

NCAM (RNL-1): sc-53007

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.

REFERENCES

1. Edelman, G.M. 1985. Cell adhesion and the molecular processes of morphogenesis. *Annu. Rev. Biochem.* 54: 135-169.
2. Cunningham, B.A., et al. 1987. Neural cell adhesion molecule: structure, immunoglobulin-like domains, cell surface modulation and alternative RNA splicing. *Science* 236: 799-806.

CHROMOSOMAL LOCATION

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

SOURCE

NCAM (RNL-1) is a mouse monoclonal antibody raised against a small cell lung cancer cell line NCI-H82 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.

APPLICATIONS

NCAM (RNL-1) is recommended for detection of NCAM isoforms 120, 140 and secreted 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for NCAM siRNA (h): sc-29404, NCAM siRNA (m): sc-36017, NCAM siRNA (r): sc-156119, NCAM shRNA Plasmid (h): sc-29404-SH, NCAM shRNA Plasmid (m): sc-36017-SH, NCAM shRNA Plasmid (r): sc-156119-SH, NCAM shRNA (h) Lentiviral Particles: sc-29404-V, NCAM shRNA (m) Lentiviral Particles: sc-36017-V and NCAM shRNA (r) Lentiviral Particles: sc-156119-V.

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

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

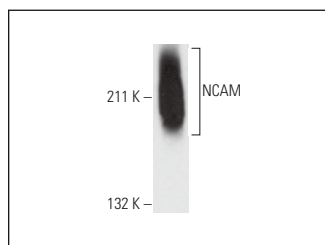
Molecular Weight of NCAM soluble fragment: 110 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, HeLa whole cell lysate: sc-2200 or SK-N-SH cell lysate: sc-2410.

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



NCAM (RNL-1): sc-53007. Western blot analysis of NCAM expression in IMR-32 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Valles-Ayoub, Y., et al. 2012. Serum neural cell adhesion molecule is hyposialylated in hereditary inclusion body myopathy. *Genet. Test. Mol. Biomarkers* 16: 313-317.
2. Leoyklang, P., et al. 2014. Sialylation of Thomsen-Friedenreich antigen is a noninvasive blood-based biomarker for GNE myopathy. *Biomark. Med.* 8: 641-652.
3. Chaudhuri, S., et al. 2015. Disease relevance of T11TS-induced T-cell signal transduction through the CD2-mediated calcineurin-NFAT pathway: perspectives in glioma immunotherapy. *Mol. Immunol.* 67: 256-264.

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 for detailed protocols and support products.



See **NCAM (123C3): sc-7326** for NCAM antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.