**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 ecNOS) 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.

**APPLICATIONS**

NOS3 (A-9) is recommended for detection of NOS3 (ecNOS) of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:1000-1:10000), 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 NOS3 siRNA (h): sc-36093, NOS3 siRNA (m): sc-36094, NOS3 siRNA (r): sc-270518, NOS3 shRNA Plasmid (h): sc-36093-SH, NOS3 shRNA Plasmid (m): sc-36094-SH, NOS3 shRNA Plasmid (r): sc-270518-SH, NOS3 shRNA (h) Lentiviral Particles: sc-36093-V, NOS3 shRNA (m) Lentiviral Particles: sc-36094-V and NOS3 shRNA (r) Lentiviral Particles: sc-270518-V.

Molecular Weight of NOS3: 140 kDa.

Positive Controls: HUV-EC-C whole cell lysate: sc-364180, Hep G2 cell lysate: sc-2227 or CCRF-CEM cell lysate: sc-2225.

**REFERENCES**


**CHROMOSOMAL LOCATION**

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

**SOURCE**

NOS3 (A-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1173-1202 at the C-terminus of NOS3 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG2a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NOS3 (A-9) is available conjugated to agarose (sc-376751 AC), 500 µg/0.25 ml agarose in 1 ml, for IP, to HRP (sc-376751 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376751 PE), fluorescein (sc-376751 FITC), Alexa Fluor® 488 (sc-376751 AF488), Alexa Fluor® 546 (sc-376751 AF546), Alexa Fluor® 594 (sc-376751 AF594) or Alexa Fluor® 647 (sc-376751 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376751 AF680) or Alexa Fluor® 790 (sc-376751 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376751 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

**STORAGE**

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

**SELECT PRODUCT CITATIONS**


**DATA**

NOS3 (A-9) sc-376751 Western blot analysis of NOS3 expression in HUV-EC-C (A), Hep G2 (B), CCRF-CEM (C) and Jurkat (D) whole cell lysates.

NOS3 (A-9) sc-376751: Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic and membrane staining of endothelial cells (B).

**RESEARCH USE**

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