

Product Information

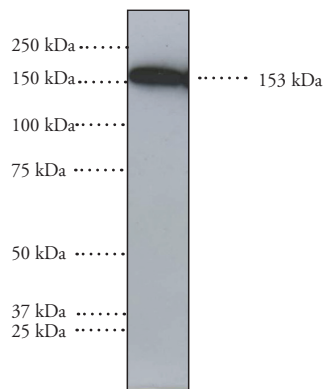


nNOS Western Ready Control

Item No. 10009632

Synonyms:	ncNOS, NOS I
Source:	Rat recombinant C-terminal hexahistidine-tagged protein expressed in Sf21 cells
M_r:	153 kDa (as provided), 150 kDa (native)
Purity:	Whole cell lysate; a single band is detected on a western blot when probed with Cayman's nNOS Polyclonal Antibody (Item No. 160870)
Supplied in:	Laemmli buffer (2% SDS, 10% glycerol, 62.5 mM Tris-HCl, pH 6.8, 5% 2-mercaptoethanol, bromophenol blue)
Stability:	≥2 years at -20°C
Applications:	Positive control for western blotting

Nitric oxide synthase (NOS) catalyzes the oxidation of arginine to nitric oxide (NO) and citrulline. Three distinct isoforms of NOS have been described having nomenclature based on the tissue source from which they were originally cloned. These three isoforms are neuronal/brain NOS (nNOS/bNOS/NOS-I), inducible NOS (iNOS/NOS-II), and endothelial NOS (eNOS/NOS-III).^{1,2} nNOS is a soluble enzyme found in brain, the peripheral nervous system, and skeletal muscle.^{3,4} An alternately spliced form of nNOS (nNOS*) containing a 34 amino acid insert has been identified in skeletal muscle.⁵ In neurons, protein-protein interactions with PSD-95 and PSD-93 *via* the PZD domain at the N-terminus of nNOS localizes the enzyme with NMDA receptors.^{6,7} Although nNOS was originally thought to be constitutively expressed, abundant evidence suggests expression is regulated by a variety of conditions.⁸



Western blot of human recombinant nNOS probed with Cayman's nNOS Polyclonal Antibody (Catalog No. 160870).

Laboratory Procedures

Western ready controls are designed to serve as positive controls on western blots. This nNOS western ready control is supplied pre-boiled in 55 µl of Laemmli buffer. To use, thaw and load 10 µl of nNOS western ready control per well and follow a standard western blotting protocol. The amount needed per well will depend on the antibody and detection system used. Due to the presence of the 6X His-tag on the nNOS provided in this control, the protein will migrate as a band ~3 kDa higher than the native, non-tagged protein.

References

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4. Nakane, M., Schmidt, H.H.H.W., Pollock, J.S., *et al.* *FEBS Lett.* **316**, 175-180 (1993).
5. Silvagno, F., Xia, H., and Bredt, D.S. *J. Biol. Chem.* **271**, 11204-11208 (1996).
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7. Christopherson, K.S. and Bredt, D.S. *J. Clin. Invest.* **100**, 2424-2429 (1997).
8. Wang, Y., Newton, D.C., and Marsden, P.A. *Critical Reviews in Neurobiology* **13**, 21-43 (1999).

Related Products

iNOS (murine macrophage) - Item No. 60862 • iNOS (murine recombinant) - Item No. 60864 • nNOS (rat recombinant) - Item No. 60870 • nNOS (rat recombinant) - Purified - Item No. 60875 • eNOS (bovine recombinant) - Item No. 60880 • iNOS Polyclonal Antibody - Item No. 160862 • eNOS Polyclonal Antiserum - Item No. 160880 • nNOS Electrophoresis Standard - Item No. 360870 • nNOS Blocking Peptide - Item No. 360871 • nNOS (rat) cDNA Probe - Item No. 660870

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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