SANTA CRUZ BIOTECHNOLOGY, INC.

NOSIP (G-6): sc-137117

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Endothelial nitric oxide synthase (eNOS) interacting protein (NOSIP) is a modulator of eNOS activity. eNOS is an important nitric oxide (NO)-generating enzyme of the vasculature that is regulated by interactions with caveolin-1, Ca^{2+}-calmodulin, HSP 90 and NOSIP. NOSIP modulates this activity by promoting the translocation of eNOS from the plasma membrane to intracellular sites, which in turn inhibits NO synthesis. NOSIP is involved in controlling airway and vascular diameter, synthesis of NO in ciliated epithelia and mucosal secretion and is an important protein for mucociliary and bronchial function. NOSIP is highly expressed in endothelial cells and vascularized tissue.

REFERENCES

1. Dedio, J., König, P., Wohlfart, P., Schroeder, C., Kummer, W. and Müller-Esterl, W. 2001. NOSIP, a novel modulator of endothelial nitric oxide synthase activity. FASEB J. 15: 79-89.
2. König, P., Dedio, J., Müller-Esterl, W. and Kummer, W. 2002. Distribution of the novel eNOS-interacting protein NOSIP in the liver, pancreas, and gastrointestinal tract of the rat. Gastroenterology 123: 314-324.
3. Dreyer, J., Hirlinger, D., Müller-Esterl, W., Oess, S. and Kuner, R. 2003. Spinal upregulation of the nitric oxide synthase-interacting protein NOSIP in a rat model of inflammatory pain. Neurosci. Lett. 350: 13-16.
4. Dreyer, J., Schleicher, M., Tappe, A., Schilling, K., Kuner, T., Kusumawidijaja, G., Müller-Esterl, W., Oess, S. and Kuner, R. 2004. Nitric oxide synthase (NOS)-interacting protein interacts with neuronal NOS and regulates its distribution and activity. J. Neurosci. 24: 10454-10465.
5. König, P., Dedio, J., Oess, S., Papadakis, T., Fischer, A., Müller-Esterl, W. and Kummer, W. 2005. NOSIP and its interacting protein, eNOS, in the rat trachea and lung. J. Histochem. Cytochem. 53: 155-164.
6. Schleicher, M., Brundin, F., Gross, S., Müller-Esterl, W. and Oess, S. 2005. Cell cycle-regulated inactivation of endothelial NO synthase through NOSIP-dependent targeting to the cytoskeleton. Mol. Cell. Biol. 25: 8251-8258.

CHROMOSOMAL LOCATION

Genetic locus: NOSIP (human) mapping to 19q13.33.

SOURCE

NOSIP (G-6) is a mouse monoclonal antibody raised against amino acids 1-301 representing full length NOSIP of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

NOSIP (G-6) is recommended for detection of NOSIP of human origin by Western Blotting (starting dilution 1:100, 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 NOSIP siRNA (h): sc-45708, NOSIP shRNA Plasmid (h): sc-45708-SH and NOSIP shRNA (h) Lentiviral Particles: sc-45708-V.

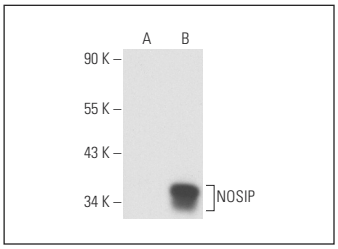
Molecular Weight of NOSIP: 34 kDa.

Positive Controls: NOSIP (h): 293T Lysate: sc-112273, WI-38 whole cell lysate: sc-364260 or A549 cell lysate: sc-2413.

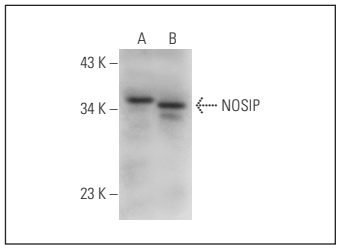
RECOMMENDED SUPPORT REAGENTS

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, UltraCruz® Blocking Reagent: sc-516214 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.

DATA



NOSIP (G-6): sc-137117. Western blot analysis of NOSIP expression in non-transfected: sc-117752 (**A**) and human NOSIP transfected: sc-112273 (**B**) 293T whole cell lysates.



NOSIP (G-6): sc-137117. Western blot analysis of NOSIP expression in WI-38 (**A**) and A549 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Hu, S., Wang, X. and Shan, G. 2016. Insertion of an Alu element in a lncRNA leads to primate-specific modulation of alternative splicing. Nat. Struct. Mol. Biol. 23: 1011-1019.

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.