abcam

ab249661

Anti-NADSYN1 antibody [EPR10611] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR10611
Purification technique	Affinity purification Protein A
Concentration	1.018 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-

Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information NADSYN1

Function	Catalyzes the final step of the nicotinamide adenine dinucleotide (NAD) de novo synthesis pathway, the ATP-dependent amidation of deamido-NAD using L-glutamine as a nitrogen source.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab249661 is the carrier-free version of ab171942.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	NADSYN1 also known as NAD synthetase 1 catalyzes the formation of nicotinamide adenine dinucleotide (NAD) from nicotinic acid adenine dinucleotide (NaAD) and ammonium. The protein plays a critical role in NAD biosynthesis. NADSYN1 has a molecular mass of approximately 66 kDa and it is mostly expressed in the liver kidney and brain. These sites of expression highlight its importance in various tissue types where energy metabolism and cell signaling are important.
Biological function summary	NADSYN1 facilitates the production of NAD an important molecule in several metabolic processes. NAD is a coenzyme that is involved in redox reactions transferring electrons from one reaction to another. NADSYN1 functions as a monomer though it participates in larger biochemical pathways rather than forming a complex itself. Its activity ensures the availability of NAD which is necessary for efficient energy production and cellular functions.
Pathways	Its activity impacts the central NAD biosynthesis pathway. Nicotinamide adenine dinucleotide is essential in glycolysis and the citric acid cycle which are important for energy production in cells. NADSYN1 activity influences these pathways and it

	maintains cellular energy homeostasis. Alongside its involvement in NAD biosynthesis it has indirect relations with proteins like NAMPT in the salvage pathway of NAD synthesis as both serve the function of replenishing cellular NAD levels.
Associated diseases and disorders	Abnormalities in NADSYN1 function can lead to metabolic disorders including congenital NAD deficiency disorders. Such disruptions can impact energy metabolism and lead to neurological and developmental issues. The dysfunction of NADSYN1 linked with oxidative stress disorders relates to its role in maintaining NAD levels which manage cellular redox states. The protein is essential in preventing energy deficits and minimizing the risk of disorders related to impaired NAD metabolism.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

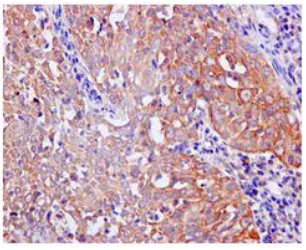
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

5 product images

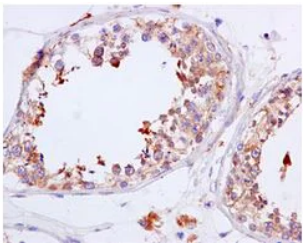


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NADSYN1 antibody [EPR10611] - BSA and Azide free (ab249661)

NADSYN1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-NADSYN1 antibody

This data was developed using ab171942, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human cervical carcinoma tissue labeling NADSYN1 with ab171942 at 1/50 dilution.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

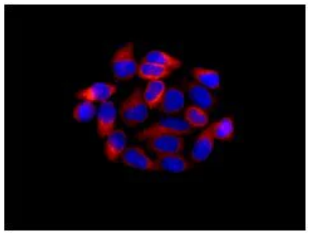


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NADSYN1 antibody [EPR10611] - BSA and Azide free (ab249661)

NADSYN1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-NADSYN1 antibody

This data was developed using ab171942, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human testis tissue labeling NADSYN1 with ab171942 at 1/50 dilution.

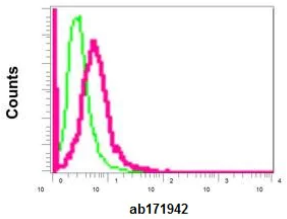
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-NADSYN1 antibody [EPR10611] - BSA and Azide free (ab249661)

NADSYN1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-NADSYN1 antibody

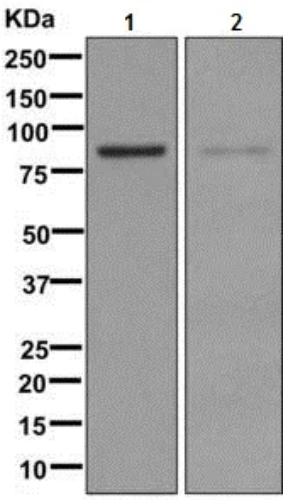
This data was developed using ab171942, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of HeLa cells labeling NADSYN1 with ab171942 at 1/50 dilution.



Flow Cytometry (Intracellular) - Anti-NADSYN1 antibody [EPR10611] - BSA and Azide free (ab249661)

NADSYN1 Flow Cytometry (Intracellular) staining using rabbit Anti-NADSYN1 antibody

This data was developed using ab171942, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of permeabilized HeLa cells labeling NADSYN1 with ab171942 at 1/100 dilution (red) ocompared with a Rabbit IgG (negative) (green).



Western blot - Anti-NADSYN1 antibody [EPR10611] - BSA and Azide free (ab249661)

NADSYN1 Western blot staining using rabbit Anti-NADSYN1 antibody

This data was developed using ab171942, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-NADSYN1 antibody [EPR10611] (ab171942) at 1/1000 dilution

Lane 1:
HeLa cell lysate at 10 µg

Lane 2:
293T cell lysate at 10 µg

Predicted band size: 79 kDa

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