LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant YFP-Human **TRADD** Protein
Catalog Number: HRP-3252
Manufacturer: LD Biopharma, Inc. USA

Introduction

Human Tumor necrosis factor receptor type 1-associated DEATH domain protein (TRADD) gene encodes a protein which mediates extrinsic apoptosis by regulating RIPK1 activation in TNFR1 signaling pathway. The TRADD nuclear form acts as a tumor suppressor by preventing ubiquitination and degradation of isoform p19ARF/ARF of CDKN2A by TRIP12: acts by interacting with TRIP12, leading to disrupt interaction between TRIP12 and isoform p19ARF/ARF of CDKN2A. As adapter molecule for TNFRSF1A/TNFR1 that specifically associates with the cytoplasmic domain of activated TNFRSF1A/TNFR1 mediating its interaction with FADD. Overexpression of TRADD leads to two major TNF-induced responses, apoptosis and activation of NF-kappa-B. Recent data indicated that modulating TRADD to restore cellular homeostasis and inhibit apoptosis as a unique strategy for human disease treatment.

Full-length human TRADD cDNA (311aa) was constructed with codon optimization gene synthesis and expressed with YFP Protein as N-terminal (YFP; 256aa) fusion protein 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:	TRADD
Accession Number:	NP_003780
Species:	Human
Size:	50µg / Vial
Composition:	1.0 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose, DTT and others.
Storage:	In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least two weeks.

Key References

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Daichao Xu, et al., ***Modulating TRADD to restore cellular homeostasis and inhibit apoptosis.*** Nature. https://doi.org/10.1038/s41586-020-2757-z (2020)

Liu Y, et al.,***Identification of TRADD as a potential biomarker in human uterine leiomyoma through iTRAQ based proteomic profiling*** Mol Cell Probes 36, 15-20 (2017)

Koo GB, et al., ***Nuclear TRADD prevents DNA damage-mediated death by facilitating non-homologous end-joining repair.*** Sci Rep 7 (1), 3332 (2017)

Hsu H, et al., ***TRADD-TRAF2 and TRADD-FADD interactions define two distinct TNF receptor 1 signal transduction pathways.*** Cell 84 (2), 299-308 (1996)

Applications

1. May be used for in vitro TRADD protein mediated signaling in protein degradation / apoptosis pathway regulation for cancer cell study using intracellular delivery of recombinant YFP-human TRADD protein with protein delivery reagent such as ProFectin.
2. May be used for TRADD protein-protein interaction assay.
3. May be used as specific substrate protein for TRADD specific kinase, and ubiquitin (Sumo pathway) related enzyme functional screening assays.
4. Potential therapeutic protein, modulating TRADD activities may be benefit for various human disease's treatment.
5. As native human TRADD antigen for its specific antibody production.

Quality Control

Purity: > 92 % by SDS-PAGE.

Recombinant YFP- Human TRADD Fusion Protein Sequence (63.3 kD)

MK**HHHHHH**QVSKGEELFTGVVPILVELDGDVNGHKFSVSGEGEGDATYGKLTLKLLCTTGKLPV
PWPTLVTTLGYGVQCFARYPDHMKQHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTL

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VNRIELKGIDFKEDGNILGHKLEYNYNSHNVYITADKQKNGIKANFKIRHNIEDGGVQLADHYQ
QNTPIGDGPVLLPDNHYLSYQSALFKDPNEKRDHMVLLEFLTAAGITEGMNDLYKGS**ENLYFQG**
EFAAGQNGHEEWVGSAYLFVESSLDKVVLSDAYAHPQQKVAVYRALQAALAESGGSPDVLQMLK
IHRSDPQLIVQLRFCGRQPCGRFLRAYREGALRAALQRSLAAALAQHSVPLQLELRAGAERLDA
LLADEERCLSCILAQQPDRLRDEELAELEDALRNLKCGSGARGGDGEVASAPLQPPVPSLSEVK
PPPPPPPAQTFLFQGQPVVNRPLSLKDQQTFARSVGLKWRKVGRSLQRGCRALRDPALDSLAYE
YEREGLYEQAFQLLRRFVQAEGRRATLQRLVEALEENELTSLAEDLLGLTDPNGGLA