

Recombinant Mouse UBP5 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51477

Size: 10ug, 100ug

Protein Name: Ubiquitin carboxyl-terminal hydrolase 5 (EC 3.4.19.12) (Deubiquitinating enzyme 5) (Isopeptidase T) (Ubiquitin thioesterase 5) (Ubiquitin-specific-processing protease 5)

Synonym: Usp5, Isot

UniProt ID: P56399

UniProt Link: www.uniprot.org/uniprotkb/P56399/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 858 AA

Molecular Weight: 96 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MAELSEEALLSVLPTIRV PKAGDRVHKDECAFSFDTPSEGGLYICMNTFLGFGKQYVERHFNKTGQ
RVYLHLRRTTRPKEEDTSAGTGDPPRKKPTRLAIGVEGGFDLTEDKFEFDEDVKIVILPDYLEIARDG
LGGLPDIVRDRVTSAVEALLSADSASRKQEVQAWDGEVRQVSKHAFNLKQLDNPARIPPCGWKCSK
CDMRENWLNLTDGSILCGRRYFDGSGGNNHAVEHYRETGYPLAVKLGTITPDGADVSYDEDDM
VLDPSLAEHL SHFGIDMLKMQKTDKTMTELEIDMNQRIGEWELIQESGVPLKPLFGPGYTGIRNLGNS
CYLNSVVQVLF SIPDFQRKYVDKLEIFQNAPTDPTQDFSTQVAKLGHGLLSGEYSKPALES GDGEQ
VPEQKEVQDGIAPRMFKALIGKGHPFSTNRQQDAQEFFLHLINMVERNCRSSNPNEVFRFLVEEK
IKCLATEKVKYTQRVDYIMQLPVPMDAALNKEELLE YEEKKRQAEKKVPLPELVRAQVPFSSCLEAY
GAPEQVDDFWSTALQAKSVAVKTRFASFDPDYLVIQIKFTFGLDWVPKKLDVSIEMPEELDISQLRG
TGLQPGEELPDIAPLVTPDEPKGSLGFYGNEDSFCSPHFSSPTSPMLDESVIIQLVEMGFPM
ACRKAVYYTGN SGAEAA MNWVM SHMDDPDFANPLILPGSSGPGSTSAAADPPPEDCVTTIVSMGF
SRDQALKALRATNNSLERAVDWIFSHIDDLDAEAAMDISEGRSAAESISESVVPVGPKVRDGP GK YQL
FAFISHMGTSTMCGHYVCHIKKEGRWVIYNDQKVCASEKPPKDLGYIYFYQRVVS

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 Ubiquitin carboxyl-terminal hydrolase 5 (EC 3.4.19.12) (Deubiquitinating enzyme 5) (Isopeptidase T) (Ubiquitin thioesterase 5) (Ubiquitin-specific-processing protease 5) 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: Deubiquitinating enzyme that participates in a wide range of cellular processes by specifically cleaving isopeptide bonds between ubiquitin and substrate proteins or ubiquitin itself. Affects thereby important cellular signaling pathways such as NF-kappa-B, Wnt/beta-catenin, and cytokine production by regulating ubiquitin-dependent protein degradation. Participates in the activation of the Wnt signaling pathway by promoting FOXM1 deubiquitination and stabilization that induces the recruitment of beta-catenin to Wnt target gene promoter. Regulates the assembly and disassembly of heat-induced stress granules by mediating the hydrolysis of unanchored ubiquitin chains. Promotes lipopolysaccharide-induced apoptosis and inflammatory response by stabilizing the TXNIP protein. Affects T-cell biology by stabilizing the inhibitory receptor on T-cells PDC1 (PubMed:37208329). Acts as a negative regulator of autophagy by regulating ULK1 at both protein and mRNA levels. Acts also as a negative regulator of type I interferon production by simultaneously removing both 'Lys-48'-linked unanchored and 'Lys-63'-linked anchored polyubiquitin chains on the transcription factor IRF3. Modulates the stability of DNA mismatch repair protein MLH1 and counteracts the effect of the ubiquitin ligase UBR4. Upon activation by insulin, it gets phosphorylated through mTORC1-mediated phosphorylation to enhance YTHDF1 stability by removing 'Lys-11'-linked polyubiquitination (By similarity). May also deubiquitinate other substrates such as the calcium channel CACNA1H (PubMed:31455361).

Subcellular Localization: Cytoplasm . Cytoplasm, Stress granule . Nucleus .

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.