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# NMNAT1 Antibody (C-Term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21921b

## Product Information

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| **Application** | WB, E |
| **Primary Accession** | Q9HAN9 |
| **Other Accession** | Q0VD50 |
| **Reactivity** | Human, Mouse |
| **Predicted** | Bovine, Canine, Rabbit |
| **Host** | Rabbit |
| **Clonality** | polyclonal |
| **Isotype** | Rabbit IgG |
| **Clone Names** | RB55362 |
| **Calculated MW** | 31932 |

## Additional Information

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| **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** | This NMNAT1 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 171-201 amino acids from human NMNAT1. |
| **Dilution** | WB~~1:2000 E~~Use at an assay dependent concentration. |
| **Format** | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification. |
| **Storage** | Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | NMNAT1 Antibody (C-Term) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | NMNAT1 ( HGNC:17877) |
| **Synonyms** | NMNAT |

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| **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 |

## 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.

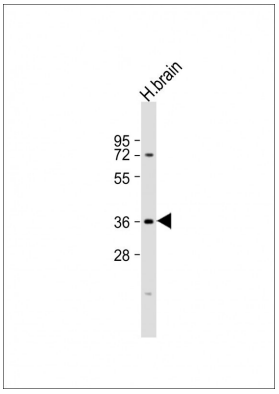
## References

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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).
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## Images



Anti-NMNAT1 Antibody (C-Term) at 1:1000 dilution + human brain lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 32 kDa Blocking/Dilution buffer: 5% NFDM/TBST.




Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.