NMNAT3 cDNA Clone – Nicotinamide Nucleotide Adenylyltransferase 3 (Human)

PRODUCT OVERVIEW

Product Name	NMNAT3, cDNA Clone
Full Product Name	NMNAT3 cDNA Clone
Product Gene Name	NMNAT3 cdna clone
Sequence	atgtaccagg tcatccaggg tatcatctct cctgtcaacg acacctatgg gaagaaagac ctcgcagctt ctcatcaccg agtggccatg gcccggctgg ccctgcagac atccgactgg atccgggtgg acccttggga gagtgagcag gcacagtgga tggagacagt gaaggtgctg aggcatcatc acagcaaact gctcagatct ccaccccaga tggaaggccc agaccatggc aaggcactct tctcgacccc tgcagctgtg cctgagctga agcttctctg tggggcagac gtcttgaaga ccttccagac ccccaacctc tggaaggatg cgcacatcca ggaaatagtg gagaagtttg gcttggtgtg cgtgggccga gtaggtcacg acccaaaagg ttacatcgca gaatctccca tcctacggat gcaccagcac aacattcacc tggccaagga gcctgtgcag aatgagatca gtgccacata catcaggcga gccttgggcc aagggcagag cgtaaagtac ctgattcccg atgctgtcat cacgtacatc aaggaccatg gcctctacac caagggcagt acctggaaag gcaaaagcac ccagagcact gagggcaaga caagctag
Molecular Weight	18,255 Da
OMIM	608702
Vector	pENTR223.1 or pUC
Clone Sequence Report	Provided with product shipment
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for NMNAT3 cdna clone	MBS1266788 is a cDNA clone targeting NMNAT3.
Other Notes	Small volumes of NMNAT3 cdna clone 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.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for NMNAT3. It may not necessarily be applicable to this product.

NCBI GI #	21706743
NCBI GeneID	349565
NCBI Accession #	BC034374
UniProt Secondary Accession #	Q8N4G1; B3KVR6; D3DNF2; D3DNF3
UniProt Related Accession #	Q96T66
NCBI Official Full Name	Homo sapiens nicotinamide nucleotide adenylyltransferase 3, mRNA
NCBI Official Synonym Full Names	nicotinamide nucleotide adenylyltransferase 3
NCBI Official Symbol	NMNAT3
NCBI Official Synonym Symbols	PNAT3; FKSG76; PNAT-3
UniProt Protein Name	Nicotinamide/nicotinic acid mononucleotide adenylyltransferase 3
UniProt Synonym Protein Names	Nicotinamide-nucleotide adenylyltransferase 3; NMN adenylyltransferase 3; Nicotinate-nucleotide adenylyltransferase 3 (EC:2.7.7.18); NaMN adenylyltransferase 3; Pyridine nucleotide adenylyltransferase 3 (EC:2.7.7.1); PNAT-3
Protein Family	Nicotinamide/nicotinic acid mononucleotide adenylyltransferase

UniProt Gene Name	NMNAT3
UniProt Synonym Gene Names	NMN/NaMN adenylyltransferase 3; NMN adenylyltransferase 3; NaMN adenylyltransferase 3; PNAT-3
UniProt Entry Name	NMNA3_HUMAN
NCBI Protein Information	nicotinamide/nicotinic acid mononucleotide adenylyltransferase 3
NCBI Summary for NMNAT3	This gene encodes a member of the nicotinamide/nicotinic acid mononucleotide adenylyltransferase family. These enzymes use ATP to catalyze the synthesis of nicotinamide adenine dinucleotide or nicotinic acid adenine dinucleotide from nicotinamide mononucleotide or nicotinic acid mononucleotide, respectively. The encoded protein is localized to mitochondria and may also play a neuroprotective role as a molecular chaperone. Alternatively spliced transcript variants encoding multiple isoforms have been observed for this gene. [provided by RefSeq, Jan 2011]
UniProt Comments for NMNAT3	NMNAT3: Catalyzes the formation of NAD(+) from nicotinamide mononucleotide (NMN) and ATP. Can also use the deamidated form; nicotinic acid mononucleotide (NaMN) as substrate with the same efficiency. Can use triazofurin monophosphate (TrMP) as substrate. Can also use GTP and ITP as nucleotide donors. Also catalyzes the reverse reaction, i.e. the pyrophosphorolytic cleavage of NAD(+). For the pyrophosphorolytic activity, can use NAD (+), NADH, NAAD, nicotinic acid adenine dinucleotide phosphate (NHD), nicotinamide guanine dinucleotide (NGD) as substrates. Fails to cleave phosphorylated dinucleotides NADP(+), NADPH and NAADP(+). Protects against axonal degeneration following injury. Belongs to the eukaryotic NMN adenylyltransferase family. 3 isoforms of the human protein are produced by alternative splicing. Protein type: Mitochondrial; Transferase; Apoptosis; Cofactor and Vitamin Metabolism - nicotinate and nicotinamide; EC 2.7.7.18; EC 2.7.7.1 Chromosomal Location of Human Ortholog: 3q23 Cellular Component: cytosol; mitochondrion Molecular Function: nicotinamide-nucleotide adenylyltransferase activity; nicotinate-nucleotide adenylyltransferase activity Biological Process: NAD biosynthetic process; NAD metabolic process
Research Articles on NMNAT3	**1.** NMNAT3 is absent in mitochondria in human cells, and, akin to plants and yeast, cytosolic NAD maintains the mitochondrial NAD pool.
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