

Recombinant Mouse FBW1A Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51593

Size: 10ug, 100ug

Protein Name: F-box/WD repeat-containing protein 1A (Beta-TrCP protein E3RS-IkappaB) (Beta-transducin repeat-containing protein) (Beta-TrCP) (E3RSIkappaB) (mE3RS-IkappaB) (F-box and WD repeats protein beta-TrCP) (HOS) (Ubiquitin ligase FWD1) (plkappaB-E3 receptor subunit)

Synonym: Btrc, Fbw1, Fbxw1, Fwd1, Kiaa4123

UniProt ID: Q3ULA2

UniProt Link: www.uniprot.org/uniprotkb/Q3ULA2/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 605 AA

Molecular Weight: 69 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MDPAEAVLQEKALKFMCSMPRSLWLGCSLADSMPSLRCLYNPGTGALTAFQNSSEREDCNNGEP
PRKIIPEKNSLRQTYNSCARLCINQETVCLTSTAMKTENCVAKAKLANGTSSMIVPKQRKLSASYEKE
KELCVKYFEQWSESDQVEFVEHLISQMCHYQHGHINSYLPMLQRDFITALPARGLDHIAENILSYLD
AKSLCAAELVCKEWYRVTS DGMLWKKLIERMVRTDSLWRGLAERRGWGQYLFKNKPPDENAPPNS
FYRALYPKIIQDIETIESNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKSTLEC
KRILTGHGTGSVLCLQYDERVIITGSSDSTVRVWDVNAGEMLNTLIHHCEAVLHLRFNNGMMVTCSD
RSIAVWDMASPTDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRTIKVWNTSTCEFVRTLNHGKRGIA
CLQYRDRLVVGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDNKRIVSGAYDGGIKVWDLMAAL
DPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDTILIWDFLNDPAAHAEPSPSPRTYTYISR

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 F-box/WD repeat-containing protein 1A (Beta-TrCP protein E3RS-IkappaB) (Beta-transducin repeat-containing protein) (Beta-TrCP) (E3RSIkappaB) (mE3RS-IkappaB) (F-box and WD repeats protein beta-TrCP) (HOS) (Ubiquitin ligase FWD1) (pIkappaB-E3 receptor subunit) 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: Substrate recognition component of a SCF (SKP1-CUL1-F-box protein) E3 ubiquitin-protein ligase complex which mediates the ubiquitination and subsequent proteasomal degradation of target proteins (PubMed:10097128, PubMed:16371461, PubMed:16611981, PubMed:18782782, PubMed:21911472, PubMed:29593216, PubMed:9859996, PubMed:9990853). Recognizes and binds to phosphorylated target proteins (PubMed:10097128, PubMed:16371461, PubMed:16611981, PubMed:18782782, PubMed:21911472, PubMed:9859996, PubMed:9990853). SCF(BTRC) mediates the ubiquitination of phosphorylated NFKB, ATF4, CDC25A, DLG1, FBXO5, PER1, SMAD3, SMAD4, SNAI1 and probably NFKB2. SCF(BTRC) mediates the ubiquitination of CTNNB1 and participates in Wnt signaling (By similarity). SCF(BTRC) mediates the ubiquitination of NFKBIA, NFKBIB and NFKBIE; the degradation frees the associated NFKB1 to translocate into the nucleus and to activate transcription (PubMed:10097128, PubMed:9859996). Ubiquitination of NFKBIA occurs at 'Lys-21' and 'Lys-22' (PubMed:10097128, PubMed:9859996). The SCF(FBXW11) complex also regulates NF-kappa-B by mediating ubiquitination of phosphorylated NFKB1: specifically ubiquitinates the p105 form of NFKB1, leading to its degradation (By similarity). SCF(BTRC) mediates the ubiquitination of CEP68; this is required for centriole separation during mitosis (By similarity). SCF(BTRC) mediates the ubiquitination and subsequent degradation of nuclear NFE2L1 (PubMed:21911472). Has an essential role in the control of the clock-dependent transcription via degradation of phosphorylated PER1 and PER2 (PubMed:18782782). May be involved in ubiquitination and subsequent proteasomal degradation through a DBB1-CUL4 E3 ubiquitin-protein ligase (By similarity). Required for activation of NFKB-mediated transcription by IL1B, MAP3K14, MAP3K1, IKKKB and TNF (By similarity). SCF(BTRC) acts as a negative regulator of smoothened signaling by mediating ubiquitination of GLI2 and GLI3 in absence of smoothened, promoting their processing into transcription repressors (PubMed:16371461, PubMed:16611981). Mediates ubiquitination of REST, thereby leading to its proteasomal degradation (By similarity). SCF(BTRC) mediates the ubiquitination and subsequent proteasomal degradation of KLF4; thereby negatively regulating cell pluripotency maintenance and embryogenesis (PubMed:29593216). SCF(BTRC) acts as a regulator of mTORC1 signaling pathway by catalyzing ubiquitination and subsequent proteasomal degradation of phosphorylated DEPTOR, TFE3 and MITF (By similarity). SCF(BTRC) directs 'Lys-48'-linked ubiquitination of UBR2 in the T-cell receptor signaling pathway (By similarity).

Subcellular Localization: Cytoplasm . 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.



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- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.