

Anti-Nitric Oxide Synthase, Brain(1-181) NOS1 Antibody (Monoclonal, NOS-B1)

Catalog # ABO10458

Product Information

Application	WB
Primary Accession	P29476
Host	Mouse
Isotype	Mouse IgG1
Reactivity	Human, Rat, Pig
Clonality	Monoclonal
Format	Lyophilized
Description	Mouse IgG monoclonal antibody for Nitric Oxide Synthase, Brain (1-181) NOS1, nitric oxide synthase 1 (neuronal) (NOS1) detection. Tested with WB in Human;rat;goat;pig. No cross reactivity with other proteins.
Reconstitution	Add 1ml of PBS buffer will yield a concentration of 100ug/ml.

Additional Information

Gene ID	24598
Other Names	Nitric oxide synthase, brain, 1.14.13.39, BNOS, Constitutive NOS, NC-NOS, NOS type I, Neuronal NOS, N-NOS, nNOS, Peptidyl-cysteine S-nitrosylase NOS1, Nos1, Bnos
Calculated MW	160559
Application Details	Western blot, 0.5 µg/ml, Human, goat, pig, rat
Subcellular Localization	Cell membrane, sarcolemma ; Peripheral membrane protein . Cell projection, dendritic spine . In skeletal muscle, it is localized beneath the sarcolemma of fast-twitch muscle fiber by associating with the dystrophin glycoprotein complex (By similarity). In neurons, enriched in dendritic spines. .
Tissue Specificity	Isoform N-NOS-1 is expressed in brain and colorectum. Found in the Auerbach's plexus of the enteric nervous system. Isoform PNNOS is expressed in the penis, urethra, prostate, and skeletal muscle, and coexists with the cerebellar nnos in the pelvic plexus, bladder and liver, and is detectable in the cerebellum. .
Source	Eukaryota
Protein Name	Nitric oxide synthase, brain

Contents	Mouse ascites fluid, 1.2% sodium acetate, 2mg BSA, with 0.01mg NaN ₃ as preservative.
Clone Names	NOS-B1
Immunogen	Recombinant neuronal NOS fragment(amino acids 1-181) from rat brain.
Purification	Ascites
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20 °C for one year. After r ° Constitution, at 4 °C for one month. It ° Can also be aliquotted and stored frozen at -20 °C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the NOS family.

Protein Information

Name	Nos1 {ECO:0000312 RGD:3184}
Synonyms	Bnos
Function	Produces nitric oxide (NO) which is a messenger molecule with diverse functions throughout the body. In the brain and peripheral nervous system, NO displays many properties of a neurotransmitter. Inhibitory transmitter for non-adrenergic and non-cholinergic nerves in the colorectum. Probably has nitrosylase activity and mediates cysteine S-nitrosylation of cytoplasmic target proteins such SRR. Inhibitory transmitter for non-adrenergic and non-cholinergic nerves in the colorectum.
Cellular Location	Cell membrane, sarcolemma {ECO:0000250 UniProtKB:Q9Z0J4}; Peripheral membrane protein. Cell projection, dendritic spine. Note=In skeletal muscle, it is localized beneath the sarcolemma of fast-twitch muscle fiber by associating with the dystrophin glycoprotein complex (By similarity). In neurons, enriched in dendritic spines (PubMed:15548660) {ECO:0000250 UniProtKB:Q9Z0J4, ECO:0000269 PubMed:15548660}
Tissue Location	Isoform N-NOS-1 is expressed in brain and colorectum. Found in the Auerbach's plexus of the enteric nervous system. Isoform PNNOS is expressed in the penis, urethra, prostate, and skeletal muscle, and coexists with the cerebellar nnos in the pelvic plexus, bladder and liver, and is detectable in the cerebellum

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 NH₂-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 though 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.

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