SANTA CRUZ BIOTECHNOLOGY, INC.

NOS2 (N-20): sc-651

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 O_2) 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 Ca^{2+}/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 Ca^{2+}-independent and is expressed in a broad range of cell types.

CHROMOSOMAL LOCATION

Genetic locus: NOS2 (human) mapping to 17q11.2; Nos2 (mouse) mapping to 11 B5.

SOURCE

NOS2 (N-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of NOS2 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NOS2 (N-20) is available conjugated either phycoerythrin (sc-651 PE, 200 µg/ml) or fluorescein (sc-651 FITC, 200 µg/ml), for IF, IHC(P) and FCM. In addition, NOS2 (N-20) is available conjugated to either TRITC (sc-651 TRITC, 200 µg/ml) or PerCP (sc-651 PerCP), 100 tests in 2 ml, for IF, IHC(P) and FCM.

Blocking peptide available for competition studies, sc-651 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NOS2 (N-20) is recommended for detection of NOS2 (iNOS) 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for NOS2 siRNA (h): sc-29417, NOS2 siRNA (m): sc-36092, NOS2 shRNA Plasmid (h): sc-29417-SH, NOS2 shRNA Plasmid (m): sc-36092-SH, NOS2 shRNA (h) Lentiviral Particles: sc-29417-V and NOS2 shRNA (m) Lentiviral Particles: sc-36092-V.

Molecular Weight of NOS2: 130 kDa.

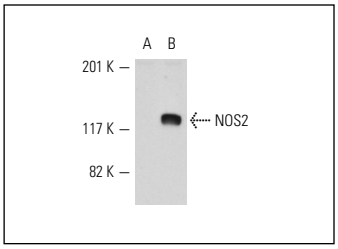
RESEARCH USE

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

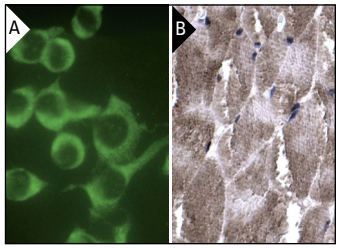
STORAGE

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

DATA



NOS2 (N-20): sc-651. Western blot analysis of NOS2 expression in uninduced (**A**) and LPS/IFN-γ stimulated (**B**) RAW 264.7 whole cell lysates.



NOS2 (N-20): sc-651. Immunofluorescence staining of methanol-fixed RAW 264.7 cells stimulated with LPS/IFN-γ showing cytoplasmic staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocyte cells (**B**).

SELECT PRODUCT CITATIONS

1. Carpenter, L., et al. 2001. Protein kinase Cδ activation by interleukin-1β stabilizes inducible nitric-oxide synthase mRNA in pancreatic β-cells. J. Biol. Chem. 276: 5368-5374.
2. Buchwalow, I.B., et al. 2001. Inducible nitric oxide synthase in the myocard. Mol. Cell. Biochem. 217: 73-82.
3. Jing, H., et al. 2011. Nitric oxide in enteric nervous system mediated the inhibitory effect of vasopressin on the contraction of circular muscle strips from colon in male rats. Neurogastroenterol. Motil. 23: e125-e135.
4. Lin, Z., et al. 2011. Benzylamine and methylamine, substrates of semicarbazide-sensitive amine oxidase, attenuate inflammatory response induced by lipopolysaccharide. Int. Immunopharmacol. 11: 1079-1089.
5. Li, J., et al. 2011. Honokiol: an effective inhibitor of tumor necrosis factor-α-induced up-regulation of inflammatory cytokine and chemokine production in human synovial fibroblasts. Acta Biochim. Biophys. Sin. 43: 380-386.
6. Vega-Naredo, I., et al. 2012. Melatonin modulates autophagy through a redox-mediated action in female Syrian hamster Harderian gland controlling cell types and gland activity. J. Pineal Res. 52: 80-92.
7. Patruno, A., et al. 2012. Activity of matrix metallo proteinases (MMPs) and the tissue inhibitor of MMP (TIMP)-1 in electromagnetic field-exposed THP-1 cells. J. Cell. Physiol. 227: 2767-2774.