Product Name: UBA1

Alternate Names: UBE1, A1S9

Product Code: TE1-001

FOR RESEARCH USE ONLY (RUO)

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: Human

Predicted MW (kDa): 118 kDa

Source: Proprietary

Purity: 98 %

Tag: N/A

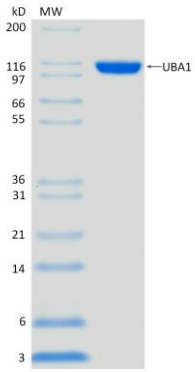
Formulation: 40 mM HEPES, 100 mM NaCl, 10% Glycerol, 1 mM EDTA, 1 mM TCEP, pH 7.6

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

Stability/Storage: Use a manual defrost freezer and avoid repeated freeze-thaw cycles. Aliquot and store ≤ -70°C (stable for 24 months from date of receipt).

Quality Assurance

Purity & SDS-PAGE



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

Protein ID: Ubiquitin-like modifier-activating enzyme 1

Activity Assay

Verified in Ubiquitin Charging Assay. Verified in UbiREAL Assay.

Background

Description

In vitro, UBA1 activates ubiquitin in an ATP-dependent manner, generating an E1-ubiquitin thioester that is competent for charging E2 conjugating enzymes and supporting various ubiquitylation assays.

Accession Number: P22314

Entrez Gene ID: UBA1

Protein Sequence

MSSSPLSKKRRVSGPDPKPGSNCSPAQSVLSEVPSVPTNGMAKNGSEADIDEGLYSRQLYVLG
HEAMKRLQTSSVLVSGLRGLGVEIAKNIILGGVKAVTLHDQGTAQWADLSSQFYLREEDIGKN
RAEVSQPRLAELNSYVPVTAYTGPLVEDFLSGFQVVVLTNTPLEDQLRVGEFCHNRGIKLVVA
DTRGLFGQLFCDFGEEMILTDSNGEQPLSAMVSMVTKDNPGVVTCLDEARHGFESGDFVSFSE
VQGMVELNGNQPMEIKVLGPYTFSICDTSNFSDYIRGGIVSQVKVPKKISFKSLVASLAEPDF
VVTDFAKFSRPAQLHIGFQALHQFCAQHGRPPRPRNEEDAAELVALAQAVNARALPAVQQNNL
DEDLIRKLAYVAAGDLAPINAFIGGLAAQEVMKACSGKFMPIMQWLYFDALECLPEDKEVLTE
DKCLQRQNRYDGQVAVFGSDLQEKLGKQKYFLVGAGAIGCELLKNFAMIGLGCGEGGEIIVTD
MDTIEKSNLNRQFLFRPWDVTKLKSDTAAAAVRQMNPHIRVTSHQNRVGPDTERIYDDDFFQN
LDGVANALDNVDARMYMDRRCVYYRKPLLESGTLGTKGNVQVVIPFLTESYSSSQDPPEKSIP
ICTLKNFPNAIEHTLQWARDEFEGLFKQPAENVNQYLTDPKFVERTLRLAGTQPLEVLEAVQR
SLVLQRPQTWADCVTWACHHWHTQYSNNIRQLLHNFPPDQLTSSGAPFWSGPKRCPHPLTFDV
NNPLHLDYVMAAANLFAQTYGLTGSQDRAAVATFLQSVQVPEFTPKSGVKIHVSDQELQSANA
SVDDSRLEELKATLPSPDKLPGFKMYPIDFEKDDDSNFHMDFIVAASNLRAENYDIPSADRHK
SKLIAGKIIPAIATTTAAVVGLVCLELYKVVQGHRQLDSYKNGFLNLALPFFGFSEPLAAPRH
QYYNQEWTLWDRFEVQGLQPNGEEMTLKQFLDYFKTEHKLEITMLSQGVSMLYSFFMPAAKLK
ERLDQPMTEIVSRVSKRKLGRHVRALVLELCCNDESGEDVEVPYVRYTIR