

p-NOS3 (pS1177.39): sc-293032

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 eNOS), 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.

REFERENCES

1. Heiss, L.N., et al. 1994. Epithelial autotoxicity of Nitric oxide: role in the respiratory cytopathology of pertussis. *Proc. Natl. Acad. Sci. USA* 91: 267-270.
2. Farias-Eisner, R., et al. 1994. Nitric oxide is an important mediator for tumoricidal activity *in vivo*. *Proc. Natl. Acad. Sci. USA* 91: 9407-9411.

CHROMOSOMAL LOCATION

Genetic locus: NOS3 (human) mapping to 7q36.1.

SOURCE

p-NOS3 (pS1177.39) is a mouse monoclonal antibody raised against a short amino acid sequence containing Ser 1177 phosphorylated NOS3 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

p-NOS3 (pS1177.39) is recommended for detection of Ser 1177 phosphorylated NOS3 of 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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

p-NOS3 (pS1177.39) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

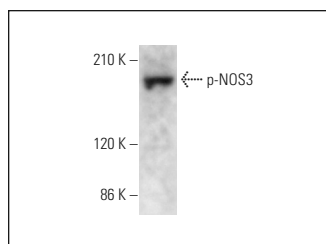
Molecular Weight of p-NOS3: 140 kDa.

Positive Controls: HUV-EC-C whole cell lysate: sc-364180 or JAR cell lysate: sc-2276.

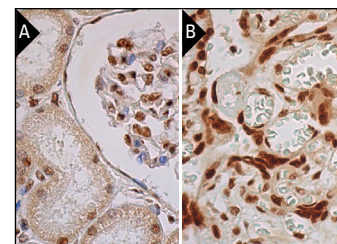
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Lambda Phosphatase: sc-200312A and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



p-NOS3 (pS1177.39): sc-293032. Western blot analysis of NOS3 phosphorylation in JAR whole cell lysate.



p-NOS3 (pS1177.39): sc-293032. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing nuclear and cytoplasmic staining of cells in tubules (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear staining of trophoblastic cells (B).

SELECT PRODUCT CITATIONS

1. Niewiarowska-Sendo, A., et al. 2018. Influence of bradykinin B2 receptor and dopamine D2 receptor on the oxidative stress, inflammatory response, and apoptotic process in human endothelial cells. *PLoS ONE* 13: e0206443.
2. Guers, J.J., et al. 2018. Voluntary wheel running prevents salt-induced endothelial dysfunction: role of oxidative stress. *J. Appl. Physiol.* 126: 502-510.
3. Guo, B.Q., et al. 2018. Puerarin reduces ischemia/reperfusion-induced myocardial injury in diabetic rats via upregulation of vascular endothelial growth factor A/angiotensin-1 and suppression of apoptosis. *Mol. Med. Rep.* 17: 7421-7427.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.