

**nNOS Antibody**

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	160	Rabbit	#P29475	4842

**Product Usage Information****Application**

Western Blotting

**Dilution**

1:1000

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

nNOS Antibody detects endogenous levels of total nNOS protein.

**Source / Purification**

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to human nNOS. Antibodies are purified by protein A and peptide affinity chromatography.

**Background**

Nitric Oxide Synthase (NOS) catalyzes the formation of nitric oxide (NO) and citrulline from L-arginine, oxygen, and cofactors. Three family members have been characterized: neuronal NOS (nNOS), which is found primarily in neuronal tissue; inducible NOS (iNOS), which is induced by interferon gamma and lipopolysaccharides in the kidney and cardiovascular system; and endothelial NOS (eNOS), which is expressed in blood vessels (1). NO is a messenger molecule with diverse functions throughout the body, including the maintenance of vascular integrity, homeostasis, synaptic plasticity, long-term potentiation, learning, and memory (2,3).

nNOS binds selectively to the second PDZ domain of PSD-95, and the enzymatic activity of nNOS is either downregulated by phosphorylation at Ser847 by CaM-KII or stimulated by calcium influxes governed by the NMDA receptor channels (4-5).

**Background References**

1. Tsutsui, M. (2004) *J Atheroscler Thromb* 11, 41-8.
2. Son, H. et al. (1996) *Cell* 87, 1015-23.
3. Hawkins, R.D. (1996) *Neuron* 16, 465-7.
4. Watanabe, Y. et al. (2003) *Biochem J* 372, 465-71.
5. Sears, C.E. et al. (2004) *Philos Trans R Soc Lond B Biol Sci* 359, 1021-44.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting

**Cross-Reactivity Key**

**H:** Human **M:** Mouse **R:** Rat

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