

Human TNF-related Apoptosis-Inducing Ligand (trail) Reference standard

Cat. No. TNFSF10-18H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	This material is intended as a biological reference standard in bioassays for TRAIL. Its activity is measured by its capacity to induce cytotoxicity in cultured cell lines, e.g. mouse L929, human KYM-1, which are normally also susceptible to TNF-mediated cytotoxicity. Metabolic inhibitors such as actinomycin D may be added to cells to augment TRAIL-mediated cytotoxicity.
Species	Human
Description	TNFSF10 is a member of the tumor necrosis factor family. TNFSF10 functions as a ligand which induces the process of cell death called apoptosis. TNFSF10 shows homology to other members of the tumor necrosis factor superfamily. It is composed of 281 amino acids (aa) and has characteristics of a type II transmembrane protein. The N-terminal cytoplasmic domain is not conserved across family members, however, the C-terminal extracellular domain is conserved and can be proteolytically cleaved from the cell surface.
Enzyme Unit	10,000 International units (IU). The assigned potency is in International Units (IU) that reflect results derived from cytotoxicity assays. These IU are specific to TRAIL and are not continuous with the IU of TNF-alpha or TNF-beta.
Usage	No attempt should be made to weigh out any portion of the freeze-dried material prior to reconstitution. For all practical purposes each ampoule contains the same quantity of the substances listed above. Dissolve the total contents of the ampoule with 0.5ml

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of sterile distilled water. Rinse the ampoule with 0.4ml of sterile distilled water and make up the total volume to 1ml with sterile distilled water. This solution should now be at a concentration of 10,000 IU/ml. Use carrier protein where extensive dilution is required. For economy of use, it is recommended that the solution be sub-divided into several small aliquots and stored at -40 °C or below.

Notes

This preparation is not for administration to humans. The preparation contains human and bovine source material. The preparation contains an excipient of human origin which has been tested and found negative for HBsAg and HIV antibody. The preparation has subsequently been tested and found negative for anti- HCV and HCV RNA by PCR. The bovine casein used as an excipient was sourced from a country where bovine spongiform encephalopathy (BSE) has not been found. As with all materials of biological origin, this preparation should be regarded as potentially hazardous to health. It should be used and discarded according to your own laboratorys safety procedures. Such safety procedures should include the wearing of protective gloves and avoiding the generation of aerosols. Care should be exercised in opening ampoules or vials, to avoid cuts.

Stability

Reference materials are held at Creative Biomart within assured, temperature-controlled storage facilities and they should be stored on receipt as indicated on the label. Accelerated degradation studies have indicated that this material is suitably stable, when stored at -20°C or below, for the assigned values to remain valid until the material is withdrawn or replaced. These studies have also shown that the material is suitably stable for shipment at ambient temperature without any effect on the assigned values. Once reconstituted, diluted or aliquoted, users should determine the stability of the material according to their own method of preparation, storage and use. Users who have data supporting any deterioration in the characteristics of any reference preparation are encouraged to contact Creative Biomart.

Storage

Unopened ampoules should be stored at -20 °C . Please note: because of the

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inherent stability of lyophilized material, Creative Biomart may ship these materials at ambient temperature.

GENE INFORMATION

Gene Name TNFSF10 tumor necrosis factor (ligand) superfamily, member 10 [Homo sapiens];

Official Symbol TNFSF10

Synonyms TNFSF10; tumor necrosis factor (ligand) superfamily, member 10; tumor necrosis factor ligand superfamily member 10; Apo 2L; CD253; TL2; TRAIL; Apo-2 ligand; TNF-related apoptosis inducing ligand TRAIL; tumor necrosis factor (ligand) family, member 10; chemokine tumor necrosis factor ligand superfamily member 10; tumor necrosis factor apoptosis-inducing ligand splice variant delta; APO2L; Apo-2L;

Gene ID 8743

mRNA Refseq NM_001190942

Protein Refseq NP_001177871

MIM 603598

UniProt ID P50591

Chromosome Location 3q26

Pathway Activation of Pro-Caspase 8, organism-specific biosystem; Apoptosis, organism-specific biosystem; Apoptosis, organism-specific biosystem; Apoptosis, conserved biosystem; Apoptosis, organism-specific biosystem; Caspase-8 is formed from

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procaspase-8, organism-specific biosystem; Cytokine-cytokine receptor interaction, organism-specific biosystem;

Function

cytokine activity; metal ion binding; protein binding; receptor binding; tumor necrosis factor receptor binding;

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