



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 RAB21 Protein
Catalog Number: hRP-1680
Manufacturer: LD Biopharma, Inc.

Introduction

Rab family small G proteins that constitute more than 60 members in humans play a key role in the spatiotemporal regulation of membrane traffic. Each Rab protein recognizes distinct subsets of intracellular membranes and controls the specific membrane transport pathways. Rab proteins function as a molecular switch cycling between 'inactive' GDP-bound and 'active' GTP-bound forms. The GTP-bound Rab protein interacts with their effector protein(s) that mediate the specific function of each Rab protein. Human Rab21 protein plays a role in the targeted trafficking of integrins via its association with integrin alpha tails. As a consequence, Rab21 protein is involved in the regulation of cell adhesion and migration.

Full-length human Rab21 cDNA (224 aa, derived from BC092475) was constructed by full-length gene synthesis with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. 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: RAB21
Accession Number: NP_055814
Species: Human
Size: 50 µg / 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 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

Hognas G, et al., *Cytokinesis failure due to derailed integrin traffic induces aneuploidy and oncogenic transformation in vitro and in vivo*. *Oncogene* 31 (31), 3597-3606 (2012)



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Yang X, et al., *Rab21 attenuates EGF-mediated MAPK signaling through enhancing EGFR internalization and degradation.* Biochem. Biophys. Res. Commun. 421 (4), 651-657 (2012)

Mai A, et al., *Competitive binding of Rab21 and p120RasGAP to integrins regulates receptor traffic and migration.* J. Cell Biol. 194 (2), 291-306 (2011)

Hooper S, et al., *A chemical biology screen reveals a role for Rab21-mediated control of actomyosin contractility in fibroblast-driven cancer invasion.* Br. J. Cancer 102 (2), 392-402 (2010)

Applications

1. May be used for in vitro RAB21 protein mediated integrins expression regulation study for cancer cell metastasis by intracellular delivery of this protein with “ProFectin” reagent.
2. May be used for mapping RAB21 protein-protein interaction assay.
3. As antigen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHHENLYFQGGEFAAAGGGGGAAAAGRAYSFKVVLLGEGCVGKTSLV
LRYCENKFNDKHIITTLQASFLTCKLNIGGKRVNLAIWDTAGQERFHALGPIYYRDSNGAILVYD
ITDEDSFQKVKNWVKELRKMLGNEICLCIVGNKIDLEKERHVS IQEAESYAESVGA KH YHTSAK
QNKGIEELFLDLCKRMIETAQVDERAKNGSSQP GTARRGVQIIDDEPQAQTSGGGCCSSG