

Product Name: UBA1, tagged

Alternate Names: UBE1, A1S9

Product Code: TE1-001

Quantity: 25 µg

FOR RESEARCH USE ONLY (RUO)

Storage:

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
Aliquot and store $\leq -70^{\circ}\text{C}$.

Verified Applications / Usage

Recombinant Ubiquitin Activating Enzyme 1 activates ubiquitin for subsequent transfer to a Ubiquitin Conjugating Enzyme (E2) in in vitro reactions. This initial event in the ubiquitin-proteasome cascade requires Mg-ATP and ubiquitin. Appropriate enzyme concentrations are specific to the application.

Physical Characteristics

Species: Homo sapiens (Human)

Predicted MW (kDa): 121

Source: Proprietary

Purity: 98%

Concentration: 5 µM

Formulation: 40 mM HEPES, 100 mM NaCl, 10% Glycerol, 1 mM EDTA, 1 mM TCEP, pH 7.6

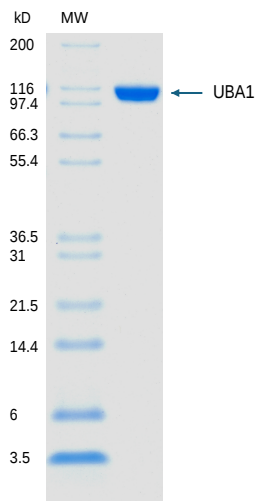
Stability/Storage: Use a manual defrost freezer and avoid repeated freeze-thaw cycles. Aliquot and store $\leq -70^{\circ}\text{C}$.

Shipping: The product is shipped with dry ice or equivalent. Upon receipt, store it immediately at the temperature recommended below.

Quality Assurance

Purity & SDS-PAGE

Protein ID: Ubiquitin-like
modifier-activating enzyme 1



2 µg UBA1 run on 4-12% SDS-PAGE gel under reducing conditions, then visualized with Colloidal Coomassie Blue Stain.

Activity Assay

Verified in UbiREAL Assay

Background

Description

UBA1 (Ubiquitin Activating Enzyme 1) is an essential enzyme involved in the ubiquitination pathway, which tags proteins for degradation (or otherwise alters protein-protein interactions). As an E1 enzyme, UBA1 activates ubiquitin by forming a high-energy thioester bond, initiating a cascade that leads to the transfer of ubiquitin to Ubiquitin Conjugating Enzymes (E2's), Ubiquitin Ligases (E3's) and finally substrate proteins. This process is crucial for regulating protein turnover, cell cycle progression, DNA repair, and stress responses. Recombinant UBA1 is therefore indispensable for degrader MoA assays, E2-panel specificity screens, or high-throughput campaigns benchmarking linkage-specific antibodies and proteasome-targeting modalities.

Accession Number: P22314

Entrez Gene ID: UBA1

Protein Sequence

MGWSHPQFEKGSHHHHHHHHGSLEVLFFQGP GSMSSSPLSKKRRVSG
PDPKPGSNCSPAQSVLSEVPSVPTNGMAKNGSEADIDEGLYSRQLYVL
GHEAMKRLQTSSVLVSGLRGLGVEIAKNIILGGVKAVTLHDQGTAQWA
DLSSQFYLR EEDIGKNRAEVSQPRLAELNSYVPVTAYTGPLVEDFLSGF
QVVVLTNTPLEDQLRVGEFCHNRGIKLVVADTRGLFGQLFCDFGEEMIL
TDSNGEQPLSAMVSMVTKDNPGVVTCLDEARHGFESGDFVSFSEVQG
MVELNGNQPM EIKVLGPYTFSICDTSNFSYIRGGIVSQVKVPKKISFKS
LVA SLAEPDFVVTDFAKFSRPAQLHIGFQALHQFCAQHGRPPRPRNEE
DAAELVALAQAVNARALPAVQQNNLDEDLIRKLAYVAAGDLAPINAFIG
GLAAQEVMKACSGKFMPI MQWLYFDALECLPEDKEVLTEDKCLQRQN
RYDGQVAVFGSDLQEKLGKQKYFLVGAGAIGCELLKNFAMIGLGC GEG
GEIIVTDMDTIEKSNLNRQFLFRPWDVTKLKSDTAAA AVRQMNPHIRVT
SHQNRVGP DTERIYDDDFQNL DGVANALDNVDARMYMDRRCVYYRK
PLLESGTLG TKGNVQVVIPFLTESYSSSQDPPEKSIPICTLKNFPNAIEHT
LQWARDEFEG LFKQPAENVNQYLTD PKFVERTLRLAGTQPLEVLEAVQ
RSLVLQRPQTWADCVTWACHHWHTQYSNNIRQLLHNFPPDQLTSSGA
PFWSGPKRC PHPLTFDVNNPLHLDYVMAAANLFAQTYGLTGSQDRAA
VATFLQSVQVPEFTPKSGVKIHVSDQELQSANASVDDSRLEELKATLPS
PDKLPGFKMYPIDFEKDDDSNFHMDFIVAASNLR AENYDIPSADRHKSK
LIAGKIIPAIATTTAAVVGLVCLELYKVVQGHRQLDSYKNGFLNLALPFFG
FSEPLAAPRHQYYNQEWTLWDRFEVQGLQPNGEEMTLKQFLDYFKTE
HKLEITMLSQGVSM LYSFFMPAAKLKERLDQPMTEIVSRVSKRKLGRHV
RALVLELCCNDESGEDVEVPYVRYTIR