10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

KD-Validated Anti-NMNAT1 Mouse Monoclonal Antibody

Mouse monoclonal antibody
Catalog # AGI2078

Product Information

Application	WB
Primary Accession	Q9HAN9
Reactivity	Human
Clonality	Monoclonal
Isotype	Mouse IgG1
Clone Names	24GB13215
Calculated MW	31932
Gene Name	NMNAT1
Aliases	NMNAT1; Nicotinamide Nucleotide Adenylyltransferase 1; NMNAT; Nicotinamide/Nicotinic Acid Mononucleotide Adenylyltransferase 1; PNAT1; Nicotinate-Nucleotide Adenylyltransferase 1; NMN/NaMN Adenylyltransferase 1; NaMN Adenylyltransferase 1; NMN Adenylyltransferase 1; LCA9; Nicotinamide Mononucleotide Adenylyltransferase 1; Nicotinamide-Nucleotide Adenylyltransferase 1; Nicotinamide Nucleotide Adenylyltransferase; Pyridine Nucleotide Adenylyltransferase 1; Leber'S Congenital Amaurosis 9; Leber Congenital Amaurosis 9; EC 2.7.7.18; EC 2.7.7.1; SHILCA
Immunogen	Recombinant protein of human NMNAT1

Additional Information

Gene ID	64802
Other Names	Nicotinamide/nicotinic acid mononucleotide adenylyltransferase 1, NMN/NaMN adenylyltransferase 1, 2.7.7.1, 2.7.7.18, Nicotinamide-nucleotide adenylyltransferase 1, NMN adenylyltransferase 1, Nicotinate-nucleotide adenylyltransferase 1, NaMN adenylyltransferase 1, NMNAT1 (HGNC:17877), NMNAT

Protein Information

Name	NMNAT1 (HGNC:17877)
Synonyms	NMNAT
Function	Catalyzes the formation of NAD(+) from nicotinamide mononucleotide (NMN) and ATP (PubMed:17402747). Can also use the deamidated form; nicotinic acid mononucleotide (NaMN) as substrate with the same efficiency (PubMed:17402747). Can use triazofurin monophosphate (TrMP) as substrate (PubMed:17402747). Also catalyzes the reverse reaction, i.e. the pyrophosphorolytic cleavage of NAD(+) (PubMed:17402747). 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 (PubMed:17402747). Involved in the synthesis of ATP in the nucleus, together with PARP1, PARG and NUDT5 (PubMed:27257257). Nuclear ATP generation is required for extensive chromatin remodeling events that are energy-consuming (PubMed:27257257). Also acts as a cofactor for glutamate and aspartate ADP-ribosylation by directing PARP1 catalytic activity to glutamate and aspartate residues on histones (By similarity). Fails to cleave phosphorylated dinucleotides NADP(+), NADPH and NaADP(+) (PubMed:17402747). Protects against axonal degeneration following mechanical or toxic insults (By similarity). Neural protection does not correlate with cellular NAD(+) levels but may still require enzyme activity (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

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