

## NCS-1 (G-4): sc-376206



The Power to Question

## BACKGROUND

NCS-1 (for neuronal calcium sensor-1, also designated frequenin) belongs to a highly conserved family of EF-hand-containing  $Ca^{2+}$ -binding proteins expressed mainly in neurons. NCS-1 is localized to neuronal cell bodies and axons throughout the brain and spinal cord. It is also expressed in glial cells and in neuroendocrine bovine adrenal chromaffin and PC12 cells. NCS-1 is a regulatory protein involved in  $Ca^{2+}$ -dependent exocytosis of synaptic vesicles and dense core granules. NCS-1 also functions in the voltage-independent autocrine pathway that negatively regulates non-L-type  $Ca^{2+}$  channels.

## CHROMOSOMAL LOCATION

Genetic locus: NCS1 (human) mapping to 9q34.11; Ncs1 (mouse) mapping to 2 B.

## SOURCE

NCS-1 (G-4) is a mouse monoclonal antibody raised against amino acids 1-190 representing full length NCS-1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NCS-1 (G-4) is available conjugated to agarose (sc-376206 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376206 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376206 PE), fluorescein (sc-376206 FITC), Alexa Fluor® 488 (sc-376206 AF488), Alexa Fluor® 546 (sc-376206 AF546), Alexa Fluor® 594 (sc-376206 AF594) or Alexa Fluor® 647 (sc-376206 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376206 AF680) or Alexa Fluor® 790 (sc-376206 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

NCS-1 (G-4) is recommended for detection of NCS-1 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NCS-1 (G-4) is also recommended for detection of NCS-1 in additional species, including porcine and avian.

Suitable for use as control antibody for NCS-1 siRNA (h): sc-36019, NCS-1 siRNA (m): sc-36020, NCS-1 siRNA (r): sc-270206, NCS-1 shRNA Plasmid (h): sc-36019-SH, NCS-1 shRNA Plasmid (m): sc-36020-SH, NCS-1 shRNA Plasmid (r): sc-270206-SH, NCS-1 shRNA (h) Lentiviral Particles: sc-36019-V, NCS-1 shRNA (m) Lentiviral Particles: sc-36020-V and NCS-1 shRNA (r) Lentiviral Particles: sc-270206-V.

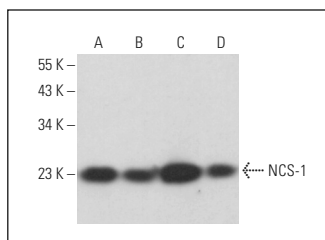
Molecular Weight of NCS-1: 21 kDa.

Positive Controls: Neuro-2A whole cell lysate: sc-364185, U-87 MG cell lysate: sc-2411 or T98G cell lysate: sc-2294.

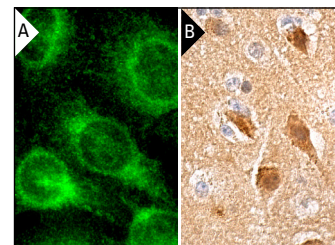
## RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



NCS-1 (G-4): sc-376206. Western blot analysis of NCS-1 expression in U-87 MG (A), T98G (B), SK-N-SH (C) and Neuro-2A (D) whole cell lysates.



NCS-1 (G-4): sc-376206. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human brain tissue showing nuclear and cytoplasmic staining of neuronal cells (B).

## SELECT PRODUCT CITATIONS

1. Uzureau, S., et al. 2020. APOL1 C-terminal variants may trigger kidney disease through interference with APOL3 control of actomyosin. Cell Rep. 30: 3821-3836.e13.

## 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.

## PROTOCOLS

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

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