

**DESCRIPTION**

<b>Source</b>	<i>E. coli</i> -derived Pro118-Asn291 Accession # P50592
<b>N-terminal Sequence Analysis</b>	Pro118
<b>Predicted Molecular Mass</b>	20 kda

**SPECIFICATIONS**

<b>Activity</b>	Measured in a cytotoxicity assay using L-929 mouse fibroblast cells in the presence of the metabolic inhibitor actinomycin D. Matthews, N. and M.L. Neale (1987) in <i>Lymphokines and Interferons, A Practical Approach</i> . Clemens, M.J. <i>et al.</i> (eds): IRL Press. 221. The ED <sub>50</sub> for this effect is 0.2-1.2 ng/mL.
<b>Endotoxin Level</b>	<0.01 EU per 1 µg of the protein by the LAL method.
<b>Purity</b>	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in Tris, Ammonium Sulfate and ZnSO <sub>4</sub> with Trehalose and with BSA as a carrier protein. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 200 µg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**BACKGROUND**

TNF-related apoptosis-inducing ligand (TRAIL), also called apoptosis 2 ligand (Apo2L) for its similarity in sequence, structure, and function to Fas Ligand/Apo1L, is a 33-35 kDa type II transmembrane glycoprotein of the tumor necrosis factor superfamily, designated TNFSF10 (1-3). Mouse TRAIL cDNA encodes a 17 amino acid (aa) N-terminal intracellular domain, a 20 aa transmembrane domain and a 253 aa extracellular domain. Like most TNF family members, TRAIL is bioactive as a homotrimer (1). Unlike other TNF family members, a zinc ion complexed by human Cys 230 (mouse Cys 240) of each of the three monomers is critical for structural stability (4, 5). Either transmembrane or cysteine protease-released soluble sTRAIL induce apoptosis of many transformed cell lines, but rarely of normal cells (3, 6). Accordingly, TRAIL is suggested to have a role in tumor surveillance (1). Mice with genetically disrupted TRAIL have defective thymocyte apoptosis, creating faulty negative selection and some increased susceptibility to induced autoimmune diseases (7). In humans, TRAIL controls apoptosis of erythrocyte precursors and sTRAIL is inversely correlated with hemoglobin (1, 8). TRAIL transcripts are constitutively expressed in a variety of human (and presumably mouse) tissues and mononuclear cells (2, 3). Only one of two receptors that transduce apoptotic signals in humans is found in the mouse (TRAIL R2/DR5 but not TRAIL R1/DR4) (1). Mice express TRAIL receptors DcTRAIL R1/TNFRSF23 and DcTRAIL R2/TNFRSF22. These receptors lack death domains, but differ in structure from human regulatory receptors TRAIL R3 and TRAIL R4 (9). Osteoprotegerin has been identified in humans as a TRAIL receptor, but binding in mouse has not yet been demonstrated (1, 10). Mouse TRAIL shows 85% aa identity with rat TRAIL and 70% aa identity with human, bovine, and porcine TRAIL within the TNF homology domain (aa 118-291).

**References:**

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