abcam

ab190686

Anti-CAPON/NOS1AP antibody [EPR14519(B)]

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	EPR14519(B)
Purification technique	Affinity purification Protein A
Concentration	0.665 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

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

Species	Rat

Dilution info	1/1000 - 1/10000
Notes	-

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

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/130
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
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	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

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	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

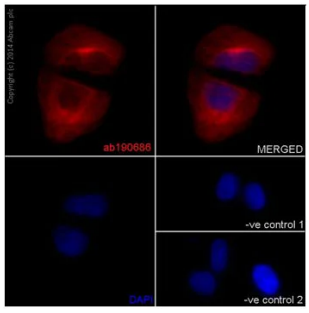
We do not recommend this combination. It is not covered by our product promise.

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.

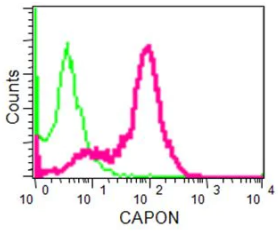
5 product images



Immunocytochemistry/ Immunofluorescence - Anti-CAPON/NOS1AP antibody [EPR14519(B)] (ab190686)

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

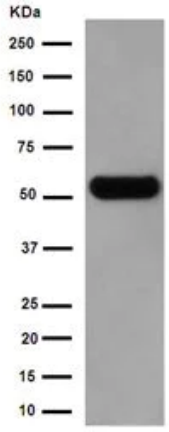
Immunofluorescence analysis of 4% paraformaldehyde-fixed SH-SY5Y cells labeling CAPON/NOS1AP with ab190686 at 1/50 dilution. Goat anti-rabbit IgG (Alexa Fluor® 555) at 1/200 dilution was used as the secondary antibody (red). Slide is counter stained with Dapi (blue).



Flow Cytometry (Intracellular) - Anti-CAPON/NOS1AP antibody [EPR14519(B)] (ab190686)

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.



Western blot - Anti-CAPON/NOS1AP antibody [EPR14519(B)] (ab190686)

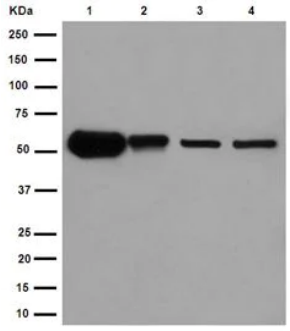
All lanes:
Western blot - Anti-CAPON/NOS1AP antibody [EPR14519(B)] (ab190686) at 1/10000 dilution

All lanes:
Human fetal brain lysates at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 56 kDa



Western blot - Anti-CAPON/NOS1AP antibody [EPR14519(B)] (ab190686)

All lanes:
Western blot - Anti-CAPON/NOS1AP antibody [EPR14519(B)] (ab190686) at 1/1000 dilution

Lane 1:
Human fetal brain lysates at 20 µg

Lane 2:
Human cerebellum brain lysates at 20 µg

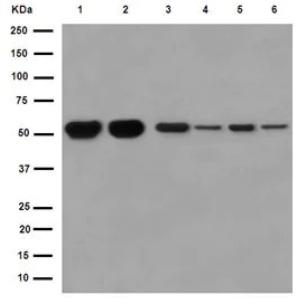
Lane 3:
MCF-7 cell lysates at 20 µg

Lane 4:
HeLa cell lysates at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 56 kDa



Western blot - Anti-CAPON/NOS1AP antibody [EPR14519(B)] (ab190686)

All lanes:
Western blot - Anti-CAPON/NOS1AP antibody [EPR14519(B)] (ab190686) at 1/1000 dilution

Lane 1:
Mouse brain lysates at 10 µg

Lane 2:
Rat brain lysates at 10 µg

Lane 3:
C6 cell lysates at 10 µg

Lane 4:
Raw 264.7 cell lysates at 10 µg

Lane 5:
PC-12 cell lysates at 10 µg

Lane 6:
NIH/3T3 cell lysates at 10 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 56 kDa

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