# NCAM (D-10): sc-374289

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BIOTECHNOLOGY

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## 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, rhabdo-myosarcomas, 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.

## SOURCE

NCAM (D-10) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of NCAM 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.

## APPLICATIONS

NCAM (D-10) is recommended for detection of NCAM 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), immunohistochemistry (including paraffin-embedded sections) (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 NCAM siRNA (h): sc-29404, NCAM shRNA Plasmid (h): sc-29404-SH and NCAM shRNA (h) Lentiviral Particles: sc-29404-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: SK-N-SH cell lysate: sc-2410, U-87 MG cell lysate: sc-2411 or NCAM (h2): 293T Lysate: sc-177603.

## 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) Immunopre-cipitation: 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. 4) Immuno-histochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA
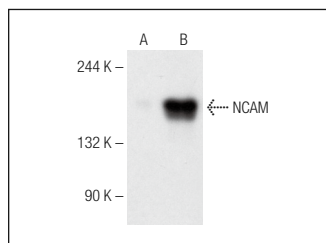


NCAM (D-10): sc-374289. Western blot analysis of NCAM expression in non-transfected: sc-117752 (**A**) and human NCAM transfected: sc-177603 (**B**) 293T whole cell lysates.
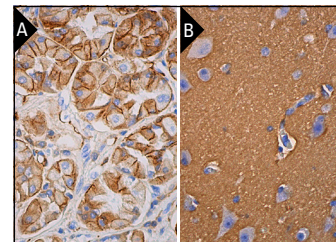
NCAM (D-10): sc-374289. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing membrane and cytoplasmic staining of glandular cells (**A**) and human cerebral cortex tissue showing neuropil staining (**B**).

## 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.

CONJUGATES

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