

Nischarin (6): sc-136550

BACKGROUND

Integrins play important roles in key cellular functions, including cytoskeletal organization, growth, survival, motility and gene expression regulation. Nischarin is a novel intracellular protein, that binds to the cytoplasmic domain of Integrin $\alpha 5/\beta 1$ and interacts with various members of the Pak family of kinases. Nischarin binding to Pak1 inhibits the ability of Pak1 to phosphorylate substrates. When bound, this complex localizes to membrane ruffles which are involved in cell motility. Nischarin also acts as an antagonist of Rac function on cell movement and alters Actin filament organization. These functions give Nischarin a possible role in cell migration regulation. Nischarin is a primarily cytoplasmic protein primarily expressed in kidney and brain.

REFERENCES

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2. Alahari, S.K., Reddig, P.J. and Juliano, R.L. 2004. The integrin-binding protein Nischarin regulates cell migration by inhibiting Pak. *EMBO J.* 23: 2777-2788.
3. Dontenwill, M., Piletz, J.E., Chen, M., Baldwin, J., Pascal, G., Ronde, P., Dupuy, L., Greney, H., Takeda, K. and Bousquet, P. 2004. IRAS is an anti-apoptotic protein. *Ann. N.Y. Acad. Sci.* 1009: 400-412.
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5. Zhu, H., Hayes, J., Chen, M., Baldwin, J. and Piletz, J.E. 2004. Relationship between platelet imidazoline receptor-binding peptides and candidate imidazoline-1 receptor, IRAS. *Ann. N.Y. Acad. Sci.* 1009: 439-446.

CHROMOSOMAL LOCATION

Genetic locus: Nisch (mouse) mapping to 14 B.

SOURCE

Nischarin (6) is a mouse monoclonal antibody raised against amino acids 1011-1214 of Nischarin of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG₁ lambda 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.

PROTOCOLS

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

APPLICATIONS

Nischarin (6) is recommended for detection of Nischarin of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Nischarin siRNA (m): sc-61202, Nischarin siRNA (r): sc-108099, Nischarin shRNA Plasmid (m): sc-61202-SH, Nischarin shRNA Plasmid (r): sc-108099-SH, Nischarin shRNA (m) Lentiviral Particles: sc-61202-V and Nischarin shRNA (r) Lentiviral Particles: sc-108099-V.

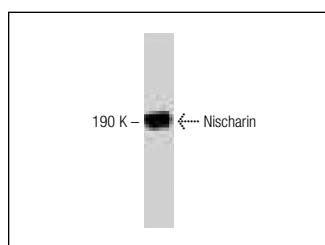
Molecular Weight of Nischarin: 190 kDa.

Positive Controls: PC-12 cell lysate: sc-2250.

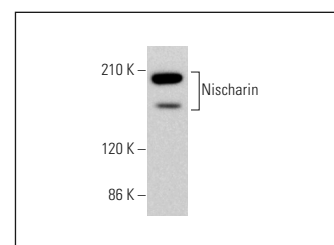
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG λ BP-HRP: sc-516132 or m-IgG λ BP-HRP (Cruz Marker): sc-516132-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-IgG λ BP-FITC: sc-516185 or m-IgG λ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Nischarin (6): sc-136550. Western blot analysis of Nischarin expression in PC-12 whole cell extract.



Nischarin (6): sc-136550. Western blot analysis of Nischarin expression in PC-12 whole cell lysate. Detection reagent used: m-IgG λ BP-HRP (Cruz Marker): sc-516132-CM.

RESEARCH USE

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