Recombinant Human Nicotinamide mononucleotide adenylyltransferase 1(NMNAT1)

Catalog No: #AP76917

Package Size: #AP76917-1 20ug #AP76917-2 100ug #AP76917-3 1mg

Orders: order@signalwayantibody.com
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Description

Product Name	Recombinant Human Nicotinamide mononucleotide adenylyltransferase 1(NMNAT1)
Brief Description	Recombinant Protein
Host Species	E.coli
Purification	Greater than 90% as determined by SDS-PAGE.
Immunogen Description	Expression Region:1-279aaSequence Info:Full Length
Other Names	Nicotinamide-nucleotide adenylyltransferase 1
Accession No.	Q9HAN9
Uniprot	Q9HAN9
GeneID	64802;
Calculated MW	58.9 kDa
Tag Info	N-terminal GST-tagged
Target Sequence	MENSEKTEVVLLACGSFNPITNMHLRLFELAKDYMNGTGRYTVVKGIISPVGDAYKKKGLIPAYHRVIMAELAT KNSKWVEVDTWESLQKEWKETLKVLRHHQEKLEASDCDHQQNSPTLERPGRKRKWTETQDSSQKKSLEPK TKAVPKVKLLCGADLLESFAVPNLWKSEDITQIVANYGLICVTRAGNDAQKFIYESDVLWKHRSNIHVVNEWIA NDISSTKIRRALRRGQSIRYLVPDLVQEYIEKHNLYSSESEDRNAGVILAPLQRNTAEAKT
Formulation	Tris-based buffer50% glycerol
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C,-80°C. The shelf life of lyophilized form is 12 months at -20°C,-80°C.Notes:Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.

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. Involved in the synthesis of ATP in the nucleus, together with PARP1, PARG and NUDT5. Nuclear ATP generation is required for extensive chromatin remodeling events that are energy-consuming. Fails to cleave phosphorylated dinucleotides NADP+, NADPH and NaADP+. Protects against axonal degeneration following mechanical or toxic insults

References

"Characterization of recombinant human nicotinamide mononucleotide adenylyl transferase (NMNAT), a nuclear enzyme essential for NAD synthesis."
Schweiger M., Hennig K., Lerner F., Niere M., Hirsch-Kauffmann M., Specht T., Weise C., Oei S.L., Ziegler M.
FEBS Lett. 492:95-100(2001) Research Topic:Epigenetics and Nuclear Signaling

Note: This product is for in vitro research use only