Technical Data Sheet

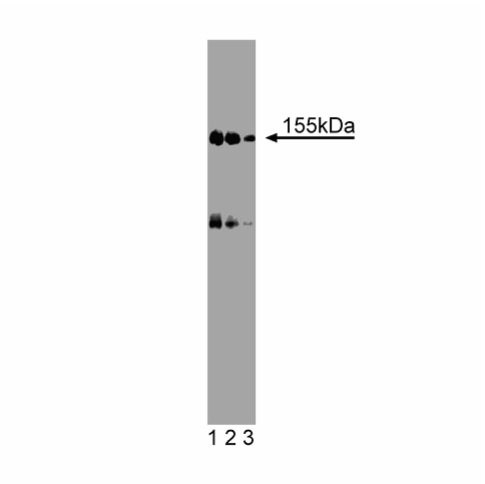
Purified Mouse Anti-nNOS/NOS Type 1

Product Information

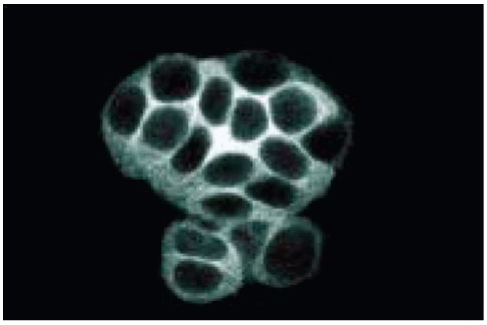
Material Number:	**611852**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	52/nNOS/NOS Type I
Immunogen:	Rat nNOS/NOS Type I aa. 144-262
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Rat
Target MW:	155 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Nitric oxide synthase (NOS) is a cell-type specific enzyme which catalyzes the synthesis of nitric oxide (NO). NO is a short-lived radical which transmits cellular signals involved in vasorelaxation, neurotransmission, and cytotoxicity. In neurons and endothelial cells, constitutive NOS (cNOS) is activated by agonists that increase intracellular Ca2+concentrations and enhance calmodulin binding. Neuronal NOS (nNOS or bNOS) and endothelial NOS (eNOS) have recognition sites for NADPH, FAD, FMN, and calmodulin and are regulated in a similar manner. However, both have been shown to be distinct gene products of about 155kDa and 140kDa, respectively, and the human forms show 52% amino acid identity to each other. nNOS and the 130 kDa inducible macrophage NOS (iNOS) share 51% amino acid homology. nNOS (neuronal NOS) is found in the cytoplasm of cell types such as neurons, skeletal muscle fibers, and lung epithelium. It is slightly larger than the other isoforms due to an N-terminal extension containing a PDZ domain through which it binds PSD-95 (post-synaptic density protein) and localizes to the cell membrane of synapses.



Western blot analysis of nNOS/NOS Type I on rat pituitary lysate. *Lane 1: 1:2500, lane 2: 1:5000, lane 3: 1:10000 dilution of nNOS/NOS Type I.*



GC

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20°C.

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

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3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Bredt DS, Hwang PM, Glatt CE, Lowenstein C, Reed RR, Snyder SH. Cloned and expressed nitric oxide synthase structurally resembles cytochrome P-450 reductase. *Nature.* 1991; 351(6329):714.(Biology)

Nathan C. Nitric oxide as a secretory product of mammalian cells. *FASEB J.* 1992; 6(12):3051-3064.(Biology)

Tochio H, Mok YK, Zhang Q, Kan HM, Bredt DS, Zhang M. Formation of nNOS/PSD-95 PDZ dimer requires a preformed beta-finger structure from the nNOS PDZ domain. *J Mol Biol.* 2000; 303(3):359-370.(Biology)