

NCAM (123C3): sc-7326



The Power to Question

BACKGROUND

Neural cell adhesion molecules (NCAMs) are a family of closely related cell surface glycoproteins involved in cell to cell interactions during growth and thought to play an important role in embryogenesis and development. The expression of these molecules is widespread in all three germ layers during embryogenesis, but is more restrictive in adult tissues. NCAM expression is observed in a variety of human tumors including neuroblastomas, rhabdomyosarcomas, Wilms' tumor, Ewing's sarcoma and some primitive myeloid malignancies. Multiple isoforms of NCAM have been reported in both mouse and human brain tissue. In humans, NCAMs arise from differential splicing and use of alternative polyadenylation sites of a single gene mapping to 11q23.2.

CHROMOSOMAL LOCATION

Genetic locus: NCAM1 (human) mapping to 11q23.2; Ncam1 (mouse) mapping to 9 A5.3.

SOURCE

NCAM (123C3) is a mouse monoclonal antibody raised against the membrane preparation of a small cell lung carcinoma specimen of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NCAM (123C3) is available conjugated to agarose (sc-7326 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-7326 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-7326 PE), fluorescein (sc-7326 FITC), Alexa Fluor® 488 (sc-7326 AF488), Alexa Fluor® 546 (sc-7326 AF546), Alexa Fluor® 594 (sc-7326 AF594) or Alexa Fluor® 647 (sc-7326 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-7326 AF680) or Alexa Fluor® 790 (sc-7326 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

NCAM (123C3) is recommended for detection of NCAM of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells); also recommended for detection of neuroectodermally derived tumors such as neuroblastoma, medulloblastoma, astrocytoma and retinoblastoma.

Suitable for use as control antibody for NCAM siRNA (h): sc-29404, NCAM siRNA (m): sc-36017, NCAM shRNA Plasmid (h): sc-29404-SH, NCAM shRNA Plasmid (m): sc-36017-SH, NCAM shRNA (h) Lentiviral Particles: sc-29404-V and NCAM shRNA (m) Lentiviral Particles: sc-36017-V.

Molecular Weight of NCAM transmembrane isoforms: 140/180 kDa.

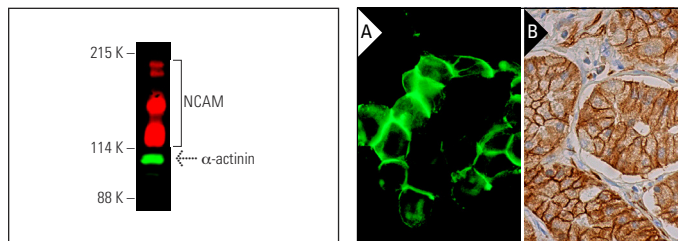
Molecular Weight of NCAM GPI-linked isoforms: 120/125 kDa.

Molecular Weight of NCAM soluble fragment: 110 kDa.

STORAGE

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

DATA



Simultaneous direct near-infrared western blot analysis of NCAM expression, detected with NCAM (123C3) Alexa Fluor® 790: sc-7326 AF790 and α -actinin expression, detected with α -actinin (H-2) Alexa Fluor® 680: sc-17829 AF680 in human cerebral cortex tissue extract. Blocked with UltraCruz® Blocking Reagent: sc-516214.

NCAM (123C3): sc-7326. Immunofluorescence staining of methanol-fixed IMR-32 cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing membrane and cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Fujimoto, I., et al. 2001. Regulation of cell adhesion by polysialic acid. Effects on cadherin, immunoglobulin cell adhesion molecule, and integrin function and independence from neural cell adhesion molecule binding or signaling activity. *J. Biol. Chem.* 276: 31745-31751.
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- Gururajan, M., et al. 2015. SRC family kinase FYN promotes the neuroendocrine phenotype and visceral metastasis in advanced prostate cancer. *Oncotarget* 6: 44072-44083.
- Skog, M.S., et al. 2016. Expression of neural cell adhesion molecule and polysialic acid in human bone marrow-derived mesenchymal stromal cells. *Stem Cell Res. Ther.* 7: 113.
- Fu, B., et al. 2017. Natural killer cells promote fetal development through the secretion of growth-promoting factors. *Immunity* 47: 1100-1113.
- Coppieters, N., et al. 2018. Polysialic acid masks neural cell adhesion molecule antigenicity. *Brain Res.* 1710: 199-208.
- Cassetta, L., et al. 2019. Human tumor-associated macrophage and monocyte transcriptional landscapes reveal cancer-specific reprogramming, biomarkers, and therapeutic targets. *Cancer Cell* 35: 588-602.
- Plaza Reyes, A., et al. 2020. Identification of cell surface markers and establishment of monolayer differentiation to retinal pigment epithelial cells. *Nat. Commun.* 11: 1609.

RESEARCH USE

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

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