

## NMNAT1 Blocking Peptide (C-Term)

Synthetic peptide  
Catalog # BP21921b

### Specification

#### NMNAT1 Blocking Peptide (C-Term) - Product Information

Primary Accession [Q9HAN9](#)  
Other Accession [Q0VD50](#)

#### NMNAT1 Blocking Peptide (C-Term) - Additional Information

Gene ID 64802

#### Other Names

Nicotinamide mononucleotide  
adenylyltransferase 1, NMN  
adenylyltransferase 1, 2.7.7.1,  
Nicotinate-nucleotide adenylyltransferase 1,  
NaMN adenylyltransferase 1, 2.7.7.18,  
NMNAT1, NMNAT

#### Target/Specificity

The synthetic peptide sequence is selected from aa 191-201 of HUMAN NMNAT1

#### Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

#### Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

#### Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

#### NMNAT1 Blocking Peptide (C-Term) - Protein Information

Name NMNAT1

Synonyms NMNAT

#### NMNAT1 Blocking Peptide (C-Term) - Background

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. Also catalyzes the reverse reaction, i.e. the pyrophosphorolytic cleavage of NAD(+). For the pyrophosphorolytic activity, prefers NAD(+) and NAAD as substrates and degrades NADH, nicotinic acid adenine dinucleotide phosphate (NHD) and nicotinamide guanine dinucleotide (NGD) less effectively. Fails to cleave phosphorylated dinucleotides NADP(+), NADPH and NAADP(+). Protects against axonal degeneration following mechanical or toxic insults.

#### NMNAT1 Blocking Peptide (C-Term) - References

Schweiger M., et al. FEBS Lett. 492:95-100(2001).  
Emanuelli M., et al. J. Biol. Chem. 276:406-412(2001).  
Fernando F.S., et al. Gene 284:23-29(2002).  
Ota T., et al. Nat. Genet. 36:40-45(2004).  
Gregory S.G., et al. Nature 441:315-321(2006).

**Function**

Catalyzes the formation of NAD(+) from nicotinamide mononucleotide (NMN) and ATP (PubMed:<a href="http://www.uniprot.org/citations/17402747" target="\_blank">17402747</a>). Can also use the deamidated form; nicotinic acid mononucleotide (NaMN) as substrate with the same efficiency (PubMed:<a href="http://www.uniprot.org/citations/17402747" target="\_blank">17402747</a>). Can use triazofurin monophosphate (TrMP) as substrate (PubMed:<a href="http://www.uniprot.org/citations/17402747" target="\_blank">17402747</a>). Also catalyzes the reverse reaction, i.e. the pyrophosphorolytic cleavage of NAD(+) (PubMed:<a href="http://www.uniprot.org/citations/17402747" target="\_blank">17402747</a>). 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 (PubMed:<a href="http://www.uniprot.org/citations/17402747" target="\_blank">17402747</a>). Involved in the synthesis of ATP in the nucleus, together with PARP1, PARG and NUDT5 (PubMed:<a href="http://www.uniprot.org/citations/27257257" target="\_blank">27257257</a>). Nuclear ATP generation is required for extensive chromatin remodeling events that are energy-consuming (PubMed:<a href="http://www.uniprot.org/citations/27257257" target="\_blank">27257257</a>). Fails to cleave phosphorylated dinucleotides NADP(+), NADPH and NaADP(+) (PubMed:<a href="http://www.uniprot.org/citations/17402747" target="\_blank">17402747</a>). Protects against axonal degeneration following mechanical or toxic insults (By similarity).

**Cellular Location**

Nucleus

**Tissue Location**

Widely expressed with highest levels in skeletal muscle, heart and kidney. Also expressed in the liver pancreas and placenta. Widely expressed throughout the brain

**NMNAT1 Blocking Peptide (C-Term) -  
Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)