

# N-Shc (N-19): sc-6197

## BACKGROUND

Src homology (SH2) domains are noncatalytic sequences that are conserved among a number of cytoplasmic signaling proteins. These signaling proteins are directly regulated by receptor tyrosine kinases and control the activation of mitogenic signal transduction pathways by such receptors. For instance, ligand-induced activation of the EGF and PDGF receptors induces dimerization, triggers receptor autophosphorylation on tyrosine residues and results in the binding of a number of cytoplasmic SH2 domain proteins such as PLC  $\gamma$ 1, Ras GAP and PI 3-kinase to the activated receptors. Another gene, Shc, encodes two proteins with a single SH2 domain. A Shc-related gene N-Shc (for neuronal Shc), encodes a protein that contains two phosphotyrosine domains (PTB), a single SH2 domain and is expressed exclusively in the brain. Neither Shc nor N-Shc have any identifiable catalytic activity, suggesting them to be members of an expanding class of proteins that function to couple activated growth factor receptors to downstream signaling intermediates.

## REFERENCES

1. Ullrich, A. and Schlessinger, J. 1990. Signal transduction by receptors with tyrosine kinase activity. *Cell* 61: 203-212.
2. Morrison, D.K., et al. 1990. Platelet-derived growth factor (PDGF)-dependent association of phospholipase C- $\gamma$  with the PDGF receptor signaling complex. *Mol. Cell. Biol.* 10: 2359-2366.
3. Cantley, L.C., et al. 1991. Oncogenes and signal transduction. *Cell* 64: 281-302.
4. Koch, C.A., et al. 1991. SH2 and SH3 domains: elements that control interactions of cytoplasmic signaling proteins. *Science* 252: 669-674.
5. Mc Glade, J., et al. 1992. Shc proteins are phosphorylated and regulated by the v-Src and v-Fps protein-tyrosine kinases. *Proc. Natl. Acad. Sci. USA* 89: 8869-8873.
6. Pelicci, G., et al. 1992. A novel transforming protein (SHC) with an SH2 domain is implicated in mitogenic signal transduction. *Cell* 70: 93-104.

## CHROMOSOMAL LOCATION

Genetic locus: SHC3 (human) mapping to 9q22.1; Shc3 (mouse) mapping to 13 A5.

## SOURCE

N-Shc (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of N-Shc of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6197 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

N-Shc (N-19) is recommended for detection of N-Shc of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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 N-Shc siRNA (h): sc-40975, N-Shc siRNA (m): sc-40976, N-Shc shRNA Plasmid (h): sc-40975-SH, N-Shc shRNA Plasmid (m): sc-40976-SH, N-Shc shRNA (h) Lentiviral Particles: sc-40975-V and N-Shc shRNA (m) Lentiviral Particles: sc-40976-V.

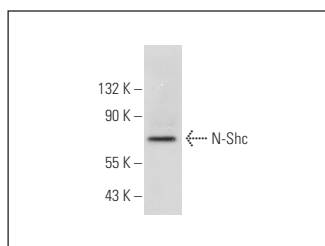
Molecular Weight of N-Shc: 66 kDa.

Positive Controls: rat brain extract: sc-2392, SH-SY5Y cell lysate: sc-3812 or BxPC-3 whole cell lysate.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



N-Shc (N-19): sc-6197. Western blot analysis of N-Shc expression in BxPC-3 whole cell lysate.

## STORAGE

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



Try **N-Shc (H-7): sc-365598** or **N-Shc (23): sc-135996**, our highly recommended monoclonal alternatives to N-Shc (N-19).