

Recombinant Mouse UBR2 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51697

Size: 10ug, 100ug

Protein Name: E3 ubiquitin-protein ligase UBR2 (EC 2.3.2.27) (N-recogin-2) (Ubiquitin-protein ligase E3-alpha-2) (Ubiquitin-protein ligase E3-alpha-II)

Synonym: Ubr2, Kiaa0349

UniProt ID: Q6WKZ8

UniProt Link: www.uniprot.org/uniprotkb/Q6WKZ8/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 1755 AA

Molecular Weight: 199 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MASEMEPEVQAIDRSLLLECSAEEIAGRWLQATDLNREVYQHLAHCVPKIYCRGPNPFPQKEDTLAQ
HILLGPMEWYICAE DPALGF PKLEQANKPSHLCGRVFKVGEPTYSCRDCAVDPTCVLCMECFLGSIH
RDHRYRMTTSGGGGFCDCGDTEAWKEGPYCQKHKLSSSEVVEEEDPLVHLSERVEDVIARTYNIFAIMF
RYAVDILTWEKESELPEDLEVAEKSDTYCMLFNDEVHTYEQVIYTLQKAVNCTQKEAIGFATTVD RD
GRRSVRYGDFQYCDQAKTVIVRNTSRQTKPLKVQVMHSSVAAHQNFGLKALSWLGSVIGYSDGLR
RILCQVGLQEGPDGENSSLVDRLMLNDSKLWKGARSVYHQLFMSSLLMDLKYYKKLFALRFAKNYRQ
LQRDFMEDDHERAVSVTALSVQFFTAPT LARMLL TEENLMTV IIAKAFMDHLKHRDAQGRFQFERYTA
LQAFKFRRVQSLILDLYVLISKPT EWSD ELRQKFLQGFD AFLELLKCMQGM DPITRQVGQHIEMEPE
WEAAFTLQMKLTHVISMVQDWALDEKVLIEAYKKCLAVLTQCHGGFTDGEQPITLSICGHSVETIRY
CVSQEKVSIHLPI SRLLAGLHVLLSKSEVAYKFPELLPLSELSPMLIEHPLRCLVLC AQVHAGMWRR
NGFSLVNQIYYHNVKCRREMFDKDIVMLQTGVSMMDPNHFLMIMLSRFELYQLFSTPDYGKRFSS
EVTHKDVVQQNNTLIEEMLYLIIMLVGERFNPGVGQVAATDEIKREIIHQLSIKPMAHSELVKSLPEDE
NKETGMESVIESVAHFKKPGLTGRGMYELKPECAKEFNLYFYHFSRAEQSKAEAAQRKLKRENKED
TALPPPALPPFCPLFASLVNQLQCDVM LYIMGTILQWAVEHHGSAWSESMLQRVLHLIGMALQEEKH
HLENAVEGHVQTFTFTQKISKPGDAPHNSPSILAMLET LQNAPSLEAHKDMIRWLLKMFNAIKKIREC
SSSSPVAEAEAGTIMEESSRDKDKAERKRKAEIARLRREKIM AQMSEMQRHFIDENKELFQQTLELDT
SASATLDSSPPVSDAALTALGPAQTQVPEPRQFVTCILCQEEQEVTVGSRAMVLA AFVQRSTVLSKD
RTKTIADPEKYDPLFMHPDLSCGTHTGSCGHVMHAHCWQRYFDSVQAKEQRRQQRRLRLHTSYDVE



NGEFLCPLCECLSNTVIPLLLPPRSILSRRLNFSQPDLAQWTRAVTQQIKVVQMLRRKHNAADTSSS
EDTEAMNIIPIEGFRPDFYPRNPYSDSIKEMLTTFGTAAVKVGLKVHPNEGDPVPILCWGTCAytiQ
SIERILSDEEKPVFGPLPCRLDDCLRSLTRFAAAHWTVALLPVVQGHFCKLFASLVPSDSYEDLPCILD
IDMFHLLVGLVLAFFALQCQDFSGSSLATGDLHIFHLVTMAHIVQILLTSCTEENGMDQENPTGEEEL
AILSLHKTLLHQTGSALKEAPSGWHLWRSVRAAIMPFLLKCSALFFHYLNGVPPAPDLQVSGTSHFEH
LCNYLSLPTNLIHLFQENSIMNSLIESWCQNSEVKRYLNGERGAISYPRGANKLIDLPEDYSSLINQA
SNFSCPKSGGDKSRAPTLCLVCGSLLCSQSYCCQAELEGEDVGACTAHTYSCGSGAGIFLRVRECQ
VLFLAGKTKGCFYSPPYLDDYGETDQGLRRGNPLHLCQERFRKIQLWQQHSITEEIGHAQEANQTL
VGIDWQHL

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 E3 ubiquitin-protein ligase UBR2 (EC 2.3.2.27) (N-recogin-2) (Ubiquitin-protein ligase E3-alpha-2) (Ubiquitin-protein ligase E3-alpha-II) 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: E3 ubiquitin-protein ligase which is a component of the N-end rule pathway (PubMed:14585983, PubMed:19008229, PubMed:30872531, PubMed:31268597). Recognizes and binds to proteins bearing specific N-terminal residues (N-degrons) that are destabilizing according to the N-end rule, leading to their ubiquitination and subsequent degradation (PubMed:14585983, PubMed:19008229, PubMed:30872531, PubMed:31268597). Recognizes both type-1 and type-2 N-degrons, containing positively charged amino acids (Arg, Lys and His) and bulky and hydrophobic amino acids, respectively (PubMed:19008229). Does not ubiquitinate proteins that are acetylated at the N-terminus (By similarity). In contrast, it strongly binds methylated N-degrons (By similarity). Plays a critical role in chromatin inactivation and chromosome-wide transcriptional silencing during meiosis via ubiquitination of histone H2A (PubMed:14585983, PubMed:20080676). Binds leucine and is a negative regulator of the leucine-mTOR signaling pathway, thereby controlling cell growth (By similarity). Required for spermatogenesis, promotes, with Tex19.1, SPO11-dependent recombination foci to accumulate and drive robust homologous chromosome synapsis (PubMed:28708824). Polyubiquitinates LINE-1 retrotransposon encoded, L1-ORF1, which induces degradation, inhibiting LINE-1 retrotransposon mobilization (PubMed:28806172). Catalyzes ubiquitination and degradation of the N-terminal part of NLRP1B following NLRP1B activation by pathogens and other damage-associated signals: ubiquitination promotes degradation of the N-terminal part and subsequent release of the cleaved C-terminal part of NLRP1B, which polymerizes and forms the NLRP1B inflammasome followed by host cell pyroptosis (PubMed:30872531, PubMed:31268597). Plays a role in T-cell receptor signaling by inducing 'Lys-63'-linked ubiquitination of lymphocyte cell-specific kinase LCK (PubMed:38225265). This activity is regulated by DUSP22, which induces 'Lys-48'-linked

ubiquitination of UBR2, leading to its proteasomal degradation by SCF E3 ubiquitin-protein ligase complex (By similarity).

Subcellular Localization: Nucleus . Chromosome . Note=Associated with chromatin during meiosis.

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.