

GNPDA1 Antibody
Mouse Monoclonal Antibody (Mab)
Catalog # AM1910b

Specification

GNPDA1 Antibody - Product Information

Application	WB,E
Primary Accession	P46926
Other Accession	NP_005462.1
Reactivity	Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1,k
Calculated MW	32669

GNPDA1 Antibody - Additional Information

Gene ID 10007

Other Names

Glucosamine-6-phosphate isomerase 1, Glucosamine-6-phosphate deaminase 1, GNPDA 1, GlcN6P deaminase 1, Oscillin, GNPDA1, GNPI, HLN, KIAA0060

Target/Specificity

This GNPDA1 monoclonal antibody is generated from mouse immunized with GNPDA1 recombinant protein.

Dilution

WB~~1:100~1000

Format

Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

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

GNPDA1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

GNPDA1 Antibody - Protein Information

Name GNPDA1 {ECO:0000303|PubMed:26887390, ECO:0000312|HGNC:HGNC:4417}

Function Catalyzes the reversible conversion of alpha-D-glucosamine 6- phosphate (GlcN-6P) into beta-D-fructose 6-phosphate (Fru-6P) and ammonium ion, a regulatory reaction step in de novo uridine diphosphate-N-acetyl-alpha-D-glucosamine (UDP-GlcNAc) biosynthesis via hexosamine

pathway. Deamination is coupled to aldo-keto isomerization mediating the metabolic flux from UDP-GlcNAc toward Fru-6P. At high ammonium level can drive amination and isomerization of Fru-6P toward hexosamines and UDP-GlcNAc synthesis (PubMed:[21807125](#), PubMed:[26887390](#)). Has a role in fine tuning the metabolic fluctuations of cytosolic UDP-GlcNAc and their effects on hyaluronan synthesis that occur during tissue remodeling (PubMed:[26887390](#)). Seems to trigger calcium oscillations in mammalian eggs. These oscillations serve as the essential trigger for egg activation and early development of the embryo (By similarity).

Cellular Location

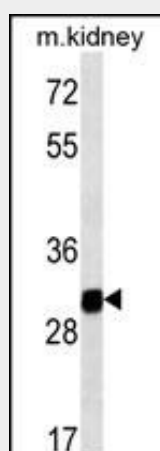
Cytoplasm.

GNPDA1 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 Cytometry](#)
- [Cell Culture](#)

GNPDA1 Antibody - Images



GNPDA1 (Cat. #AM1910b) western blot analysis in mouse kidney tissue lysates (35µg/lane). This demonstrates the GNPDA1 antibody detected the GNPDA1 protein (arrow).

GNPDA1 Antibody - Background

Glucosamine-6-phosphate deaminase (EC 3.5.99.6) is an allosteric enzyme that catalyzes the reversible conversion of D-glucosamine-6-phosphate into D-fructose-6-phosphate and ammonium (Arreola et al., 2003 [PubMed 12965206]).

GNPDA1 Antibody - References

Lamesch, P., et al. Genomics 89(3):307-315(2007) Arreola, R., et al. FEBS Lett. 551 (1-3), 63-70 (2003) : Zhang, J., et al. J. Cell. Biochem. 88(5):932-940(2003) Nakamura, Y., et al. Genomics 68(2):179-186(2000) Shevchenko, V., et al. Gene 216(1):31-38(1998)