.

Preparation and Storage

Stability & Storage:

It is recommended to store the product under sterile conditions at -70°C or lower. Samples are stable for up to 6 months at -80°C. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Proteins are shipped with blue ice.

Protein Background

Tumor necrosis factor ligand superfamily member 10 (TNFSF10), also known as TNF-related apoptosis-inducing ligand (TRAIL), Apo-2 ligand, and CD253, is a cytokine that belongs to the tumor necrosis factor (TNF) ligand family. TNFSF10 / Apo-2L / CD253 functions as a ligand that induces the process of cell death called apoptosis. TNFSF10 / TRAIL shows homology to other members of the tumor necrosis factor superfamily. As one member of the cluster of differentiation system, TNFSF10 / CD253 is commonly used as cell markers in Immunophenotyping. Different kinds of cells in the immune system can be identified through the surface CD molecules which associating with the immune function of the cell. There are more than 320 CD unique clusters and subclusters have been identified. Some of the CD molecules serve as receptors or ligands important to the cell through initiating a signal cascade which then alter the behavior of the cell. Some CD proteins do not take part in cell signal process but have other functions such as cell adhesion TNFSF10 / Apo-2L / CD253 / TRAIL binds to several members of TNF receptor superfamily including TNFRSF10A / TRAILR1, TNFRSF10B / TRAILR2, TNFRSF10C / TRAILR3, TNFRSF10D /

TRAILR4, and possibly also to TNFRSF11B/OPG. The activity of TNFSF10 / TRAIL may be modulated by binding to the decoy receptors TNFRSF10C / TRAILR3, TNFRSF10D/TRAILR4, and TNFRSF11B/OPG that cannot induce apoptosis. The binding of this protein to its receptors has been shown to trigger the activation of MAPK8 / JNK, caspase 8, and caspase 3. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. Cancer Immunotherapy Immune Checkpoint Immunotherapy Targeted Therapy

Reference

- Song C, et al. (2005) TRAIL (CD253), a new member of the TNF superfamily. *J Biol Regul Homeost Agents*. 19(1-2): 73-7.
- Kuribayashi K, et al. (2008) TNFSF10 (TRAIL), a p53 target gene that mediates p53-dependent cell death. *Cancer Biol Ther*. 7(12): 2034-8.
- Wiley SR, et al. (1995) Identification and characterization of a new member of the TNF family that induces apoptosis. *Immunity*. 3(6): 673-82.

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