

Product datasheet for MC210372

Nmnat1 (NM_133435) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Nmnat1 (NM_133435) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Nmnat1
Synonyms:	2610529L11Rik; 5730441G13Rik; D4Cole1e; nmnat
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>MC210372 representing NM_133435 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGGACTCATCCAAGAAGACAGAGGTGGTTCTCCTGGCCTGTGGCTCTTTAAACCCATCACCAACATGC
ACCTCAGGCTGTTTCGAGCTGGCCAAGGACTATATGCATGCTACAGGAAAATACAGTGTTCACAAAGGCAT
TATCTCACCGGTCGGTGATGCGTACAAGAAGAAAGGGCTCATCCAGCCCACCACCGAATCATCATGGCA
GAACTTGCCACCAAGAACTCACACTGGGTGGAAGTGGATACGTGGGAAAGTCTTCAGAAGGAGTGGGTGG
AGACTGTGAAGGTGCTCAGATACCATCAGGAGAAGCTGGCAACTGGCAGCTGCAGTTACCCACAAAGCTC
ACCTGCACTGGAAAAGCCTGGGCGGAAGAGGAAGTGGGCTGATCAAAGCAAGATTCTAGCCACAGAAG
CCCCAAGAGCCCCAACCAACAGGTGTGCCCAAGGTGAAATTGCTGTGTGGGGCAGATTTACTGGAGTCCT
TCAGCGTGCCCAACTTGTGGAAGATGGAGGACATCACGCAATCGTGGCCAACCTTTGGGCTCATCTGTAT
CACTCGGGCTGGCAGTGACGCTCAGAAATTCATCTACGAGTCCGATGTGCTGTGGAGACATCAGAGCAAC
ATCCACCTGGTGAACGAGTGGATCACCATGACATCTCGTCCACCAAGATCCGGAGGGCGCTCAGGAGGG
GCCAGAGCATCCGCTACTTGGTACCGGACCTGGTCCAAGAGTACATTGAGAAGCATGAGCTGTACAACAC
GGAGAGCGAAGGCAGGAATGCTGGGGTCACCCTGGCTCCTCTGCAGAGGAACGCCGAGAGGCCAAGCAC
AACCATTCCACTCTG**TGA**

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites:	Sgfl-MluI
ACCN:	NM_133435
Insert Size:	858 bp



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OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_133435.1](#), [NP_597679.1](#)

RefSeq Size: 954 bp

RefSeq ORF: 858 bp

Locus ID: 66454

UniProt ID: [Q9EPA7](#)

Cytogenetics: 4 E2

Gene Summary:

Catalyzes the formation of NAD(+) from nicotinamide mononucleotide (NMN) and ATP (PubMed:15381699). Can also use the deamidated form; nicotinic acid mononucleotide (NaMN) as substrate with the same efficiency (By similarity). Can use triazofurin monophosphate (TrMP) as substrate (By similarity). Also catalyzes the reverse reaction, i.e. the pyrophosphorolytic cleavage of NAD(+) (By similarity). For the pyrophosphorolytic activity, prefers NAD(+) and NaAD as substrates and degrades NADH, nicotinic acid adenine dinucleotide phosphate (NADP) and nicotinamide guanine dinucleotide (NGD) less effectively (By similarity). Involved in the synthesis of ATP in the nucleus, together with PARP1, PARG and NUDT5 (By similarity). Nuclear ATP generation is required for extensive chromatin remodeling events that are energy-consuming (By similarity). Fails to cleave phosphorylated dinucleotides NADP(+), NADPH and NaADP(+) (By similarity). Protects against axonal degeneration following mechanical or toxic insults (PubMed:15310905, PubMed:16914673). Delays axonal degeneration after axotomy. Results in a >10-fold increase in intact neurites 72 hours after injury (PubMed:16914673).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (1) represents the shorter transcripts. Variants 1 and 2 encode the same protein. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.