



LD Biopharma, Inc.
9924 Mesa Rim Road Suite B
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<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human RAB33b Protein
Catalog Number: hRP-1665
Manufacturer: LD Biopharma, Inc.

Introduction

Endocytosis is involved in a wide variety of cellular processes, including uptake and internalization of solutes and components of the extracellular matrix (ECM), regulation of signaling induced by extracellular ligands, trafficking of cell surface receptors, such as integrins, and rearrangement of the actin cytoskeleton. Endocytosis and intracellular trafficking are coordinated by a family of small GTPases termed the Rabs. Rab proteins are classified according to their function and localization in different intracellular compartments and membrane domains. Rab33b, a member of the Rab small GTPase family that was originally described as a Golgi-resident protein involved in Golgi-to-endoplasmic reticulum (ER) transport, directly interacts with Atg16L in a guanosine triphosphate (GTP)-dependent manner and that activation and inactivation of RAB33b modulate autophagy pathway.

Full-length human Rab33b cDNA (227 aa, Isoform-I, derived from BC036064) was constructed 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: RAB33b (SMC2)
Accession Number: NP_112586
Species: Human
Size: 20 µg / Vial
Composition: 0.2 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

Pusapati GV, et al., *Ric1-Rgp1 complex is a guanine nucleotide exchange factor for the late Golgi Rab6A GTPase and an effector of the medial Golgi Rab33B GTPase.* J. Biol. Chem.



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287 (50), 42129-42137 (2012)

Itoh T, et al., *Golgi-resident small GTPase Rab33B interacts with Atg16L and modulates autophagosome formation*. Mol. Biol. Cell 19 (7), 2916-2925 (2008)

Applications

1. May be used for in vitro RAB33b protein mediated autophagy regulation in various cells study by intracellular delivery of this protein with “ProFectin” reagent.
2. May be used for mapping RAB33b protein-protein interaction.
3. As antigen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHHENLYFQGGEFSRKKTPKSKGASTPAASTLPTANGARPARSGTALS
GPDAPPNGPLQPGRPSLGGGVDFYDVAFKVMLVGDSGVGKTCLLVRFKDGAFLAGTFISTVGID
FRNKVLDVDGVKVKLQMWDTAGQERFRSVTHAYYRDAHALLLLYDVTNKASFDNIQAWLTEIHE
YAQHDVALMLLGNKVDSAHERVVKREDGEKLAKEYGLPFMETS AKTGLNVDLAF'TAI AKELKRR
SMKAPSEPRFRLHDYVKREGRGASCCRP