

Recombinant Mouse RUBIC Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51710

Size: 10ug, 100ug

Protein Name: Run domain Beclin-1-interacting and cysteine-rich domain-containing protein (Rubicon)

Synonym: Rubcn, Kiaa0226

UniProt ID: Q80U62

UniProt Link: www.uniprot.org/uniprotkb/Q80U62/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 956 AA

Molecular Weight: 107 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MRPEGAGMDLGGGDGERLLEKSRRHEWQLLGNLKTTEGLVSANCPNVWSKYGGGLERLCRDMQ
NILYHGLIHDQVCCRQADYWQFVKDIRWLSPHSALHVEKFISLHESDQSDTDSVSERAVAELWLQHS
LQCHCLSAQLRPLLGDRQYIRKFYTETAFLLSDAHVTAMLQCLEAVEQNNPRLLAQIDASMFARKQE
SPLLVTKSQSLTALPGSTYTPPASYAQHSYFGSSSSSLQSMPQSSHSSERRSTSFSLSGPSWQPQED
RECLSPAETQTTPAPLPSDSTLAQDSPLTAQEMSDSTLTSPLEASWVSSQNDSPSDVSEGPEYLAIG
NPAPHGRTASCESHSSNGESSSSHLFSSSSSQKLESAASSLGDQEEGRQSQAGSVLRRSSFSEGG
TAPVASGTTKSHIRSHSDTNIASRGAAGGPRNITIIVEDPIAEGGQYLCSGEGMFRRPSEGQSLISYLS
EQDFGSCADLEKENAHFSISESLIAAIELMKCNMMSQCLEEEVEEEDSDREIQELKQKIRLRQQIR
TKNLLPAYRETENGSRFTSSSSQFSSRDSTQLSESGSAEDADDLEIQDADIRRSVSNKGSSFSQN
LSHCFLHSTSAEAVAMGLLKQFEGMQLPAASELEWLVPEDAPQKLLPIPDSLPIPDGQHADIYKL
RIRVRGNLEWAPPRPQIIFNVHPAPTRKIAVAKQNYRCAGCGIRTDPDYIKRLRYCEYLGKYFCQCCH
ENAMMVPSRILRKWDFSKYYVSNFSKDLLLKIWNDFLNVQDINSALYRKVKLLNQVRLLRVQLYH
MKNMFKTCRLAKELLDSDVVPGLHTEDLHLYSLSDLTATKKGELGPRLAELTRAGAAHVERCMLC
QAKGFICEFCQNEEDVIFPFELHKCRTCEECKACYHKTCFKSGRCPCRERLQARRELLAKQSLESYL
SDYEEEPTEALALEATVLETT

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 Run domain Beclin-1-interacting and cysteine-rich domain-containing protein (Rubicon) 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: Inhibits PI3K3 activity; under basal conditions negatively regulates PI3K complex II (PI3KC3-C2) function in autophagy. Negatively regulates endosome maturation and degradative endocytic trafficking and impairs autophagosome maturation process (PubMed:19270693). Can sequester UVRAG from association with a class C Vps complex (possibly the HOPS complex) and negatively regulates Rab7 activation (By similarity).; Involved in regulation of pathogen-specific host defense of activated macrophages. Following bacterial infection promotes NADH oxidase activity by association with CYBA thereby affecting TLR2 signaling and probably other TLR-NOX pathways. Stabilizes the CYBA:CYBB NADPH oxidase heterodimer, increases its association with TLR2 and its phagosome trafficking to induce antimicrobial burst of ROS and production of inflammatory cytokines. Following fungal or viral infection (implicating CLEC7A (dectin-1)-mediated myeloid cell activation or RIGI-dependent sensing of RNA viruses) negatively regulates pro-inflammatory cytokine production by association with CARD9 and sequestering it from signaling complexes (By similarity).

Subcellular Localization: Late endosome . Lysosome . Early endosome . Note=Predominantly located in late endosomes/lysosomes, only partially detected in early endosome and not at all in the Golgi apparatus.

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.