

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

E~~Use at an assay dependent concentration.

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

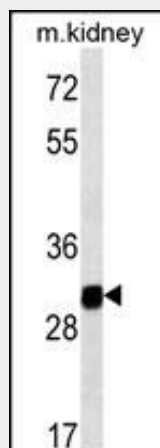
Cytoplasm {ECO:0000250|UniProtKB:O88958}.

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)