10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

GNPDA2 Antibody
Catalog # ASC10860

Specification

GNPDA2 Antibody - Product Information

Application	**WB, ICC, IF**
Primary Accession	Q8TDQ7
Other Accession	NP_612208, 19923881
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Application Notes	**GNPDA2 antibody can be used for detection of GNPDA2 by Western blot at 1 µg/mL. Antibody can also be used for immunocytochemistry starting at 4 µg/mL. For immunofluorescence start at 20 µg/mL.**

GNPDA2 Antibody - Additional Information

Gene ID	**132789**

Target/Specificity
GNPDA2; GNPDA2 antibody is predicted to not cross-react with GNPDA1.

Reconstitution & Storage
GNPDA2 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Precautions
GNPDA2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

GNPDA2 Antibody - Protein Information

Name GNPDA2 {ECO:0000303|PubMed:26887390}

Synonyms GNP2

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. Has a role in fine tuning the metabolic fluctuations of cytosolic UDP-GlcNAc and their effects on hyaluronan synthesis that occur during tissue remodeling.

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Cellular Location
Cytoplasm.

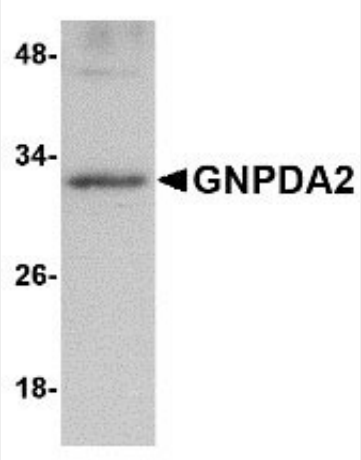
Tissue Location
Ubiquitous, with highest expression detected in testis, ovary, placenta, and heart.

GNPDA2 Antibody - Protocols

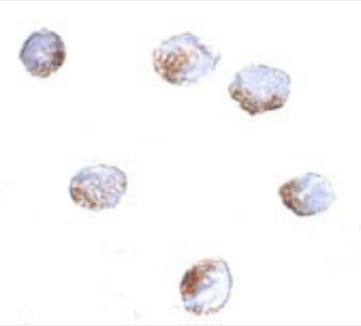
Provided below are standard protocols that you may find useful for product applications.

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

GNPDA2 Antibody - Images



Western blot analysis of GNPDA2 in human kidney lysate with GNPDA2 antibody at 1 µg/mL.



Immunocytochemistry of GNPDA2 in 293 cells with GNPDA2 antibody at 4 µg/mL.

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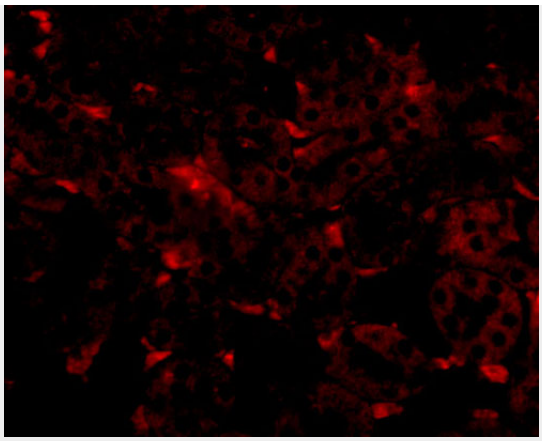

Immunofluorescence of GNPDA2 in mouse kidney tissue with GNPDA2 antibody at 20 µg/mL.

GNPDA2 Antibody - Background

GNPDA2 Antibody: Glucosamine-6-phosphate deaminase (GNPDA) is an allosteric enzyme that catalyzes the reversible conversion of D-glucosamine-6-phosphate into D-fructose-6-phosphate and ammonium. GNPDA2 is the second mammalian glucosamine-6-phosphate deaminase discovered, and is closer in structure and activity to the E. coli enzyme than GNPDA1. GNPDA1 possesses greater affinity for ammonium than either GNPDA2 or the E. coli enzyme suggesting that the forward reaction of D-glucosamine-6-phosphate into D-fructose-6-phosphate and ammonium is catalyzed at a slower rate than GNPDA2.

GNPDA2 Antibody - References

Wolosker H, Kline D, Bian Y, et al. Molecularly cloned mammalian glucosamine-6-phosphate deaminase localizes to transporting epithelium and lacks oscillin activity. FASEB J.1998; 12:91-9.
Zhang J, Zhang W, Zou D, et al. Cloning and functional characterization of GNPI, a novel human homolog of glucosamine-6-phosphate isomerase/oscillin. J. Cell Biochem.2003; 88:932-40.
Arreola R, Valderrama B, Morante ML, et al. Two mammalian glucosamine-6-phosphate deaminases: a structural and genetic study. FEBS Lett.2003; 551:63-70.