Product Name: NAE1 / UBA3

Alternate Names: APPBP1, HPP1, Amyloid beta precursor protein-binding protein 1, 59 kDa (APP-BP1), Amyloid protein-binding protein 1, Proto-oncogene protein 1 / UBE1C, NEDD8-activating enzyme E1C, Ubiquitin-activating enzyme E1C, Ubiquitin-like modifier-activating enzyme 3 (Ubiquitin-activating enzyme 3)

Product Code: TE1-082

FOR RESEARCH USE ONLY (RUO)

Verified Applications / Usage

Recombinant NEDD8-activating enzyme activates NEDD8 for subsequent transfer to a NEDD8 Conjugating Enzyme (E2) in Mg-ATP-dependent *in vitro* reactions. Appropriate enzyme concentrations are specific to the application.

Physical Characteristics

Species: Human

Predicted MW (kDa): NAE1: 60 kDa
UBA3: 52 kDa

Source: Proprietary

Purity: 98 %

Tags: NAE1: N/A
UBA3: N/A

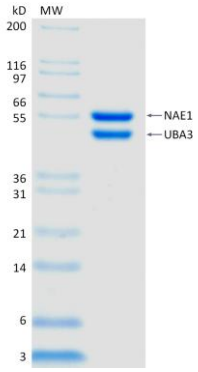
Formulation: 40 mM HEPES, 100 mM NaCl, 10% Glycerol, 1 mM EDTA, 1 mM TCEP, pH 7.6

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 NAE1 / UBA3 run on 4-12% SDS-PAGE gel under reducing conditions, then visualized with Colloidal Coomassie Blue Stain.

Protein ID: NAE1
NEDD8-activating enzyme E1 catalytic subunit

Activity Assay

Verified in NEDD8 Charging Assay.

Background

Description

In vitro, NEDD8 E1 activates NEDD8 in an ATP-dependent manner, generating an E1-NEDD8 thioester that is competent for charging E2 conjugating enzymes and supporting various Neddylation assays.

Accession Number: Q13564

Entrez Gene ID: NAE1

Accession Number: Q8TBC4

Entrez Gene ID: UBA3

Protein Sequences

NAE1:

SGSMAQLGKLLKEQKYDRQLRLWGDHGQEALESAHVCLINATATGTEILKNLVLPGIGSFTII
DGNQVSGEDAGNNFFLQRSSIGKNRAEAAMEFLQELNSDVSGSFVEESPENLLDNDPSFFCRF
TVVVATQLPESTSLRLADVLWNSQIPLLICRTYGLVGYMRIIIKEHPVIESHPDNALEDLRLD
KPFPELREHFQSYDLDHMEKKDHSHTPWIVIIAKYLAQWYSETNGRIPKTYKEKEDFRDLIRQ
GILKNENGAPEDEENFEEAIKNVNTALNTTQIPSSIEDIFNDDRCINITKQTPSFWILARALK
EFVAKEGQGNLPVRGTIPDMIADSGKYIKLQNVYREKAKKDAAAVGNHVAKLLQSIGQAPESI
SEKELKLLCSNSAFLRVVRCRSLAEEYGLDTINKDEIISSMDNPDNEIVLYLMLRAVDRFHKQ
QGRYPGVSNYQVEEDIGKLKSCLTGFLQEYGLSVMVKDDYVHEFCRYGAAEPHTIAAFLGGAA
AQEVIKIITKQFVIFNNTYIYSGMSQTSATFQL

UBA3:

SGSMADGEEPEKKRRRIEELLAEKMAVDGGCGDTGDWEGRWNHVKKFLERSGPFTHPDFEPST
ESLQFLLDTCKVLVIGAGGLGCELLKNLALSGFRQIHVIDMDTIDVSNLNRQFLFRPKDIGRP
KAEVAAEFLNDRVPNCNVVPHFNKIQDFNDTFYRQFHIIVCGLDSIIARRWINGMLISLLNYE
DGVLDPSSIVPLIDGGTEGFKGNARVILPGMTACIECTLELYPPQVNFPMCTIASMPRLPEHC
IEYVRMLQWPKEQPFGEGVPLDGDDPEHIQWIFQKSLERASQYNIRGVTYRLTQGVVKRIIPA
VASTNAVIAAVCATEVFKIATSAYIPLNNYLVFNDVDGLYTYTFEAERKENCPACSQLPQNIQ
FSPSAKLQEVLDYLTNSASLQMKSPAITATLEGKNRTLYLQSVTSIEERTRPNLSKTLKELGL
VDGQELAVADVTTPQTVLFKLHFTS