

Product datasheet

Anti-nNOS (neuronal) antibody ab3511

★★★★★ [1 Abreviews](#) [5 References](#) [5 Images](#)

Overview

Product name	Anti-nNOS (neuronal) antibody
Description	Rabbit polyclonal to nNOS (neuronal)
Host species	Rabbit
Specificity	Detects nNOS from bovine, mouse, rabbit and rat tissues. This antibody does not detect endothelial NOS (eNOS) or inducible NOS (iNOS).
Tested applications	Suitable for: IHC-Fr, WB, IHC-P, ICC/IF, IP
Species reactivity	Reacts with: Mouse, Rat, Rabbit, Guinea pig, Cow, Human
Immunogen	Synthetic peptide corresponding to Rat nNOS (neuronal) aa 700-800. Run BLAST with Expasy Run BLAST with NCBI
Positive control	WB: Mouse and rat brain tissue lysate. IHC-P: Mouse skeletal muscle tissue, rat cerebellum tissue. IHC-Fr: Rat brain tissue. ICC/IF: SH-SY5Y cells.
General notes	<p>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.</p> <p>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</p>

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	Constituent: 100% Whole serum
Purity	Whole antiserum
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab3511 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
IHC-Fr		1/800.
WB		1/1000.
IHC-P		1/200 - 1/400.
ICC/IF		Use at an assay dependent concentration.
IP		Use at an assay dependent concentration.

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.

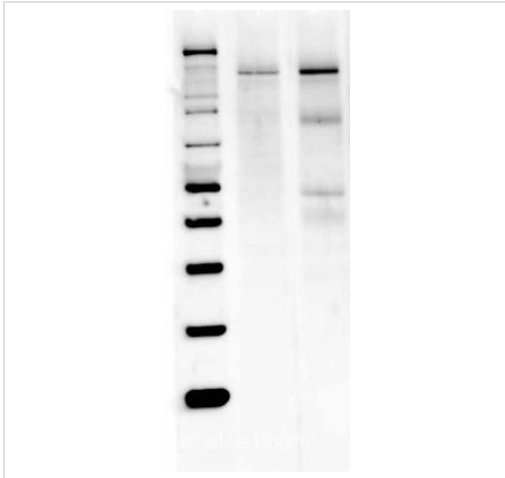
Post-translational modifications

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

Cellular localization

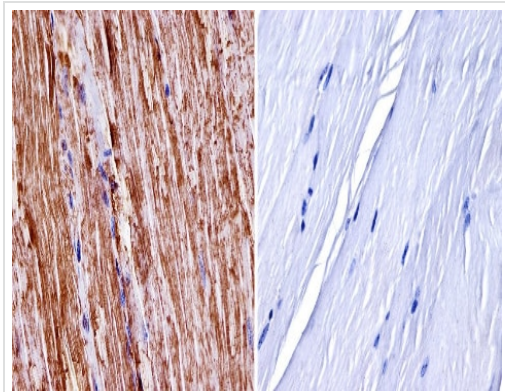
Cell membrane > sarcolemma. Cell projection > dendritic spine. In skeletal muscle, it is localized beneath the sarcolemma of fast-twitch muscle fiber by associating with the dystrophin glycoprotein complex. In neurons, enriched in dendritic spines.

Images



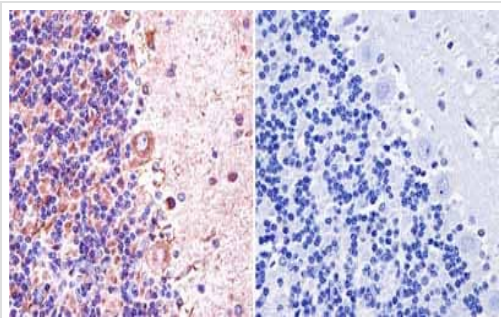
Western blot - Anti-nNOS (neuronal) antibody (ab3511)

