



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human RNPS1 Protein
Catalog Number: hRP-0838
Manufacturer: LD Biopharma, Inc.

Introduction

Human RNA-binding protein with serine-rich domain 1 (RNPS1) gene encodes a protein that is part of a post-splicing multiprotein complex involved in both mRNA nuclear export and mRNA surveillance. mRNA surveillance detects exported mRNAs with truncated open reading frames and initiates nonsense-mediated mRNA decay (NMD). When translation ends upstream from the last exon-exon junction, this triggers NMD to degrade mRNAs containing premature stop codons. This protein binds to the mRNA and remains bound after nuclear export, acting as a nucleo-cytoplasmic shuttling protein.

Full-length human RNPS1 (305 aa) gene was constructed with 15 aa N-terminal T7 tag 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:	RNPS1 (E5.1; SHGC-67834)
Accession Number:	NP_006702
Species:	Human
Size:	20 µg / Vial
Composition:	0.1 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.

Key References

Li,X., et al., *The RNA binding protein RNPS1 alleviates ASF/SF2 depletion-induced genomic instability*. RNA 13 (12), 2108-2115 (2007)

Girard,A., et al., *A germline-specific class of small RNAs binds mammalian Piwi*



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proteins. Nature 442 (7099), 199-202 (2006)

Gehring, N.H., et al., *Exon-junction complex components specify distinct routes of nonsense-mediated mRNA decay with differential cofactor requirements*. Mol. Cell 20 (1), 65-75 (2005)

Applications

1. May be used for in vitro mRNA nuclei-cytoplasmic shuttling regulation study with intracellular delivery of this protein.
2. As soluble / native protein, may be used as enzymatic substrate protein for kinase and ubiquitin assay development.
3. May be used for mapping RNPS1 protein-protein interaction.
4. May be used as antigen for specific antibody development.

Quality Control

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

Recombinant Protein Sequence

MASMTGGQQMGRGEFMDLSGVKKKSLLGVKENNKSSSTRAPSPTRKDRSDEKSKDRSKDKGAT
KESSEKDRGRDKTRKRRSASSGSSSTRSRSSSTSSSGSSTSTGSSSGSSSSSASSRSGSSSTSR
SSSSSSSSGSPSPSRRRHDNRRRSRSKSKPPKRDEKERKRRSPSPKPTKVHIGRLTRNVTKDHI
MEIFSTYGKIKMIDMPVERMHPHLSKGYAYVEFENPDEAEKALKHMDGGQIDGQEITATAVLAP
WPRPPPRRFSPPRMLPPPPMWRRSPPRMRRRSRSPRRRSPVRRRSRSPGRRRHRSRSSSNSSR