

Neuroglycan C (A-7): sc-398051

BACKGROUND

Neuroglycan C is a brain-specific chondroitin sulfate proteoglycan (CSPG) implicated in the proliferation of neural stem and progenitor cells. Neuroglycan C is a single-pass membrane protein that can manifest as a part-time proteoglycan depending on the tissue expressing it. In its proteoglycan form, Neuroglycan C exhibits chondroitin sulfate glycans and functions as a receptor for midkine, a growth factor that binds heparin, to affect cytoskeletal changes. By means of ectodomain shedding, the ectodomain of Neuroglycan C is able to enhance neurite outgrowth from neurons. Neurite growth stimulation is affected by both an EGF-like and an acidic amino acid domain found on the shed ectodomain. Both domains instigate neurite growth, however, these domains exhibit differing functionality as to number of neurites produced and neuron types stimulated.

REFERENCES

1. Ishikawa, K., et al. 2006. Effects of single and repeated administration of methamphetamine or morphine on Neuroglycan C gene expression in the rat brain. *Int. J. Neuropsychopharmacol.* 9: 407-415.
2. Aono, S., et al. 2006. Expression and identification of a new splice variant of Neuroglycan C, a transmembrane chondroitin sulfate proteoglycan, in the human brain. *J. Neurosci. Res.* 83: 110-118.
3. Ida, M., et al. 2006. Identification and functions of chondroitin sulfate in the milieu of neural stem cells. *J. Biol. Chem.* 281: 5982-5991.
4. Nakanishi, K., et al. 2006. Identification of neurite outgrowth-promoting domains of Neuroglycan C, a brain-specific chondroitin sulfate proteoglycan, and involvement of phosphatidylinositol 3-kinase and protein kinase C signaling pathways in neuritogenesis. *J. Biol. Chem.* 281: 24970-24978.

CHROMOSOMAL LOCATION

Genetic locus: CSPG5 (human) mapping to 3p21.31.

SOURCE

Neuroglycan C (A-7) is a mouse monoclonal antibody raised against amino acids 181-276 mapping within an internal region of Neuroglycan C of human origin.

PRODUCT

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

Neuroglycan C (A-7) is available conjugated to agarose (sc-398051 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398051 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398051 PE), fluorescein (sc-398051 FITC), Alexa Fluor® 488 (sc-398051 AF488), Alexa Fluor® 546 (sc-398051 AF546), Alexa Fluor® 594 (sc-398051 AF594) or Alexa Fluor® 647 (sc-398051 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398051 AF680) or Alexa Fluor® 790 (sc-398051 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

Neuroglycan C (A-7) is recommended for detection of Neuroglycan C 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 Neuroglycan C siRNA (h): sc-62681, Neuroglycan C shRNA Plasmid (h): sc-62681-SH and Neuroglycan C shRNA (h) Lentiviral Particles: sc-62681-V.

Molecular Weight of Neuroglycan C: 150 kDa.

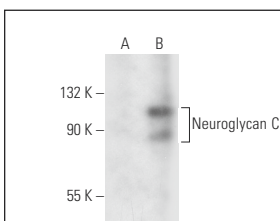
Molecular Weight of Neuroglycan C core glycoprotein: 120 kDa.

Positive Controls: Neuroglycan C (h): 293T Lysate: sc-129246 or human cerebral cortex extract: sc-516707.

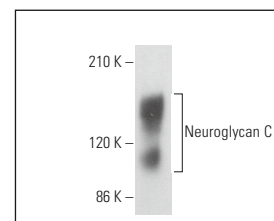
RECOMMENDED SUPPORT REAGENTS

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



Neuroglycan C (A-7): sc-398051. Western blot analysis of Neuroglycan C expression in non-transfected: sc-117752 (A) and human Neuroglycan C transfected: sc-129246 (B) 293T whole cell lysates.



Neuroglycan C (A-7): sc-398051. Western blot analysis of Neuroglycan C expression in human cerebral cortex tissue extract.

SELECT PRODUCT CITATIONS

1. Mereiter, S., et al. 2019. O-glycan truncation enhances cancer-related functions of CD44 in gastric cancer. *FEBS Lett.* 593: 1675-1689.

STORAGE

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

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