

Datasheet for ABIN967895

anti-NOS1 antibody (AA 1095-1289)

3 Images

5 Publications



[Go to Product page](#)

Overview

Quantity:	150 µg
Target:	NOS1
Binding Specificity:	AA 1095-1289
Reactivity:	Human, Rat, Mouse, Dog
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This NOS1 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Immunoprecipitation (IP)

Product Details

Immunogen:	Human nNOS aa. 1095-1289
Clone:	16-nNOS-NOS Type I
Isotype:	IgG2a
Cross-Reactivity:	Rat (Rattus), Mouse (MURINE), Dog (Canine)
Characteristics:	<ol style="list-style-type: none"> 1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Please refer to us for technical protocols. 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing. 4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

Product Details

Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
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Target Details

Target:	NOS1
Alternative Name:	nNOS/NOS Type I (NOS1 Products)
Background:	<p>Nitric oxide synthase (NOS), a cell-type specific enzyme, catalyzes the synthesis of nitric oxide (NO). NO is a short-lived radical that transmits cellular signals involved in vasorelaxation, neurotransmission, and cytotoxicity. In neurons and endothelial cells, constitutive NOS (cNOS) is activated by agonists that increase intracellular Ca²⁺ levels and enhance calmodulin binding. Neuronal NOS (nNOS or bNOS) and endothelial NOS (eNOS) have recognition sites for NADPH, FAD, FMN, and calmodulin and are regulated in a similar manner. However, both have been shown to be distinct gene products of about 155 kDa and 140 kDa, respectively, and the human forms show 52% amino acid identity. Neuronal NOS and induced macrophage NOS (iNOS) share 51% amino acid homology with the greatest degree of divergence in the calmodulin binding domain. Neuronal NOS, a cytosolic protein present mainly in neural tissues, has been purified and characterized from rat cerebellum. The NO synthesized by this enzyme acts as a neurotransmitter. eNOS has been cloned from human vascular endothelium as well as from bovine aortic endothelial cells (BAEC) and has a unique N-myristylation consensus sequence that may explain its membrane localization. This antibody is routinely tested by western blot analysis.</p> <p>Synonyms: NOS Type I, Neuronal Nitric Oxide Synthase</p>
Molecular Weight:	155 kDa
Pathways:	Negative Regulation of Hormone Secretion, Myometrial Relaxation and Contraction

Application Details

Comment:	Related Products: ABIN967389, ABIN968545
Restrictions:	For Research Use only

Handling

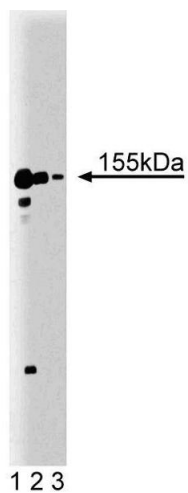
Format:	Liquid
Concentration:	250 µg/mL

Handling

Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤ 0.09 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	Store undiluted at -20° C.

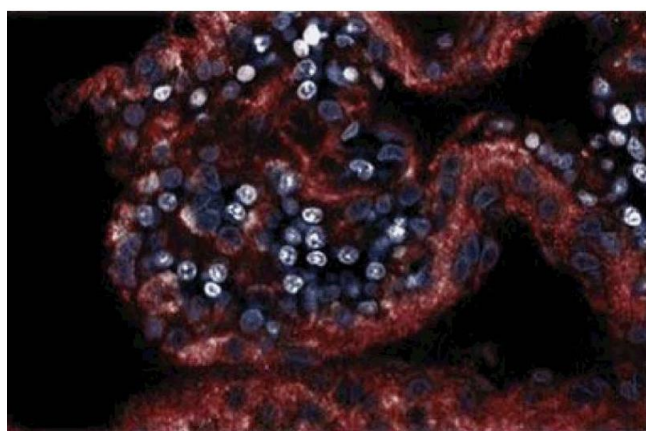
Publications

Product cited in:	<p>Schuh, Uldrijan, Telkamp, Rothlein, Neyses: "The plasmamembrane calmodulin-dependent calcium pump: a major regulator of nitric oxide synthase I." in: The Journal of cell biology, Vol. 155, Issue 2, pp. 201-5, (2001) (PubMed).</p> <p>Sasaki, Gonzalez-Zulueta, Huang, Herring, Ahn, Ginty, Dawson, Dawson: "Dynamic regulation of neuronal NO synthase transcription by calcium influx through a CREB family transcription factor-dependent mechanism." in: Proceedings of the National Academy of Sciences of the United States of America, Vol. 97, Issue 15, pp. 8617-22, (2000) (PubMed).</p> <p>Yu, Shao, Qian, George, Rockey: "Gene transfer of the neuronal NO synthase isoform to cirrhotic rat liver ameliorates portal hypertension." in: The Journal of clinical investigation, Vol. 105, Issue 6, pp. 741-8, (2000) (PubMed).</p> <p>Nathan: "Nitric oxide as a secretory product of mammalian cells." in: FASEB journal : official publication of the Federation of American Societies for Experimental Biology, Vol. 6, Issue 12, pp. 3051-64, (1992) (PubMed).</p> <p>Bredt, Hwang, Glatt, Lowenstein, Reed, Snyder: "Cloned and expressed nitric oxide synthase structurally resembles cytochrome P-450 reductase." in: Nature, Vol. 351, Issue 6329, pp. 714-8, (1991) (PubMed).</p>
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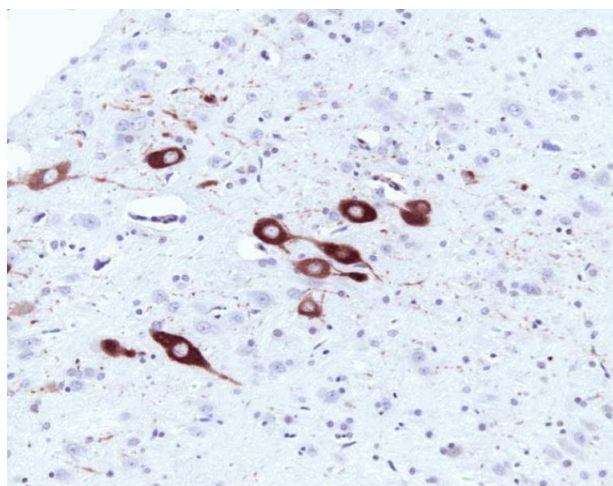
Western Blotting

Image 1. Western blot analysis of nNOS on a rat pituitary lysate. Lane 1: 1:2500, lane 2: 1:5000, lane 3: 1:10,000 dilution of the mouse anti-nNOS antibody.



Immunofluorescence

Image 2. Immunofluorescence staining on a rabbit brain section.



Immunohistochemistry (Paraffin-embedded Sections)

Image 3. Immunohistochemical staining of a formalin-fixed paraffin-embedded rat brain tissue section with no pretreatment (20X magnification).