# SANTA CRUZ BIOTECHNOLOGY, INC.

# neurocan (650.24): sc-33663



### BACKGROUND

The lecticans are a family of chondroitin proteoglycans, including aggrecan, versican, neurocan and brevican, that contain a C-type lectin domain. Neurocan is a glycoprotein synthesized primarily by neurons, and its expression levels are highest during embryonic brain development and during the early postnatal period. Neurocan is a component of the extracellular matrix in the central nervous system that can bind to various other CNS matrix components, such as heparin, Tenascin-R, HB-GAM and NCAM, suggesting that it plays a role in axon guidance and neurite growth. Neurocan is a 1,257 amino acid, precursor protein in embryonic and neonatal rats that is proteolytically processed in the adult CNS into an N-terminal fragment, which localizes to the cytoplasm of glial cells. Neurocan expression (including the re-expression of the neonatal isoform) increases significantly in adults in the glial scar resulting from cortical injury.

# **CHROMOSOMAL LOCATION**

Genetic locus: NCAN (human) mapping to 19p13.11; Ncan (mouse) mapping to 8 B3.3.

#### SOURCE

neurocan (650.24) is a mouse monoclonal antibody immunized with purified proteoglycan fraction of neonatal rat brain.

## PRODUCT

Each vial contains 200  $\mu g$  lgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

neurocan (650.24) is available conjugated to agarose (sc-33663 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-33663 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-33663 PE), fluorescein (sc-33663 FITC), Alexa Fluor<sup>®</sup> 488 (sc-33663 AF488), Alexa Fluor<sup>®</sup> 546 (sc-33663 AF546), Alexa Fluor<sup>®</sup> 594 (sc-33663 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-33663 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-33663 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-33663 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

### **APPLICATIONS**

neurocan (650.24) is recommended for detection of neurocan 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for neurocan siRNA (h): sc-41901, neurocan siRNA (m): sc-41902, neurocan shRNA Plasmid (h): sc-41901-SH, neurocan shRNA Plasmid (m): sc-41902-SH, neurocan shRNA (h) Lentiviral Particles: sc-41901-V and neurocan shRNA (m) Lentiviral Particles: sc-41902-V.

Molecular Weight of full length neurocan: 220 kDa.

Molecular Weight of neurocan proteolytic variant: 140 kDa.

Positive Controls: rat brain extract: sc-2392, rat postnatal brain tissue extract or mouse brain extract: sc-2253.

#### **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<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

#### DATA





of neurocan expression in rat brain tissue extract

Detection reagent used: m-lgGK BP-HRP: sc-516102

neurocan (650.24): sc-33663. Western blot analysis of neurocan expression in mouse brain tissue extract Detection reagent used: m-IgG $\kappa$  BP-HRP: sc-516102.

# SELECT PRODUCT CITATIONS

 Gao, Q.S., et al. 2021. Brief inhalation of sevoflurane can reduce glial scar formation after hypoxic-ischemic brain injury in neonatal rats. Neural Regen Res. 16: 1052-1061.

# **STORAGE**

Store at 4° C, \*\*D0 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 for detailed protocols and support products.

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