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KD-Validated Anti-NMNAT1 Mouse Monoclonal Antibody

Mouse monoclonal antibody
Catalog # AGI2078

Specification

KD-Validated Anti-NMNAT1 Mouse Monoclonal Antibody - Product Information

Application	**WB**
Primary Accession	Q9HAN9
Reactivity	**Human**
Clonality	**Monoclonal**
Isotype	**Mouse IgG1**
Calculated MW	**Predicted, 32 kDa, observed, 32 kDa KDa**
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**

KD-Validated Anti-NMNAT1 Mouse Monoclonal Antibody - 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

KD-Validated Anti-NMNAT1 Mouse Monoclonal Antibody - 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

KD-Validated Anti-NMNAT1 Mouse Monoclonal Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-NMNAT1 Mouse Monoclonal Antibody - Images

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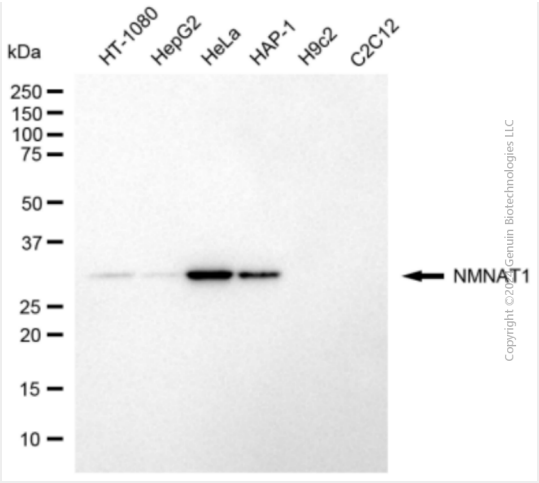
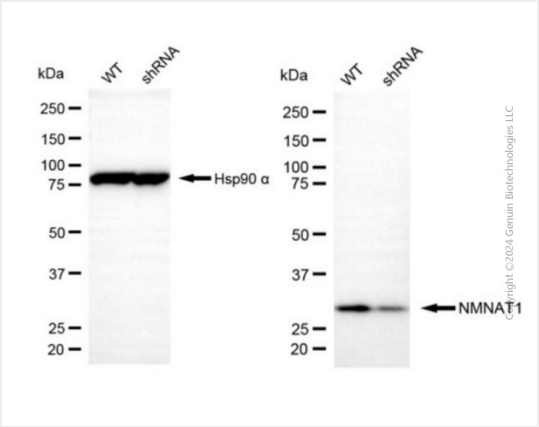


Western blotting analysis using anti-NMNAT1 antibody (Cat#AGI2078). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-NMNAT1 antibody (Cat#AGI2078, 1:2,500) and HRP-conjugated goat anti-mouse secondary antibody respectively.



Western blotting analysis using anti-NMNAT1 antibody (Cat#AGI2078). NMNAT1 expression in wild-type (WT) and NMNAT1 shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-NMNAT1 antibody (Cat#AGI2078, 1:2,500) and HRP-conjugated goat anti-mouse secondary antibody respectively.