LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human SAR1a Protein
Catalog Number: hRP-0756
Manufacturer: LD Biopharma, Inc.

Introduction

Human SAR1a, the small GTPase that support COPII vesicle fission, organizes on membrane in a coat-independent manner to constrict membranes. It plays an important role for regulating cell membrane receptors exit from the endoplasmic reticulum for cell surface trafficking.

Full-length human SAR1a (198 aa) gene was constructed with 15aa N-terminal T7 tag and expressed in E.coli as inclusion bodies, refolded using our unique "temperature shift inclusion body refolding" technology and chromatographically purified.

Gene Symbol:	SAR1a (masra2; Sara)
Accession Number:	NP_064535
Species:	Human
Size:	50 µg / Vial
Composition:	0.5 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

Long,K.R., et al., *Sar1 assembly regulates membrane constriction and ER export*. J. Cell Biol. 190 (1), 115-128 (2010)

Zhuang,X., et al., *Sar1-dependent trafficking of the human calcium receptor to the cell surface*. Biochem. Biophys. Res. Commun. 396 (4), 874-880 (2010)

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Taneja,T.K., et al., *Sar1-GTPase-dependent ER exit of KATP channels revealed by a mutation causing congenital hyperinsulinism*. Hum. Mol. Genet. 18 (13), 2400-2413 (2009)

Robitaille,M., et al., *Intracellular trafficking and assembly of specific Kir3 channel/G protein complexes*. Cell. Signal. 21 (4), 488-501 (2009)

Jones,B., et al., *Mutations in a Sar1 GTPase of COPII vesicles are associated with lipid absorption disorders*. Nat. Genet. 34 (1), 29-31 (2003)

Applications

1. May be used for in vitro receptor membrane trafficking regulation study with recombinant SAR1a protein intracellular delivery methods
2. As soluble/native protein, may be used as enzymatic substrate protein for ubiquitin assay.
3. May be used for mapping protein–protein interaction assay.
4. May be used as antigen for specific antibody development.

Quality Control

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

Recombinant Protein Sequence

MASMTGGQQMGRGEFMSFIFEWIYNGFSSVLQFLGLYKKSGKLVFLGLDNAGKTTLLHMLKDDR
LGQHVPTLHPTSEELTIAGMTFTTFDLGGHEQARRVWKNYLPAINGIVFLVDCADHSRLVESKV
ELNALMTDETISNVPILILGNKIDRTDAISEEKLREIFGLYGQTTGKGNVTLKELNARPMEVFM
CSVLKRQGYGEGFRWLSQYID