

Recombinant Rat OPTN Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52555

Size: 10ug, 100ug

Protein Name: Optineurin (FIP-2-like protein)

Synonym: Optn

UniProt ID: Q8R5M4

UniProt Link: www.uniprot.org/uniprotkb/Q8R5M4/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 585 AA

Molecular Weight: 67 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MSHQPLSCLTEKGDSSCETPGNGPSNMVHPNLDFTPEELLQQMKELLVENHQLKEAMKLNNQAM
KGRFEELSAWTEKQKEERQLFEIQSKEAKERLKAISHENERLKEELGKLKEKSERPFEDITGRCGFP
RTDLEQEVEQLKRQVEQEVEHLKIQVRRLLQAEKADLLGIVSELQLKLNSGGSSSEDSFVEIRMTEGEA
EGAMKEMRNSAGPTRTDSISMGKCTEDARTCVEFEELTVSQQLLCLREGNQKVERLEIALREAKERI
SDFEKKANGHSAIETQTEGSTQKEEEDKDPEISVGIEVETLNVQVASLFKELQEAHTKLSEAELMKKR
LQEKQCALERKNSATPSELNEKQELVYSNRKLELQVESMRSEIKMEQAKTEEEKSRLATLQATHDKL
LQEHNKALRTIEELTKQQAQKVDKVQLQELSEKLELAEQALASKQLQMDQEMKQTIKQEEDELETMAV
LRAQMEVYCSDFAERAAREKIHEEKEQLALQLAILLKENNDFFDGGSRQSLMEMQCRHGARTSDS
DQQAYLFQRGAEDMSWQHGGQPRSIPIHSCPKCGEVLDPIDTLQIHVMDCI

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Optineurin (FIP-2-like protein) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Plays an important role in the maintenance of the Golgi complex, in membrane trafficking, in exocytosis, through its interaction with myosin VI and Rab8. Links myosin VI to the Golgi complex and plays an important role in Golgi ribbon formation. Negatively regulates the induction of IFNB in response to RNA virus infection. Plays a neuroprotective role in the eye and optic nerve. Probably part of the TNF signaling pathway that can shift the equilibrium toward induction of cell death. May act by regulating membrane trafficking and cellular morphogenesis via a complex that contains Rab8 and huntingtin (HD). Mediates the interaction of Rab8 with the probable GTPase-activating protein TBC1D17 during Rab8-mediated endocytic trafficking, such as that of transferrin receptor (TFRC/TfR); regulates Rab8 recruitment to tubules emanating from the endocytic recycling compartment. Autophagy receptor that interacts directly with both the cargo to become degraded and an autophagy modifier of the MAP1 LC3 family; targets ubiquitin-coated bacteria (xenophagy) and appears to function in the same pathway as SQSTM1 and CALCOCO2/NDP52.

Subcellular Localization: Cytoplasm, perinuclear region . Golgi apparatus . Golgi apparatus, trans-Golgi network . Cytoplasmic vesicle, autophagosome . Cytoplasmic vesicle . Recycling endosome . Note=Found in the perinuclear region and associates with the Golgi apparatus. Colocalizes with MYO6 and RAB8 at the Golgi complex and in vesicular structures close to the plasma membrane. Localizes to LC3-positive cytoplasmic vesicles upon induction of autophagy.

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.