abcam

ab109114

Anti-NAT1 antibody [EPR3221(2)]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR3221(2)
Purification technique	Affinity purification Protein A
Concentration	1.994 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

IHC-P

Not recommended

Species	Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target data

See full target information NAT1

Function	Participates in the detoxification of a plethora of hydrazine and arylamine drugs. Catalyzes the N- or O-acetylation of various arylamine and heterocyclic amine substrates and is able to bioactivate several known carcinogens.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Storage information	Stable for 12 months at -20°C

Notes

Species reactivity
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

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.

Supplementary info

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

Activity summary	NAT1 also known as arylamine N-acetyltransferase 1 serves as an important enzyme in acetylation reactions. This enzyme with a molecular mass of approximately 33 kDa catalyzes the transfer of acetyl groups to arylamines and other substrates such as hydrazines. By doing so NAT1 influences xenobiotic metabolism. The enzyme is expressed in various tissues most notably in the liver intestine and lung which aligns with its role in detoxifying and metabolizing drugs and carcinogens.
Biological function summary	NAT1 plays a significant role in detoxifying environmental toxins and carcinogens. The enzyme's activity contributes to the acetylation a phase II metabolic reaction which often converts lipophilic substrates into more hydrophilic products for excretion. NAT1 stands independently and does not form part of a larger complex.

	It shares functional similarities with other N-acetyltransferases but its substrate specificity can differ which influences its distinct biological role.
Pathways	NAT1 is intricately involved in metabolic and detoxification pathways. It participates in the biotransformation of various drugs and environmental carcinogens making it important for xenobiotic metabolism. NAT1 often interacts with cytochrome P450 enzymes during these processes which also contribute to the initial phase I oxidation reactions. The interplay between NAT1 and these detoxification pathways highlights the enzyme's contribution to reducing potential toxicities.
Associated diseases and disorders	NAT1 has associations with both cancer and hypersensitivity to certain drugs. Variations in NAT1 activity due to genetic polymorphisms can influence individual susceptibility to cancers particularly bladder cancer linked to arylamine exposure. Additionally its interaction with cytochrome P450 enzymes may also impact drug metabolism potentially leading to adverse drug reactions. Understanding NAT1 and its interactions help assess risks related to these diseases.

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

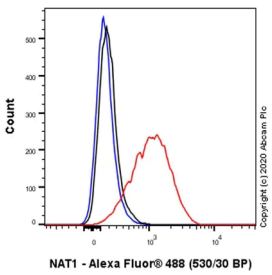
We do not recommend this combination. It is not covered by our product promise.

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.

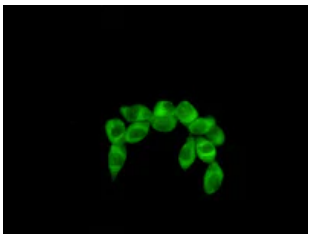
3 product images



Flow Cytometry (Intracellular) - Anti-NAT1 antibody [EPR3221(2)] (ab109114)

NAT1 Flow Cytometry (Intracellular) staining using rabbit Anti-NAT1 antibody

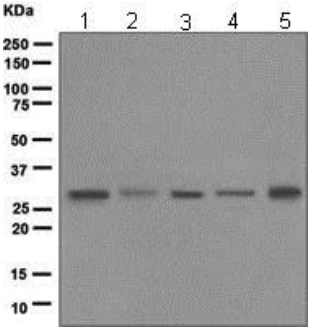
Flow Cytometry analysis of LNCaP (Human prostate carcinoma epithelial cell) cells labeling NAT1 with purified ab109114 at 1/100 dilution (10 µg/mL) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunocytochemistry/ Immunofluorescence - Anti-NAT1 antibody [EPR3221(2)] (ab109114)

NAT1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-NAT1 antibody

Immunofluorescent staining of LN-CAP cells using anti-NAT1 at 1/100 (ab109114).



Western blot - Anti-NAT1 antibody [EPR3221(2)] (ab109114)

All lanes:
Western blot - Anti-NAT1 antibody [EPR3221(2)] (ab109114) at 1/1000 dilution

Lane 1:
U937 cell lysate at 10 µg

Lane 2:
Fetal liver cell lysate at 10 µg

Lane 3:
LnCaP cell lysate at 10 µg

Lane 4:
Human bladder cell lysate at 10 µg

Lane 5:
HT-1376 cell lysate at 10 µg

Predicted band size: 34 kDa

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