

NMNAT2 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP57466

Product Information

Application IHC-P, IHC-F, IF

Primary Accession Q9BZQ4

Reactivity Human, Mouse, Rat, Pig, Bovine, Dog

Host Rabbit
Clonality Polyclonal
Calculated MW 34439
Physical State Liquid

Immunogen KLH conjugated synthetic peptide derived from human NMNAT2

Epitope Specificity 1-100/307 **Isotype** IgG

Purity affinity purified by Protein A

Buffer 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.

SUBCELLULAR LOCATION Cytoplasm. Golgi apparatus.

SIMILARITY Belongs to the eukaryotic NMN adenylyltransferase family.

SUBUNIT Monomer.

Important Note This product as supplied is intended for research use only, not for use in

human, therapeutic or diagnostic applications.

Background Descriptions This gene product belongs to the nicotinamide mononucleotide

adenylyltransferase (NMNAT) enzyme family, members of which catalyze an essential step in NAD (NADP) biosynthetic pathway. Unlike the other human

family member, which is localized to the nucleus, and is ubiquitously

expressed; this enzyme is cytoplasmic, and is predominantly expressed in the brain. Two transcript variants encoding different isoforms have been found

for this gene. [provided by RefSeq, Jul 2008]

Additional Information

Gene ID 23057

Other Names Nicotinamide/nicotinic acid mononucleotide adenylyltransferase 2,

NMN/NaMN adenylyltransferase 2, 2.7.7.1, 2.7.7.18, Nicotinamide mononucleotide adenylyltransferase 2, NMN adenylyltransferase 2, Nicotinate-nucleotide adenylyltransferase 2, NaMN adenylyltransferase 2,

NMNAT2 (HGNC:16789)

Target/Specificity Highly expressed in brain, in particular in cerebrum, cerebellum, occipital

lobe, frontal lobe, temporal lobe and putamen. Also found in the heart,

skeletal muscle, pancreas and islets of Langerhans.

Dilution IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-

10000

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name

NMNAT2 (HGNC:16789)

Function

Nicotinamide/nicotinate-nucleotide adenylyltransferase that acts as an axon maintenance factor (By similarity). Axon survival factor required for the maintenance of healthy axons: acts by delaying Wallerian axon degeneration, an evolutionarily conserved process that drives the loss of damaged axons (By similarity). Catalyzes the formation of NAD(+) from nicotinamide mononucleotide (NMN) and ATP (PubMed:16118205, PubMed:17402747). Can also use the deamidated form; nicotinic acid mononucleotide (NaMN) as substrate but with a lower efficiency (PubMed: 16118205, PubMed: 17402747). Cannot use triazofurin monophosphate (TrMP) as substrate (PubMed:16118205, PubMed:17402747). Also catalyzes the reverse reaction, i.e. the pyrophosphorolytic cleavage of NAD(+) (PubMed: 16118205, PubMed: 17402747). For the pyrophosphorolytic activity prefers NAD(+), NADH and NaAD as substrates and degrades nicotinic acid adenine dinucleotide phosphate (NHD) less effectively (PubMed: 16118205, PubMed: 17402747). Fails to cleave phosphorylated dinucleotides NADP(+), NADPH and NaADP(+) (PubMed:16118205, PubMed:17402747). Also acts as an activator of ADPribosylation by supporting the catalytic activity of PARP16 and promoting mono-ADP-ribosylation of ribosomes by PARP16 (PubMed:34314702). May be involved in the maintenance of axonal integrity (By similarity).

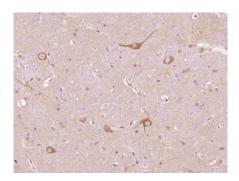
Cellular Location

Golgi apparatus membrane; Lipid-anchor {ECO:0000250|UniProtKB:Q8BNJ3}. Cytoplasmic vesicle membrane {ECO:0000250|UniProtKB:Q8BNJ3}; Lipid-anchor {ECO:0000250|UniProtKB:Q8BNJ3}. Cytoplasm. Cell projection, axon {ECO:0000250|UniProtKB:Q8BNJ3}. Note=Delivered to axons with Golgiderived cytoplasmic vesicles. {ECO:0000250|UniProtKB:Q8BNJ3}

Tissue Location

Highly expressed in brain, in particular in cerebrum, cerebellum, occipital lobe, frontal lobe, temporal lobe and putamen. Also found in the heart, skeletal muscle, pancreas and islets of Langerhans.

Images



Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (NMNAT2) Polyclonal Antibody, Unconjugated (AP57466) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.

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