




## Product datasheet

# Anti-nNOS (neuronal) (phospho S1417) antibody ab5583

★★★★★ 6 Abreviews 20 References 2 Images

### Overview

Product name	Anti-nNOS (neuronal) (phospho S1417) antibody
Description	Rabbit polyclonal to nNOS (neuronal) (phospho S1417)
Host species	Rabbit
Tested applications	<b>Suitable for:</b> IHC-Fr, ICC, WB, IP, ICC/IF, IHC-FoFr
Species reactivity	<b>Reacts with:</b> Mouse, Rat, Rabbit, Human <b>Predicted to work with:</b> Xenopus laevis, Zebrafish 
Immunogen	Synthetic peptide corresponding to Human nNOS (neuronal) aa 1411-1425 (phospho S1417). Sequence: CNRLRSE(pS)IAFIEESK  Database link: <b>P29475</b> (Peptide available as <b>ab41773</b> )   <a href="#">Run BLAST with</a>  <a href="#">Run BLAST with</a>
Positive control	WB: nocozadole-treated SH-SY5Y cells; ICC: 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&amp;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	Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 99% PBS

<b>Purity</b>	Immunogen affinity purified
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

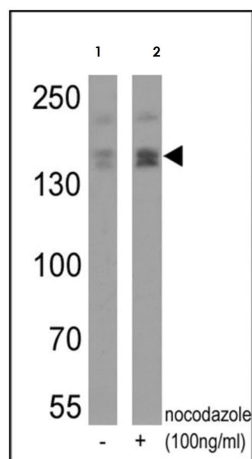
## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab5583 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	★★★★★ (2)	Use at an assay dependent concentration.
ICC		Use at an assay dependent concentration.
WB	★★★★★ (4)	1/500 - 1/5000. Predicted molecular weight: 160 kDa.
IP		Use at an assay dependent concentration.
ICC/IF		1/10 - 1/100.
IHC-FoFr		Use at an assay dependent concentration. PubMed: 20881244

## Target

<b>Function</b>	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.
<b>Tissue specificity</b>	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.
<b>Sequence similarities</b>	Belongs to the NOS family. Contains 1 FAD-binding FR-type domain. Contains 1 flavodoxin-like domain. Contains 1 PDZ (DHR) domain.
<b>Domain</b>	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.
<b>Post-translational modifications</b>	Ubiquitinated; mediated by STUB1/CHIP in the presence of Hsp70 and Hsp40 (in vitro).
<b>Cellular localization</b>	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.



Western blot - Anti-nNOS (neuronal) (phospho S1417) antibody (ab5583)

**All lanes :** Anti-nNOS (neuronal) (phospho S1417) antibody (ab5583) at 1/1000 dilution

**Lane 1 :** untreated SH-SY5Y cells (Human neuroblastoma cell line from bone marrow)

**Lane 2 :** SH-SY5Y cells (Human neuroblastoma cell line from bone marrow) treated with 100 ng/mL nocodazole

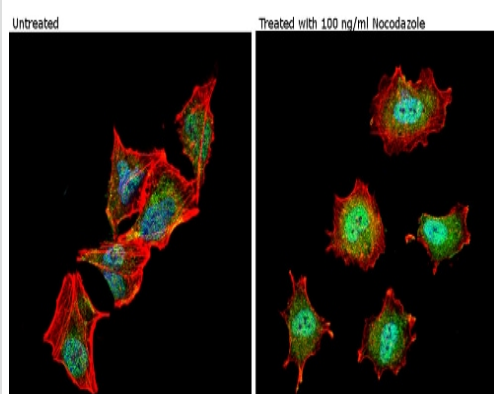
Lysates/proteins at 20 µg per lane.

### Secondary

**All lanes :** HRP-conjugated secondary antibody

Developed using the ECL technique.

**Predicted band size:** 160 kDa



Immunocytochemistry/ Immunofluorescence - Anti-nNOS (neuronal) (phospho S1417) antibody (ab5583)

Immunocytochemistry/Immunofluorescence analysis of nNOS (neuronal) (phospho S1417) (green) showing staining in the cytoplasm and nucleus of SH-SY5Y cells treated with 100 ng/ml nocodazole (left) and untreated SH-SY5Y cells (right). 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 ab5583 in 3% BSA-PBS at a dilution of 1:20 and incubated overnight at 4°C 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.

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