

p-NOS3 (pS633.37): sc-136198

BACKGROUND

Nitric oxide (NO), produced by the endothelial NO synthase (NOS3), is a fundamental determinant of cardiovascular homeostasis that maintains system blood pressure, vascular remodeling and angiogenesis. NOS3 is stimulated, in a phosphatidylinositol 3-kinase (PI 3-kinase)-dependent fashion, by treatment of endothelial cells with Insulin-like growth factor-1 and vascular endothelial growth factor (VEGF). The serine/threonine protein kinase Akt/PKB is an important downstream target of PI 3-kinase, regulating VEGF-stimulated endothelial cell survival. NOS3 activation via phosphorylation of Serine 1177 by Akt/PKB is necessary and sufficient for VEGF-mediated endothelial cell migration. Therefore, Akt/PKB can directly phosphorylate NOS3 on Serine 1177, activating the enzyme and leading to NO production.

REFERENCES

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CHROMOSOMAL LOCATION

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

SOURCE

p-NOS3 (pS633.37) is a mouse monoclonal antibody raised against a short amino acid sequence containing Ser 633 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 (pS633.37) is recommended for detection of Ser 633 phosphorylated NOS3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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.

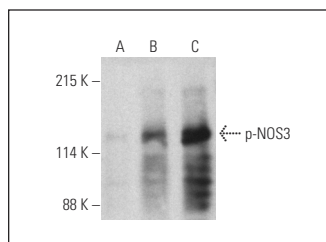
Molecular Weight of p-NOS3: 140 kDa.

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

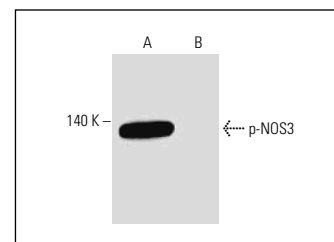
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BPHRP: sc-516102 or m-IgGκ BPHRP (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).

DATA



p-NOS3 (pS633.37): sc-136198. Western blot analysis of NOS3 phosphorylation in untreated (A), VEGF-treated (B) and Forskolin-treated (C) HUV-EC-C whole cell lysates. Blocked with UltraCruz™ Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BPHRP: sc-516102.



p-NOS3 (pS633.37): sc-136198. Western blot analysis of NOS3 phosphorylation in human endothelial cells either untreated (A) or treated (B) with lambda phosphatase.

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. Not for resale.

PROTOCOLS

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