abcam

ab236134

Anti-CAPON/NOS1AP antibody [EPR14519(B)] - 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	EPR14519(B)
Purification technique	Affinity purification Protein A
Concentration	0.992 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Expected

Species	Mouse, Rat, Human
Dilution info	Use at an assay dependent concentration.

Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

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

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information NOS1AP

Function	Adapter protein involved in neuronal nitric-oxide (NO) synthesis regulation via its association with nNOS/NOS1. The complex formed with NOS1 and synapsins is necessary for specific NO and synapsin functions at a presynaptic level. Mediates

an indirect interaction between NOS1 and RASD1 leading to enhance the ability of NOS1 to activate RASD1. Competes with DLG4 for interaction with NOS1, possibly affecting NOS1 activity by regulating the interaction between NOS1 and DLG4 (By similarity). In kidney podocytes, plays a role in podosomes and filopodia formation through CDC42 activation (PubMed:33523862).

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

ab236134 is the carrier-free version of ab190686.

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	CAPON also known as NOS1AP (nitric oxide synthase 1 adaptor protein) is an adaptor protein with a molecular weight of about 55 kDa. This protein interacts primarily with neuronal nitric oxide synthase (nNOS) modulating its activity. CAPON is expressed in the brain particularly in regions like the hippocampus and cerebral cortex where it plays roles in neuronal signaling. Its involvement in the brain implies its importance in neural functions and cognitive processes.
Biological function summary	CAPON influences signal transduction processes involving nitric oxide. As part of a molecular complex it binds with nNOS which leads to the modulation of nitric oxide production. This regulation impacts synaptic plasticity and neurotransmission hence affecting learning and memory. By interacting with other signaling proteins CAPON can affect the cellular response to various stimuli making it a significant player in neuronal communication.
Pathways	CAPON's function fits into the nitric oxide signaling pathway which is important for neuron communication and vasodilation processes. It associates with the ERK/MAPK pathway which plays a role in cognition and neural development. Through nitric oxide modulation it influences other proteins such as PSD95 a postsynaptic density protein which impacts synaptic organization and function. This involvement showcases its role in maintaining neuronal integrity and function within these pathways.
Associated diseases and disorders	CAPON has ties to neurologic and psychiatric conditions specifically schizophrenia and bipolar disorder. Alterations in its interaction with nNOS have been linked to the pathophysiology of these conditions. Additionally CAPON's connection with proteins like PSD95 suggests it may impact synaptic organization which can be disrupted in such mental health disorders. Understanding CAPON's role could contribute to therapeutic approaches in 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

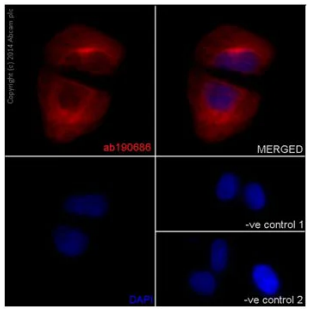
We do not recommend this combination. It is not covered by our product promise.

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.

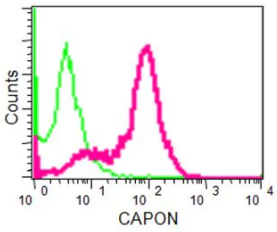
2 product images



Immunocytochemistry/ Immunofluorescence - Anti-CAPON/NOS1AP antibody [EPR14519(B)] - BSA and Azide free (ab236134)

CAPON/NOS1AP Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CAPON/NOS1AP antibody

Immunofluorescence analysis of 4% paraformaldehyde-fixed SH-SY5Y cells labeling CAPON/NOS1AP with ab190686 at 1/50 dilution. Goat anti-rabbit IgG (Alexa Fluor® 555) at 1/200 dilution was used as the secondary antibody (red). Slide is counter stained with Dapi (blue). This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab190686).



Flow Cytometry (Intracellular) - Anti-CAPON/NOS1AP antibody [EPR14519(B)] - BSA and Azide free (ab236134)

CAPON/NOS1AP Flow Cytometry (Intracellular) staining using rabbit Anti-CAPON/NOS1AP antibody

Intracellular flow cytometric analysis of 2% paraformaldehyde fixed HeLa cells labeling CAPON/NOS1AP with ab190686 at 1/130 dilution (red) compared with a rabbit monoclonal IgG control (green). Goat anti rabbit IgG (FITC) at 1/150 dilution was used as the secondary antibody. This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab190686).

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