



## Product Information Sheet

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### **Polyclonal Anti- Nitric Oxide Synthase 1, neuronal NOS, NOS1 (Magnetic Bead Conjugate)**

**Catalogue No.** PA1329-M

**Immunogen**

A synthetic peptide corresponding to a sequence at the C-terminal of human NOS1 (1418-1434aa), identical to the related rat sequence.

**Lot No.** 0131012182964

**Purity**

Immunogen affinity purified.

**Ig type** rabbit IgG

**Contents**

Each vial contains 1mg/ml Magnetic Bead in PBS, pH 7.2, 0.05mg NaN<sub>3</sub>.

**Size** 100µg/vial

**Specificity**

Human, rat.

No cross reactivity with other proteins.

**Storage**

Store at 4°C for frequent use.

**Recommended application**

*ImmunoPrecipitation (IP)*

**Description**

This Antagene antibody is immobilized by the covalent reaction of hydrazinonicotinamide-modified antibody with formylbenzamide-modified magnetic beads. It is useful for immunoprecipitation.

### **BACKGROUND**

Nitric Oxide Synthase 1(NOS1,neuronal NOS,nNOS1) is a messenger molecule, mediating the effect of endothelium-derived relaxing factor in blood vessels and the cytotoxic actions of macrophages, and playing a part in neuronal communication in the brain. It may be involved in neuronal cell death and damage in neurological illness. nNOS1 localized to the 12q24.2 region of human chromosome 12. It splice variant, expressed in testis, that encodes an NH<sub>2</sub>-terminal truncated protein of 1098 amino acids. nNOS cDNA clones were shown to contain different 5' terminal exons spliced to a common exon 2. Genomic cloning and sequence analysis demonstrate that the unique exons are positioned within 300 bp of each other but separated from exon 2 by an intron that is at least 20 kb in length. The neuronal isoform of nitric oxide synthase is highly expressed in mammalian skeletal muscle, it suggested a specific role for NOS1 in the local metabolic inhibition of alpha-adrenergic vasoconstriction in active skeletal muscle. The novel gaseous neuromediator nitric oxide is thought to play an important role in development and plasticity. Despite this, gene-knockout mice lacking neuronal (Type I) nitric oxide synthase exhibit relatively normal brain development and behavior.

### **REFERENCE**

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2. Wang, Y.; Goligorsky, M. S.; Lin, M.; Wilcox, J. N.; Marsden, P. A. : A novel, testis-specific mRNA transcript encoding an NH<sub>2</sub>-terminal truncated nitric-oxide synthase. *J. Biol. Chem.* 272: 11392-11401, 1997.
3. Xie, J.; Roddy, P.; Rife, T. K.; Murad, F.; Young, A. P. : Two closely linked but separable promoters for human neuronal nitric oxide synthase gene transcription. *Proc. Nat. Acad. Sci.* 92: 1242-1246, 1995.
4. Kharazia, V. N.; Schmidt, H. H. H. W.; Weinberg, R. J. : Type I nitric oxide synthase fully accounts for NADPH-diphosphorase in rat striatum, but not cortex. *Neuroscience* 62: 983-987, 1994.

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