SANTA CRUZ BIOTECHNOLOGY, INC.

NCAM (1.BB.495): sc-71648

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.

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.
3. Lipinski, M., et al. 1987. Characterization of neural cell adhesion molecules (NCAM) expressed by Ewing and neuroblastoma cell lines. Int. J. Cancer 40: 81-86.
4. Walsh, F.S. 1988. The NCAM gene is a complex transcriptional unit. Neurochem. Int. 12: 263-267.
5. Roth, J., et al. 1988. Presence of the long chain form of polysialic acid of the neural cell adhesion molecule in Wilms' tumor: identification of a cell adhesion molecule as an oncodevelopmental antigen and implications for tumor histogenesis. Am. J. Pathol. 133: 227-240.
6. Lanier, L.L., et al. 1989. Identity of Leu-19 (CD56) leucocyte differentiation antigen and neural cell adhesion molecule. J. Exp. Med. 169: 2233-2238.
7. Figarella-Branger, D.F., et al. 1990. Differential spectrum of expression of neural cell adhesion molecule isoforms and L1 adhesion molecules on neuroectodermal tumors. Cancer Res. 50: 6364-6370.
8. Phimister, E., et al. 1991. Expression of neural cell adhesion molecule (NCAM) isoforms in neuroblastoma. J. Clin. Pathol. 44: 580-585.

CHROMOSOMAL LOCATION

Genetic locus: NCAM1 (human) mapping to 11q23.1; Ncam1 (mouse) mapping to 9 A5.3.

SOURCE

NCAM (1.BB.495) is a rat monoclonal antibody raised against a glycoprotein fraction from neonatal brain of mouse origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide, 0.1% gelatin and 1% BSA.

APPLICATIONS

NCAM (1.BB.495) is recommended for detection of NCAM of mouse 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 (m): sc-36017, NCAM shRNA Plasmid (m): sc-36017-SH 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.

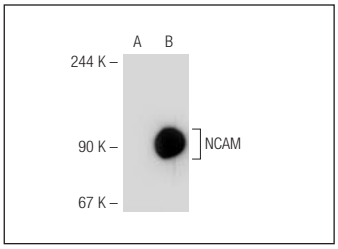
Molecular Weight of NCAM soluble fragment: 110 kDa.

Positive Contros: NCAM (m): 293T Lysate: sc-121950.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rat IgG-HRP: sc-2006 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-rat IgG-HRP: sc-2032 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rat IgG-FITC: sc-2011 (dilution range: 1:100-1:400) or goat anti-rat IgG-TR: sc-2782 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



NCAM (1.BB.495): sc-71648. Western blot analysis of NCAM expression in non-transfected: sc-117752 (**A**) and mouse NCAM transfected: sc-121950 (**B**) 293T whole cell lysates.

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.