Recombinant UFL1 protein (His tag)

Catalog Number	544209
Synonyms	E3 UFM1-protein transferase 1; Multiple alpha-helix protein located at ER; Novel LZAP-binding protein; Regulator of C53/LZAP and DDRGK1
Species	Human
Expression System	E. coli
Accession	O94874
Molecular Weight	Predictes a molecular mass of 45.30 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 47 kDa band.

Product Information

Amino Acid Sequence	MSKIKADAWE EIRRLAADFQ RAQFAEATQR LSERNCIEIV NKLIAQKQLE VVHTLDGKEY ITPAQISKEM RDELHVRGGR VNIVDLQQVI NVDLIHIENR IGDIIKSEKH VQLVLGQLID ENYLDRLAEE VNDKLQESGQ VTISELCKTY DLPGNFLTQA LTQRLGRIIS GHIDLDNRGV IFTEAFVARH KARIRGLFSA ITRPTAVNSL ISKYGFQEQL LYSVLEELVN SGRLRGTVVG GRQDKAVFVP DIYSRTQSTW VDSFFRQNGY LEFDALSRLG IPDAVSYIKK RYKTTQLLFL KAACVGQGLV DQVEASVEEA ISSGTWVDIA PLLPTSLSVE DAAILLQQVM RAFSKQASTV VFSDTVVVSE KFINDCTELF RELMHQKAEK EMLEHHHHHH
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 2-388 aa (O94874) were fused with C-terminal 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

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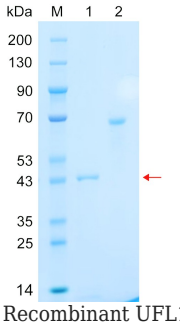
Recombinant Human E3 UFM1-protein ligase 1 (UFL1) fragment (residues 2-388) is a high-quality protein preparation ideal for studying ufmylation mechanisms and endoplasmic reticulum stress responses. This 387-amino acid fragment was carefully selected for optimal stability and solubility, making it perfect for structural studies, biochemical assays, and functional characterization of this crucial E3 ligase involved in multiple cellular processes.

E3 UFM1-protein ligase 1 (UFL1) is a key enzyme that mediates ufmylation, the covalent attachment of the ubiquitin-like modifier UFM1 to target proteins. This essential E3 ligase plays critical roles in diverse cellular processes including ribosome recycling, DNA damage response, interferon signaling, and reticulophagy (ER-phagy). UFL1 catalyzes ufmylation of numerous substrates including CD274/PD-L1, DDRGK1, RPL26/uL24, and TP53/p53, thereby regulating immune checkpoint function, ribosome dissociation from ER membranes, and protein stability. The enzyme localizes primarily to the endoplasmic reticulum membrane but also functions in the cytoplasm, nucleus, and at chromosomal locations during DNA damage repair. UFL1-mediated ufmylation is particularly important during endoplasmic reticulum stress, where it promotes lysosomal degradation of ufmylated proteins and is essential for hematopoiesis, blood vessel development, and inflammatory responses.

Validation

SDS-PAGE



Recombinant UFL1 protein (His tag) SDS-PAGE
M: Marker; Lane 1: UFL1; Lane 2: BSA