Western blot analysis of nNOS was performed by loading 40µg of Mouse (Lane 1) and Rat Brain (Lane 2) tissue lysate onto a 4-12% Bis-Tris polyacrylamide gel. Proteins were transferred to a Nitrocellulose membrane. Membranes were probed with a rabbit polyclonal antibody (ab3511) recognizing nNOS at a dilution of 1:1000.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-nNOS (neuronal) antibody (ab3511)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse skeletal muscle tissue sections labeling nNOS (neuronal) with ab3511 at 1/400 (left). Antigen retrieval was performed using 10M sodium citrate (pH 6.0) buffer, microwaved for 8-15 minutes. Tissues were blocked in 3% BSA in PBS for 30 minutes at room temperature. A biotin-conjugated secondary antibody was used. Right - negative control.



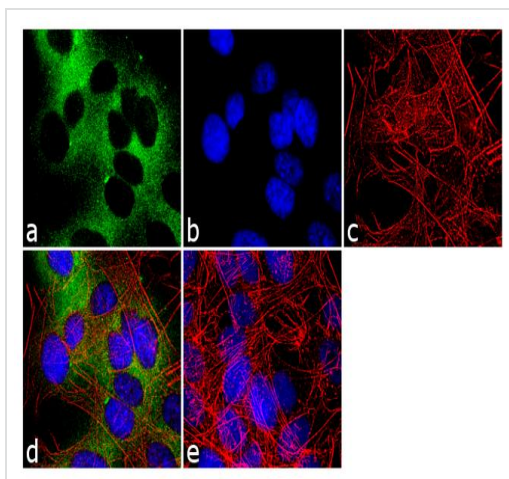
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-nNOS (neuronal) antibody (ab3511)

Immunohistochemistry was performed on normal biopsies of deparaffinized Rat cerebellum tissue. To expose target proteins heat induced antigen retrieval was performed using 10mM sodium citrate (pH6.0) buffer and microwaved for 8-15 minutes. Following antigen retrieval tissues were blocked in 3% BSA-PBS for 30 minutes at room temperature. Tissues were then probed at a dilution of 1:200 with a Rabbit Polyclonal Antibody recognizing nNOS (ab3511) or without primary antibody (negative control) overnight at 4°C in a humidified chamber. Tissues were washed extensively with PBST and endogenous peroxidase activity was quenched with a peroxidase suppressor. Detection was performed using a biotin-conjugated secondary antibody and SA-HRP followed by colorimetric detection using DAB. Tissues were counterstained with hematoxylin and prepped for mounting.



Immunohistochemistry (Frozen sections) - Anti-nNOS (neuronal) antibody (ab3511)

ab3511 at 1/800 dilution staining nNOS (neuronal) in rat brain tissue section by immunohistochemistry (Frozen sections).



Immunocytochemistry/ Immunofluorescence - Anti-nNOS (neuronal) antibody (ab3511)

Immunofluorescence analysis of nNOS was done on 70% confluent log phase SH-SY5Y cells. The cells were fixed with 4% paraformaldehyde for 10 minutes, permeabilized with 0.1% Triton™ X-100 for 10 minutes, and blocked with 1% BSA for 1 hour at room temperature. The cells were labeled with nNOS Rabbit Polyclonal Antibody (ab3511) at 1/250 dilution in 0.1% BSA and incubated for 3 hours at room temperature and then labeled with Goat anti-Rabbit IgG (H+L) Superclonal™ Secondary Antibody, Alexa Fluor® 488 conjugate at a dilution of 1/2000 for 45 minutes at room temperature (Panel a: green). Nuclei (Panel b: blue) were stained with SlowFade® Gold Antifade Mountant with DAPI. F-actin (Panel c: red) was stained with Rhodamine Phalloidin (1/300 dilution). Panel d is a merged image showing cytoplasmic localization. Panel e is a no primary antibody control. The images were captured at 60X magnification.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours

- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors