

NOS3 (H-159): sc-8311

BACKGROUND

Nitric oxide (NO) has a broad range of biological activities and has been implicated in signaling pathways in phylogenetically diverse species. Nitric oxide synthases (NOSs), the enzymes responsible for synthesis of NO, contain an N-terminal oxygenase domain and a C-terminal reductase domain. NOS activity requires homodimerization as well as three cosubstrates (L-arginine, NADPH and O₂) and five cofactors or prosthetic groups (FAD, FMN, calmodulin, tetrahydrobiopterin and heme). Several distinct NOS isoforms have been described and been shown to represent the products of three distinct genes. These include two constitutive Ca²⁺/CaM-dependent forms of NOS, including NOS1 (also designated ncNOS) whose activity was first identified in neurons, and NOS3 (also designated ecNOS), first identified in endothelial cells. The inducible form of NOS, NOS2 (also designated iNOS), is Ca²⁺-independent and is expressed in a broad range of cell types.

CHROMOSOMAL LOCATION

Genetic locus: NOS3 (human) mapping to 7q36.1; Nos3 (mouse) mapping to 5 A3.

SOURCE

NOS3 (H-159) is a rabbit polyclonal antibody raised against amino acids 2-160 of NOS3 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

NOS3 (H-159) is recommended for detection of NOS3 (ecNOS) of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NOS3 (H-159) is also recommended for detection of NOS3 (ecNOS) in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for NOS3 siRNA (h): sc-36093, NOS3 siRNA (m): sc-36094, NOS3 shRNA Plasmid (h): sc-36093-SH, NOS3 shRNA Plasmid (m): sc-36094-SH, NOS3 shRNA (h) Lentiviral Particles: sc-36093-V and NOS3 shRNA (m) Lentiviral Particles: sc-36094-V.

Molecular Weight of NOS3: 140 kDa.

Positive Controls: A549 cell lysate: sc-2413, mouse brain extract: sc-2253 or rat brain extract: sc-2392.

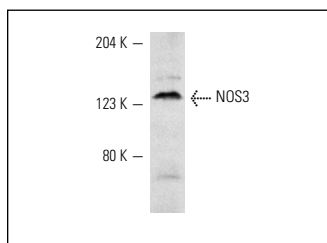
STORAGE

Store at 4° C, **DO NOT FREEZE** Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

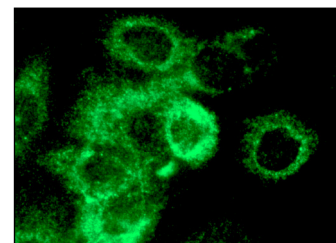
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



NOS3 (H-159): sc-8311. Western blot analysis of NOS3 expression in mouse brain extract.



NOS3 (H-159): sc-8311. Immunofluorescence staining of methanol-fixed A549 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Yilmaz, G., et al. 2001. Spleen damage in endotoxaemic mice: the involvement of nitric oxide. *J. Physiol. Pharmacol.* 52: 729-744.
2. Jimenez, A., et al. 2001. Regulation of endothelial nitric oxide synthase expression in the vascular wall and in mononuclear cells from hypercholesterolemic rabbits. *Circulation* 104: 1822-1830.
3. Moraes-Teixeira, J.A., et al. 2010. Exercise training enhances elastin, fibrillin and nitric oxide in the aorta wall of spontaneously hypertensive rats. *Exp. Mol. Pathol.* 89: 351-357.
4. Edwards, J.L., et al. 2010. *Neisseria gonorrhoeae* survival during primary human cervical epithelial cell infection requires nitric oxide and is augmented by progesterone. *Infect. Immun.* 78: 1202-1213.
5. Miranda, L.E., et al. 2010. Effects of partial liver ischemia followed by global liver reperfusion on the remote tissue expression of nitric oxide synthase: lungs and kidneys. *Transplant. Proc.* 42: 1557-1562.
6. Neto-Ferreira, R., et al. 2011. Beneficial effects of rosuvastatin on aortic adverse remodeling in nitric oxide-deficient rats. *Exp. Toxicol. Pathol.* 63: 473-478.
7. Rahman, M.S., et al. 2012. Effects of hypoxia exposure on hepatic cytochrome P450 1A (CYP1A) expression in Atlantic croaker: molecular mechanisms of CYP1A down-regulation. *PLoS ONE* 7: e40825.
8. Mazza, R., et al. 2012. Cardiac heterometric response: the interplay between Catestatin and nitric oxide deciphered by the frog heart. *Nitric Oxide* 27: 40-49.

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Try **NOS3 (A-9): sc-376751** or **NOS3 (C-6): sc-376542**, our highly recommended monoclonal alternatives to NOS3 (H-159). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **NOS3 (A-9): sc-376751**.