



**LD Biopharma, Inc.**  
7384 Trade Street, Suite B  
San Diego, CA 92121  
Tel: 858-876-8266  
<http://www.ldbiopharma.com>

## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant YFP-Human **Rab11b** Fusion Protein  
**Catalog Number:** HRP-3156  
**Manufacturer:** LD Biopharma, Inc. USA

### Introduction

The small GTPases Rab are key regulators of intracellular membrane trafficking, from the formation of transport vesicles to their fusion with membranes. Rabs cycle between an inactive GDP-bound form and an active GTP-bound form that is able to recruit to membranes different set of downstream effectors directly responsible for vesicle formation, movement, tethering and fusion. The human Ras-related protein Rab-11B plays a role in endocytic recycling, regulating apical recycling of several transmembrane proteins including cystic fibrosis transmembrane conductance regulator/CFTR, epithelial sodium channel/ENaC, potassium voltage-gated channel, and voltage-dependent L-type calcium channel. It may also regulate constitutive and regulated secretion, like insulin granule exocytosis. It is required for melanosome transport and release from melanocytes. Rab11B also regulates V-ATPase intracellular transport in response to extracellular acidosis. Recent data indicated that Rab11B mediated integrin recycling which promote brain cancer cells metastatic adaptation and outgrowth.

Full-length mature form of human Rab11b cDNA (2 - 215aa) was constructed with codon optimization gene synthesis and expressed with YFP Protein as N-terminal (YFP; 256aa) fusion protein 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:** Rab11b ( YPT3 )  
**Accession Number:** NP\_004209  
**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, DTT and others.  
**Storage:** In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least two weeks.



LD Biopharma, Inc.  
7384 Trade Street, Suite B  
San Diego, CA 92121  
Tel: 858-876-8266  
<http://www.ldbiopharma.com>

## Key References

Howe, E.N., et al. *Rab11b-mediated integrin recycling promotes brain metastatic adaptation and outgrowth*. *Nature Communi.* doi.org/ 10.1038/s41467-020-16832-2. (2020)

Zulkefli KL, et al., *A role for Rab11 in the homeostasis of the endosome-lysosomal pathway*. *Exp. Cell Res.* 380 (1), 55-68 (2019)

## Applications

1. May be used for in vitro Rab11b protein mediated integrin recycling pathway regulation for brain tumor metastatic study using intracellular delivery of recombinant human Rab11b protein with protein delivery reagent such as ProFectin.
2. May be used for Rab11b protein-protein interaction assay.
3. May be used as specific substrate protein for Rab11b specific kinase, and ubiquitin (Sumo pathway) related enzyme functional screening assays.
4. Potential therapeutic protein, blocking Rab11b may regulates integrin recycling efficiency, which benefits brain tumor treatment.
5. As native human Rab11b immunogen for its specific antibody production.

## Quality Control

Purity: > 90 % by SDS-PAGE.

## Recombinant YFP- Human Rab11B Fusion Protein Sequence ( 53.3 kD )

MKHHHHHQQVSKGEELEFTGVVPIIIVELDGDVNGHKFSVSGEGEGDATYGKLTLLKLLCTTGKLPVPWPTLV  
TTLGYGVQCFARYPDHMKQHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLVNRIELKGI  
DFKEDGNILGHKLEYNYNVSHNVYITADKQKNGIKANFKIRHNIEDGGVQLADHYQQNTPIGDGPVLLPDNH  
YLSYQSALFKDPNEKRDMVLLLEFLTAAGITEGMNDLYKGSNLYFQGEFGSGTRDDEYDYLKVVLLIGDSG  
VGKSNLLSRFTRNEFNLESKSTIGVEFATRSIQVDGKTIKAQIWDTAGQERYRAITSAYYRGAVGALLVY  
DIAKHLTYENVERWLKELRDHADSNIIVIMLVGNKSDLRHLRAVPTDEARAFKNNLSFIETSALDSTNV  
EEAFKNILTEIYRIVSQQIADRAAHDESPGNNVVDISVPPTTDGQKPNKLQCC