

# Nischarin (B-3): sc-365364

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: NISCH (human) mapping to 3p21.1; Nisch (mouse) mapping to 14 B.

## SOURCE

Nischarin (B-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 539-567 within an internal region of Nischarin of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-365364 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

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

## APPLICATIONS

Nischarin (B-3) is recommended for detection of Nischarin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 Nischarin siRNA (h): sc-61201, Nischarin siRNA (m): sc-61202, Nischarin siRNA (r): sc-108099, Nischarin shRNA Plasmid (h): sc-61201-SH, Nischarin shRNA Plasmid (m): sc-61202-SH, Nischarin shRNA Plasmid (r): sc-108099-SH, Nischarin shRNA (h) Lentiviral Particles: sc-61201-V, Nischarin shRNA (m) Lentiviral Particles: sc-61202-V and Nischarin shRNA (r) Lentiviral Particles: sc-108099-V.

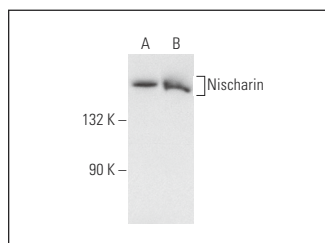
Molecular Weight of Nischarin: 190 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or F9 cell lysate: sc-2245.

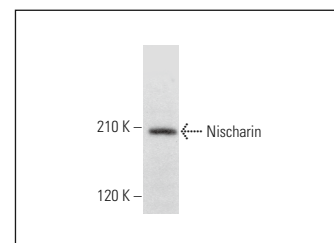
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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



Nischarin (B-3): sc-365364. Western blot analysis of Nischarin expression in Hep G2 (A) and HeLa (B) whole cell lysates.



Nischarin (B-3): sc-365364. Western blot analysis of Nischarin expression in F9 whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Gstrein, T., et al. 2018. Mutations in Vps15 perturb neuronal migration in mice and are associated with neurodevelopmental disease in humans. *Nat. Neurosci.* 21: 207-217.
2. Morandell, J., et al. 2021. Cul3 regulates cytoskeleton protein homeostasis and cell migration during a critical window of brain development. *Nat. Commun.* 12: 3058.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.