



LD Biopharma, Inc.
7384 Trade Street, Suite B
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human ARHGDIG Protein
Catalog Number: hRP-2391
Manufacturer: LD Biopharma, Inc.

Introduction

Human Rho GDP-dissociation inhibitor 3 (ARHGDIG) gene encodes a protein which inhibits GDP/GTP exchange reaction of RhoB. It interacts specifically with the GDP- and GTP-bound forms of post-translationally processed RhoB and RhoG proteins, both of which show a growth-regulated expression in mammalian cells. It stimulates the release of the GDP-bound but not the GTP-bound RhoB protein. ARHGDIG also inhibits the GDP/GTP exchange of RhoB but shows less ability to inhibit the dissociation of pre-bound GTP.

Full-length human ARHGDIG cDNA (224aa) was constructed with codon optimization gene synthesis and expressed with a human N-terminal T7-His-TEV cleavage site Tag (29aa) fusion. This protein was 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: ARHGDIG (RHOGDI-3)
Accession Number: NP_001167
Species: Human
Size: 10 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, Sucrose and DTT.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

de Leon-Bautista MP, et al., *Immunological and Functional Characterization of RhoGDI3 and Its Molecular Targets RhoG and RhoB in Human Pancreatic Cancerous and Normal Cells*. PLoS ONE 11 (11), E0166370 (2016)



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Wang J, et al., *Overexpression of Rho-GDP-dissociated inhibitor-γ inhibits migration of neural stem cells.* J Neurosci Res. Nov: 91(11): 1394-401 (2013)

Dransart E, et al., *Uncoupling of inhibitory and shuttling functions of rho GDP dissociation inhibitors.* J. Biol. Chem. 280 (6), 4674-4683 (2005)

Applications

1. May be used for in vitro ARHGDI mediated RhoB related GDP/GTP exchange reaction signaling regulation for cancer cell growth or metastasis study by intracellular delivery of this protein with protein delivery reagent such as ProFectin reagent kit.
2. May be used for mapping protein-protein interaction.
3. May be used as specific substrate protein for specific kinase, and ubiquitin (Sumo pathway) related enzyme functional screening assays.
4. Potential biomarker protein, which may be used for pancreatic or neuronal disease prevention or treatment.
5. As immunogen for specific antibody production.

Quality Control

Purity: > 70% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHENLYFQGGEFLGLDACELG AQLLELLRLALCARVLLADKEGGPPA
VDEVLDEAVPEYRAPGRKSLLEIRQLDPDDRSLAKYKRVLLGPLPPAVDPSLPNVQVTRLTLLS
EQAPGPVMDLTGDLAVLKDQVFLKEGVDIRVKISFKVHREIVSGLKCLHHTYRRGLRVDKTV
YMGVSGPSAQEYEFVTPVEEAPRGALVRGPYLVVSLFTDDDRTHHLSWEWGLCICQDWKD