Recombinant Human TRAIL/TNFSF10
Catalog Number: 375-TL

DESCRIPTION

Source
Mouse myeloma cell line, NS0-derived
Thr95-Gly281, with an N-terminal Met and 6-His tag
Accession # P50591

N-terminal Sequence Analysis
Met

Structure / Form
Noncovalently-linked homotrimer and disulfide-linked homodimer

Predicted Molecular Mass
21 kDa (monomer)

SPECIFICATIONS

SDS-PAGE
24 kDa, reducing conditions

Activity
The ED50 for this effect is 4-12 ng/mL. The apoptotic effect of soluble trimeric rhTRAIL can be enhanced by oligimerization of the soluble rhTRAIL through the use of a cross-linking antibody Mouse Anti-polyHistidine Monoclonal Antibody (Catalog # MAB050). The ED50 for this effect is 1-4 ng/mL.

Note: This is one of multiple forms available for this protein. Check R&D Systems' website, www.RnDSystems.com, for a complete listing of the variants.

Endotoxin Level
<1.0 EU per 1 μg of the protein by the LAL method.

Purity
>97%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation
Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution
Reconstitute at 20 μg/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.

Shipping
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage
Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -70 °C under sterile conditions after reconstitution.

BACKGROUND

TRAIL (TNF-related apoptosis-inducing ligand), also known as APO-2 ligand, is a type II transmembrane protein with a carboxy-terminal extracellular domain which exhibits homology to other TNF family members. In the new TNF superfamily nomenclature, TRAIL is referred to as TNFSF10. Human TRAIL cDNA encodes a 281 amino acid (aa) residue protein with an amino-terminal intracellular domain of 17 residues and a predicted internal hydrophobic domain between residues 18 and 38. The extracellular carboxy-terminal domain contains a potential N-linked glycosylation site at amino acid residue 109. Among TNF family members, TRAIL is most homologous to FAS ligand, sharing 28% amino acid sequence identity in their extracellular domains. Mouse TRAIL has also been cloned. The human TRAIL shares 65% amino acid sequence identity with mouse TRAIL and is active on mouse cells. Both membrane bound and soluble TRAIL have been shown to induce rapid apoptosis of many transformed cell lines. Like most TNF family members, the bioactive TRAIL exists as a homotrimer. TRAIL transcripts have been shown to be constitutively expressed in a variety of human tissues. A family of TRAIL receptors, including two receptors that transduce the apoptotic signals and two TRAIL decoy receptors that function to antagonize TRAIL-induced apoptosis, have been identified (1 - 3). Osteoprotegerin has been identified as a fifth TRAIL receptor (4).

References: