abcam

Product datasheet

Anti-nNOS (neuronal) antibody ab5586

1 Abreviews 12 References 6 Images

Overview

Product name	Anti-nNOS (neuronal) antibody
Description	Rabbit polyclonal to nNOS (neuronal)
Host species	Rabbit
Tested applications	**Suitable for:** ICC/IF, WB, IHC-P
Species reactivity	**Reacts with:** Mouse, Rat, Human **Predicted to work with:** Rabbit, Xenopus laevis, Zebrafish
Immunogen	Synthetic peptide corresponding to Human nNOS (neuronal) aa 1411-1425. Sequence: NRLRSESIAFIEESK (Peptide available as **ab5891**) Run BLAST with Run BLAST with
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 99% PBS
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab5586 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		1/50 - 1/500.
WB		1/100 - 1/1000. Predicted molecular weight: 160 kDa.
IHC-P	★★★☆☆ (1)	1/20 - 1/200.

Target

Function Produces nitric oxide (NO) which is a messenger molecule with diverse functions throughout the body. In the brain and peripheral nervous system, NO displays many properties of a neurotransmitter. Probably has nitrosylase activity and mediates cysteine S-nitrosylation of cytoplasmic target proteins such SRR.

Tissue specificity Isoform 1 is ubiquitously expressed: detected in skeletal muscle and brain, also in testis, lung and kidney, and at low levels in heart, adrenal gland and retina. Not detected in the platelets. Isoform 3 is expressed only in testis. Isoform 4 is detected in testis, skeletal muscle, lung, and kidney, at low levels in the brain, but not in the heart and adrenal gland.

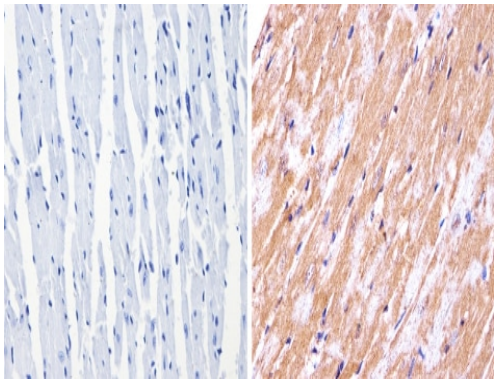
Sequence similarities Belongs to the NOS family.
Contains 1 FAD-binding FR-type domain.
Contains 1 flavodoxin-like domain.
Contains 1 PDZ (DHR) domain.

Domain The PDZ domain in the N-terminal part of the neuronal isoform participates in protein-protein interaction, and is responsible for targeting nNos to synaptic membranes in muscles. Mediates interaction with VAC14.

Post-translational modifications Ubiquitinated; mediated by STUB1/CHIP in the presence of Hsp70 and Hsp40 (in vitro).

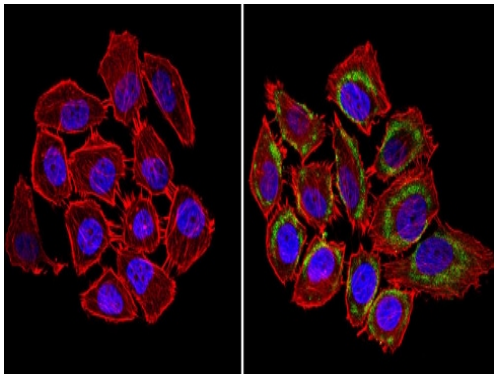
Cellular localization Cell membrane > sarcolemma. Cell projection > dendritic spine. In skeletal muscle, it is localized beneath the sarcolemma of fast-twitch muscle fiber by associating with the dystrophin glycoprotein complex. In neurons, enriched in dendritic spines.

Images



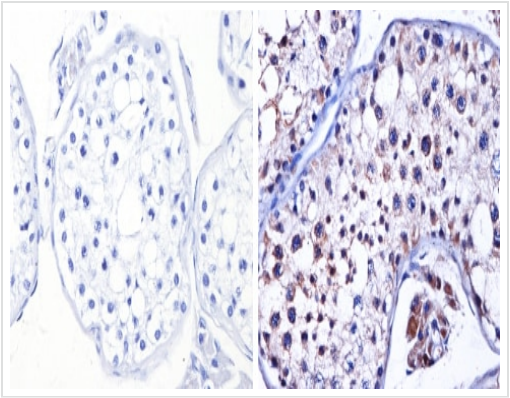
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-nNOS (neuronal) antibody (ab5586)

ab5586 labelling nNOS (neuronal) in the cytoplasm of Mouse heart tissue (right) compared with a negative control (left) by Immunohistochemistry (formalin/PFA-fixed paraffin-embedded sections). To expose target proteins, antigen retrieval method was performed using 10mM sodium citrate (pH 6.0) microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H2O2-methanol for 15 min at room temperature. Tissue sections were incubated with the primary antibody (1:20 in 3% BSA-PBS) overnight at 4°C. A HRP-conjugated anti-rabbit IgG was used as the secondary antibody, followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.



