Product datasheet

Anti-nNOS (neuronal) antibody [EP1855Y] ab76067

Overview

Product name
Anti-nNOS (neuronal) antibody [EP1855Y]
Description
Rabbit monoclonal [EP1855Y] to nNOS (neuronal)
Host species
Rabbit
Tested applications
Suitable for: WB, IP, Flow Cyt, IHC-Fr, ICC/IF
Unsuitable for: IHC-P
Species reactivity
Reacts with: Mouse, Rat, Human, Common marmoset
Immunogen
Synthetic peptide within Human nNOS (neuronal). The exact sequence is proprietary. A synthetic peptide corresponding to residues around serine 1417 of human nNOS (neuronal) protein.
Positive control
General notes
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.

This product is a recombinant rabbit monoclonal antibody.

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. Avoid freeze / thaw cycle.
Storage buffer
pH: 7.20
Preservative: 0.01% Sodium azide
 Constituents: 59% PBS, 40% Glycerol, 0.05% BSA
Purity
Protein A purified
Clonality
Monoclonal
Clone number
EP1855Y
Isotype

IgG

Applications

Our Abpromise guarantee covers the use of ab76067 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP</td>
<td></td>
<td>1/150. For unpurified use at 1/4.</td>
</tr>
<tr>
<td>Flow Cyt</td>
<td>★★</td>
<td>1/600. For unpurified use at 1/15. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.</td>
</tr>
<tr>
<td>IHC-Fr</td>
<td>★★</td>
<td>1/1000.</td>
</tr>
<tr>
<td>ICC/IF</td>
<td>★★★★★</td>
<td>1/200.</td>
</tr>
</tbody>
</table>

Application notes

Is unsuitable for IHC-P.

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 as 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.
Anti-nNOS (neuronal) antibody [EP1855Y] (ab76067) at 1/100 dilution (unpurified) + Mouse brain tissue lysate at 10 µg

**Secondary**
Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

**Predicted band size:** 161 kDa

Blocking buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM/TBST.

Anti-nNOS (neuronal) antibody [EP1855Y] (ab76067) at 1/3000 dilution (purified) + Mouse brain tissue lysate at 10 µg

**Secondary**
Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

**Predicted band size:** 161 kDa

Blocking buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM/TBST.
Anti-nNOS (neuronal) antibody [EP1855Y] (ab76067) at 1/1000 dilution (unpurified) + Mouse brain tissue lysate at 10 µg

**Secondary**

HRP-conjugated goat anti-rabbit IgG at 1/2000 dilution

**Predicted band size:** 161 kDa  
**Observed band size:** 161 kDa

Immunocytochemistry/Immunofluorescence analysis of A673 cells labelling nNOS (neuronal) (green) with purified ab76067 at 1/200. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. ab150077, an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/500) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain.

Control: primary antibody (1/200) and secondary antibody Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/500).

Unpurified ab76067 staining nNOS (neuronal) in murine sperm cells by Immunocytochemistry/Immunofluorescence. Cells were fixed with paraformaldehyde and blocked using 2% BSA. Samples were then incubated with undiluted ab76067. The secondary used was a FITC conjugated goat anti-rabbit IgG at a 1/400 dilution. Panel A shows the specific staining of nNOS in sperm while Panel B is the control sample treated with Rabbit IgG.
Overlay histogram showing PC-12 cells stained with unpurified ab76067 (red line). The cells were fixed with methanol (5 min) and incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (unpurified ab76067, 1/50 dilution) for 30 min at 22ºC. The secondary antibody used was DyLight® 488 goat anti-rabbit IgG (H+L) (ab96899) at 1/500 dilution for 30 min at 22ºC. Isotype control antibody (black line) was rabbit monoclonal IgG (1µg/1x106 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a slightly decreased signal in PC-12 cells fixed with 4% paraformaldehyde (10 min) used under the same conditions.

Please note that Abcam do not have any data for use of this antibody in non-fixed cells. We welcome any customer feedback.

Flow cytometry analysis of PC-12 cells labelling nNos (neuronal) with unpurified ab76067 at 1/15 (red). Cells were fixed with 100% methanol. A FITC-conjugated goat anti-rabbit IgG (1/150) was used as the secondary antibody. Green - Isotype control, rabbit monoclonal IgG.

Flow cytometry analysis of PC-12 cells labelling nNos (neuronal) with purified ab76067 at 1/600 (red). Cells were fixed with 100% methanol. A FITC-conjugated goat anti-rabbit IgG (1/150) was used as the secondary antibody. Green - Isotype control, rabbit monoclonal IgG.
ab76067 (unpurified) at 1/4 immunoprecipitating nNOS (neuronal) in rat brain tissue lysate. For western blotting, a peroxidase-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/1000).

Blocking buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM/TBST.

ab76067 (purified) at 1/150 immunoprecipitating nNOS (neuronal) in rat brain tissue lysate. For western blotting, a peroxidase-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/1000).

Blocking buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM/TBST.
IHC-Fr image of nNOS staining on marmoset caudate sections using unpurified ab76067 (1/1000). The tissue was fixed in paraformaldehyde and the sections were then permeabilized using Triton-X. The sections were then blocked using 2% BSA for 2 hour at 20°C. Unpurified ab76067 was diluted 1/1000 and incubated with the sections for 18 hours at 20°C. The secondary antibody used was HRP conjugated goat polyclonal to rabbit IgG (1/1000).

Please note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

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