



LD Biopharma, Inc.
9924 Mesa Rim Road Suite B
San Diego, CA 92121
Tel: 858-876-8266
<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human CD253 Protein
Catalog Number: hRP-1043
Manufacturer: LD Biopharma, Inc.

Introduction

The protein encoded by human tumor necrosis factor ligand superfamily member 10 (TNFSF10, CD253) gene is a cytokine that belongs to the tumor necrosis factor (TNF) ligand family. This protein preferentially induces apoptosis in transformed and tumor cells, but does not appear to kill normal cells although it is expressed at a significant level in most normal tissues. This protein 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 this protein 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.

Full-length extracellular domain of human CD253 cDNA (39 - 281 aa, Isoform-1, derived from BC032722) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal and expressed in E.coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: CD253 (TNFSF10; Apo-2L; APO2L; TL2; TRAIL)
Accession Number: NP_003801
Species: Human
Size: 50 µg / Vial
Composition: 0.50 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, arginine, DTT and Glycerol.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.



LD Biopharma, Inc.
9924 Mesa Rim Road Suite B
San Diego, CA 92121
Tel: 858-876-8266
<http://www.ldbiopharma.com>

Key References

Du, J., et al., *IFN-gamma-primed human bone marrow mesenchymal stem cells induce tumor cell apoptosis in vitro via tumor necrosis factor-related apoptosis-inducing ligand*. Int. J. Biochem. Cell Biol. 44 (8), 1305-1314 (2012)

Valley, C.C., et al., *Tumor necrosis factor-related apoptosis-inducing ligand (TRAIL) induces death receptor 5 networks that are highly organized*. J. Biol. Chem. 287 (25), 21265-21278 (2012)

Pantham, P., et al., *Transcriptomic analysis of placenta affected by antiphospholipid antibodies: following the TRAIL of trophoblast death*. J. Reprod. Immunol. 94 (2), 151-154 (2012)

Pan, G., et al., *An antagonist decoy receptor and a death domain-containing receptor for TRAIL*. Science 277 (5327), 815-818 (1997)

Applications

1. May be used for in vitro CD253 mediated tumor cell apoptosis pathway regulations study with this protein as soluble factor.
2. May be used for protein-protein interaction assay development.
3. May be used as potential therapeutic target protein for inducing tumor specific apoptosis.
4. As antigen for specific antibody production.

Quality Control

1. Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHGNLYFQGGFTNELKQMQDKYSKSGIACFLKEDDSYWDPNDEESM
NSPCWQVKWQLRQLVRKMI LRTSEETISTVQEKQQNISPLVRERGPQRVAAHITGTRGRSNTLS
SPNSKNEKALGRKINSWESSRSGHSFLSNLHLRNGELVIHEKGFYIYSQTYFRFQEEIKENTK
NDKQMVQYIYKYTSYPDPILLMKSARNSCWSKDAEYGLYSIYQGGIFELKENDRIFVSVTNEHL
IDMDHEASFFGAFLVG