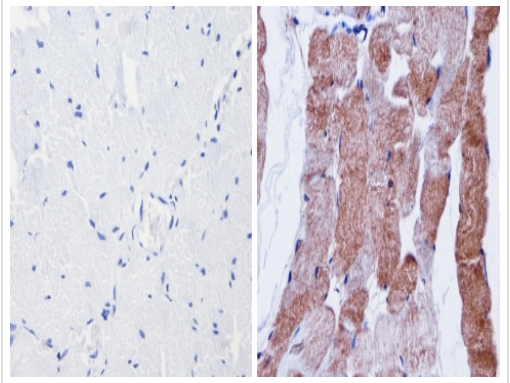
Immunocytochemistry/ Immunofluorescence - Anti-nNOS (neuronal) antibody (ab5586)

Immunocytochemistry/Immunofluorescence analysis of nNOS (neuronal) (green) showing staining in the cytoplasm and membrane of U251 cells (right) compared to a negative control without primary antibody (left). Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were incubated with ab5586 in 3% BSA-PBS at a dilution of 1:100 and incubated overnight at 4ºC in a humidified chamber. Cells were washed with PBST and incubated with a DyLight-conjugated secondary antibody in PBS at room temperature in the dark. F-actin (red) was stained with a fluorescent red phalloidin and nuclei (blue) were stained with Hoechst or DAPI. Images were taken at a magnification of 60x.



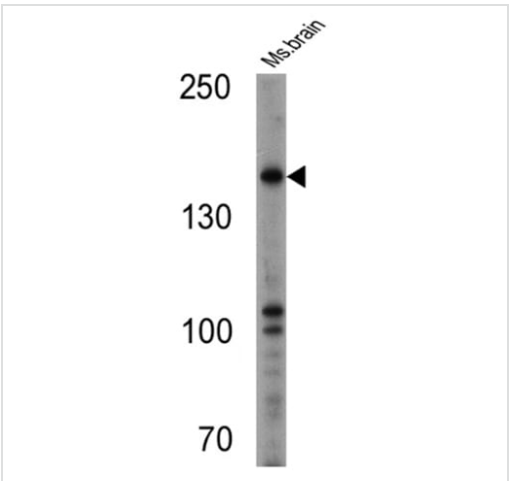
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-nNOS (neuronal) antibody (ab5586)

ab5586 labelling nNOS (neuronal) in the cytoplasm of Human testis tissue (right) compared with a negative control (left) by Immunohistochemistry (formalin/PFA-fixed paraffin-embedded sections). To expose target proteins, antigen retrieval method was performed using 10mM sodium citrate (pH 6.0) microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H2O2-methanol for 15 min at room temperature. Tissue sections were incubated with the primary antibody (1:200 in 3% BSA-PBS) overnight at 4°C. A HRP-conjugated anti-rabbit IgG was used as the secondary antibody, followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-nNOS (neuronal) antibody (ab5586)

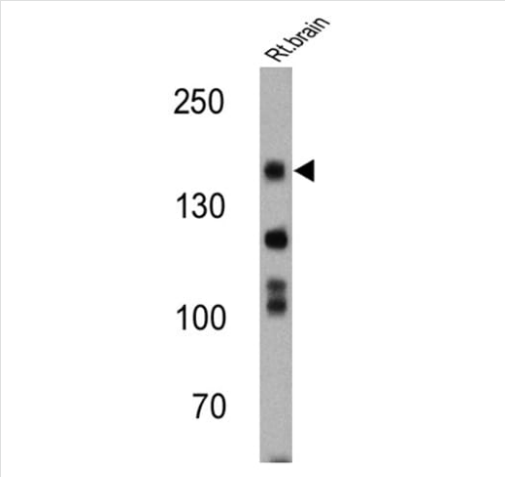
ab5586 labelling nNOS (neuronal) in the cytoplasm of Human skeletal muscle (right) compared with a negative control (left) by Immunohistochemistry (formalin/PFA-fixed paraffin-embedded sections). To expose target proteins, antigen retrieval method was performed using 10mM sodium citrate (pH 6.0) microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H2O2-methanol for 15 min at room temperature. Tissue sections were incubated with the primary antibody (1:200 in 3% BSA-PBS) overnight at 4°C. A HRP-conjugated anti-rabbit IgG was used as the secondary antibody, followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.



Western blot - Anti-nNOS (neuronal) antibody (ab5586)

Anti-nNOS (neuronal) antibody (ab5586) at 1/500 dilution + Mouse brain cell lysate at 25 µg

Predicted band size: 160 kDa
Observed band size: 160 kDa



Western blot - Anti-nNOS (neuronal) antibody (ab5586)

Anti-nNOS (neuronal) antibody (ab5586) at 1/200 dilution + Rat brain cell lysate at 25 µg

Predicted band size: 160 kDa
Observed band size: 160 kDa

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