

Recombinant Human FURIN Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50344

Size: 10ug, 100ug

Protein Name: Furin (EC 3.4.21.75) (Dibasic-processing enzyme) (Paired basic amino acid residue-cleaving enzyme) (PACE)

Synonym: FURIN, FUR, PACE, PCSK3

UniProt ID: P09958

UniProt Link: www.uniprot.org/uniprotkb/P09958/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 794 AA

Molecular Weight: 87 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MELRPWLLWVVAATGTLVLLAADAQGQKVFTNTWAVRIPGGPAVANSVARKHGFNLGQIFGDYYH
FWHRGVTKRSLSPHRPRHSRLQREPQVQWLEQQVAKRRTKRDVYQEPTDPKFPQQWYLSGVTQR
DLNVKAAWAQGYTGHGIVVSILDDGIEKNHPDLAGNYDPGASFDVNDQDPDPQPRYTQMNDNRHG
TRCAGEVAAVANNGVCGVGVAYNARIGGVRMLDGEVTDAVEARSLGLNPNHIHIYSASWGPEDDG
KTVDGPARLAEAAFFRGVSQGRGGLGSIFVWASGNGGREHDSCNCDGYTNSIYTLSSISSATQFGNV
PWYSEACSSTLATTYSSGNQNEKQIVTTDLRQKCTESHTGTSASAPLAAGIIALTLEANKNLTWRDM
QHLVVQTSKPAHLNANDWATNGVGRKVSYSYGYGLLDAGAMVALAQNWTTVAPQRKCIIDILTEPK
DIGKRLEVRKTVTACLGEPNHITRLEHAQARLTLSYNRRGDLAIHLVSPMGTRSTLLAARPHDYSADG
FNDWAFMTTHSWDEDPSGEWVLEIENTSEANNYGTLTFTLVLYGTAPGLPVPPESSGCKTLTSS
QACVVCEEFGSLHQKSCVQHCPPGFAPQVLDTHYSTENDVETIRASVCAPCHASCATCQGPALTDG
LSCPSHASLDPVEQTCSRQSQSSRESPPQQPPRLPPEVEAGQRLRAGLLPSHLPEVVAGLSCAFI
VLVFTVFLVLQLRSGFSFRGVKVTMDRGLISYKGLPPEAWQEECPDSEDEGRGERTAFIKDQS
AL

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 Furin (EC 3.4.21.75) (Dibasic-processing enzyme) (Paired basic amino acid residue-cleaving enzyme) (PACE) 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: Ubiquitous endoprotease within constitutive secretory pathways capable of cleavage at the RX(K/R)R consensus motif (PubMed:11799113, PubMed:1629222, PubMed:1713771, PubMed:2251280, PubMed:24666235, PubMed:25974265, PubMed:7592877, PubMed:7690548, PubMed:9130696). Mediates processing of TGFB1, an essential step in TGF-beta-1 activation (PubMed:7737999). Converts through proteolytic cleavage the non-functional Brain natriuretic factor prohormone into its active hormone BNP(1-32) (PubMed:20489134, PubMed:21763278). By mediating processing of accessory subunit ATP6AP1/Ac45 of the V-ATPase, regulates the acidification of dense-core secretory granules in islets of Langerhans cells (By similarity).; (Microbial infection) Cleaves and activates diphtheria toxin DT.; (Microbial infection) Cleaves and activates anthrax toxin protective antigen (PA).; (Microbial infection) Cleaves and activates HIV-1 virus Envelope glycoprotein gp160.; (Microbial infection) Required for H7N1 and H5N1 influenza virus infection probably by cleaving hemagglutinin.; (Microbial infection) Able to cleave S.pneumoniae serine-rich repeat protein PsrP.; (Microbial infection) Facilitates human coronaviruses EMC and SARS-CoV-2 infections by proteolytically cleaving the spike protein at the monobasic S1/S2 cleavage site. This cleavage is essential for spike protein-mediated cell-cell fusion and entry into human lung cells.; (Microbial infection) Facilitates mumps virus infection by proteolytically cleaving the viral fusion protein F.

Subcellular Localization: Golgi apparatus, trans-Golgi network membrane ; Single-pass type I membrane protein . Cell membrane ; Single-pass type I membrane protein . Secreted . Endosome membrane ; Single-pass type I membrane protein . Note=Shuttles between the trans-Golgi network and the cell surface (PubMed:11799113, PubMed:9412467). Propeptide cleavage is a prerequisite for exit of furin molecules out of the endoplasmic reticulum (ER). A second cleavage within the propeptide occurs in the trans Golgi network (TGN), followed by the release of the propeptide and the activation of furin (PubMed:11799113).

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.