# NEDD8-Activating Enzyme E1 Regulatory Subunit (NAE1) Mouse Recombinant Protein

## PRODUCT OVERVIEW

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| **Product Name** | NEDD8-activating enzyme E1 regulatory subunit (Nae1), Recombinant Protein |
| **Full Product Name** | Recombinant Mouse NEDD8-activating enzyme E1 regulatory subunit (Nae1) |
| **Product Gene Name** | Nae1 recombinant protein |
| **Product Synonym Gene Name** | Nae1 |
| **Sequence** | AQPGKILKEQ KYDRQLRLWG DHGQEALESA HVCLINATAT GTEILKNLVL PGIGSFTIID GNLVSGEDAG NNFFLQKSSI GKNRAQAAME FLQELNSDVS GSFVEESPEN LLDNDPSFFC RFTIVVATQL LESTLLRLAD VLWNSQIPLL ICRTYGLVGY MRIIIKEHPV IESHPDNALE DLRLDKPFPE LREHLQSYDL DHMEKKDHSH TPWIVIIAKY LAQWYNETNG RIPKSYKEKE DFRDLIRQGI LKNENGAPED EENFEEAIKN VNTALNTTQI PSSIEDIFND DRCINITKQT PTFWILARAL KEFVAKEGQG NLPVRGTIPD MIADSNKYIK LQNVYREKAK KDAAAVGNHV AKLLQSVGQA PESISEKELK LLCSNSAFLR VVRCRSLAEE YGLDTVNKDE IISSMDNPDN EIVLYLMLRA VDRFHKQHGR YPGVSNYQVE EDIGKLKSCL TGFLQEYGLS VMVKDDYVHE FCRYGAAEPH TIAAFLGGAA AQEVIKIITK QFVIFNNTYI YSGMSQTSAT FQL |
| **Host** | E Coli or Yeast or Baculovirus or Mammalian Cell |
| **Form/Format** | Lyophilized or liquid (Format to be determined during the manufacturing process) |
| **Purity/Purification** | Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific) |
| **Preparation and Storage** | Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended. |
| **Molecular Weight** | 60,274 Da |
| **Sequence Positions** | 2-534, Full length protein |
| **Tag Information** | This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information. |
| **Sterility** | Sterile filter available upon request. |
| **Endotoxin** | Low endotoxin available upon request. |
| **3D Structure** | ModBase 3D Structure for Q8VBW6 |
| **Species** | Mouse |
| **ISO Certification** | Manufactured in an ISO 9001:2015 Certified Laboratory. |
| **Related Product Information for Nae1 recombinant protein** | This protein binds to the beta-amyloid precursor protein. Beta-amyloid precursor protein is a cell surface protein with signal-transducing properties, and it is thought to play a role in the pathogenesis of Alzheimer s disease. In addition, the encoded protein can form a heterodimer with UBE1C and bind and activate NEDD8, a ubiquitin-like protein. This protein is required for cell cycle progression through the S<br>M checkpoint. Three transcript variants encoding different isoforms have been found for this gene. |
| **Other Notes** | Small volumes of Nae1 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |
| **Searchable Terms for Nae1 purchase** | MBS1335788 is a recombinant protein targeting Nae1. Also known as Recombinant Mouse NEDD8-activating enzyme E1 regulatory subunit (Nae1). Host: E Coli or Yeast or Baculovirus or Mammalian Cell. |

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Nae1. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 21450341 |
| **NCBI GeneID** | 234664 |
| **NCBI Accession #** | NP_659180.1 |
| **UniProt Primary Accession #** | Q8VBW6 |
| **UniProt Secondary Accession #** | Q8CFL6 |
| **UniProt Related Accession #** | Q8VBW6 |
| **GenBank Nucleotide #** | NM_144931.3 |
| **NCBI Official Full Name** | NEDD8-activating enzyme E1 regulatory subunit |
| **NCBI Official Synonym Full Names** | NEDD8 activating enzyme E1 subunit 1 |
| **NCBI Official Symbol** | Nae1 |
| **NCBI Official Synonym Symbols** | 59kDa; Appbp1 |
| **UniProt Protein Name** | NEDD8-activating enzyme E1 regulatory subunit |
| **UniProt Synonym Protein Names** | Amyloid beta precursor protein-binding protein 1, 59 kDa; APP-BP1; Amyloid protein-binding protein 1 |
| **Protein Family** | NEDD8-activating enzyme E1 regulatory |
| **UniProt Gene Name** | Nae1 |
| **UniProt Synonym Gene Names** | Appbp1; APP-BP1 |
| **NCBI Protein Information** | NEDD8-activating enzyme E1 regulatory subunit |
| **UniProt Comments for Nae1** | Regulatory subunit of the dimeric UBA3-NAE1 E1 enzyme. E1 activates NEDD8 by first adenylating its C-terminal glycine residue with ATP, thereafter linking this residue to the side chain of the catalytic cysteine, yielding a NEDD8-UBA3 thioester and free AMP. E1 finally transfers NEDD8 to the catalytic cysteine of UBE2M. Necessary for cell cycle progression through the S-M checkpoint. Overexpression of NAE1 causes apoptosis through deregulation of NEDD8 conjugation (). |
| **Research Articles on Nae1** | **1.** APP-BP1 plays an important role in the cell cycle progression of fetal neural stem cells |
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