**NOS1 (A-11): sc-5302**

**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 nNOS) whose activity was first identified in neurons, and NOS2 (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.

**CHROMOSOMAL LOCATION**

Genetic locus: NOS1 (human) mapping to 12q24.22; NOS1 (mouse) mapping to 5 F.

**SOURCE**

NOS1 (A-11) is a mouse monoclonal antibody raised against amino acids 2-300 of NOS1 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.

NOS1 (A-11) is available conjugated to agarose (sc-5302 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-5302 HRP), 200 µg/ml, for WB, IHCP and ELISA; to either phycocerythrin (sc-5302 PE), fluorescein (sc-5302 FITC), Alexa Fluor® 488 (sc-5302 AF488), Alexa Fluor® 546 (sc-5302 AF546), Alexa Fluor® 594 (sc-5302 AF594) or Alexa Fluor® 647 (sc-5302 AF647), 200 µg/ml, for WB (RGB), IF, IHCP) and FCM; and to either Alexa Fluor® 680 (sc-5302 AF680) or Alexa Fluor® 790 (sc-5302 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

**APPLICATIONS**

NOS1 (A-11) is recommended for detection of NOS1 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).

Suitable for use as control antibody for NOS1 siRNA (h): sc-29416, NOS1 siRNA (m): sc-36091, NOS1 shRNA (r): sc-108067, NOS1 shRNA Plasmid (h): sc-29416-SH, NOS1 shRNA Plasmid (m): sc-36091-SH, NOS1 shRNA Plasmid (r): sc-108067-SH, NOS1 shRNA (h) Lentiviral Particles: sc-29416-V, NOS1 shRNA (m) Lentiviral Particles: sc-36091-V and NOS1 shRNA (r) Lentiviral Particles: sc-108067-V.

Molecular Weight of NOS1: 155 kDa.

Positive Controls: NOS1 (m): 293 Lysate: sc-179019.

**STORAGE**

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

**DATA**

NOS1 (A-11). Western blot analysis of NOS1 expression in non-transfected 293T (A) and mouse NOS1 transfected 293T (B, and B2; H1) whole cell lysate and mouse brain tissue extract (D).

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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

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