

#4234 Store at -20C

nNOS Antibody

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	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

WB: Western Blotting

Cross-Reactivity Key

H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster
X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse
GP: Guinea Pig Rab: rabbit All: all species expected

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