SANTA CRUZ BIOTECHNOLOGY, INC.

NCAM-L1 (C-2): sc-514360

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cell adhesion molecules are a family of closely related cell surface glycoproteins involved in cell-cell interactions during growth and are thought to play an important role in embryogenesis and development. Neuronal cell adhesion molecule (NCAM) expression is observed in a variety of human tumors, including neuroblastomas, rhabdomyosarcomas, Wilm's tumors, Ewing's sarcomas and some primitive myeloid malignancies. The NCAM-L1 adhesion molecule (CD171) plays an important role in axon guidance and cell migration in the nervous system. The presence of NCAM-L1 might contribute to tumor progression by promoting cell adhesion and migration and is known to be expressed by neurons, neuroblastomas and other malignant tumors.

REFERENCES

1. Kemshead, J.T., et al. 1983. Monoclonal antibody UJ 127:11 detects a 220,000-240,000 kDa glycoprotein present on a sub-set of neuroectodermally derived cells. Int. J. Cancer 31: 187-195.
2. Bourne, S., et al. 1989. Monoclonal antibodies M340 and UJ181.4 recognize antigens associated with primitive neuroectodermal tumours/tissues. Hybridoma 8: 415-426.

CHROMOSOMAL LOCATION

Genetic locus: L1CAM (human) mapping to Xq28; L1cam (mouse) mapping to X A7.3.

SOURCE

NCAM-L1 (C-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1231-1258 within a C-terminal cytoplasmic domain of NCAM-L1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NCAM-L1 (C-2) is available conjugated to agarose (sc-514360 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514360 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514360 PE), fluorescein (sc-514360 FITC), Alexa Fluor® 488 (sc-514360 AF488), Alexa Fluor® 546 (sc-514360 AF546), Alexa Fluor® 594 (sc-514360 AF594) or Alexa Fluor® 647 (sc-514360 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514360 AF680) or Alexa Fluor® 790 (sc-514360 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514360 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

NCAM-L1 (C-2) is recommended for detection of NCAM-L1 of mouse, rat and 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).

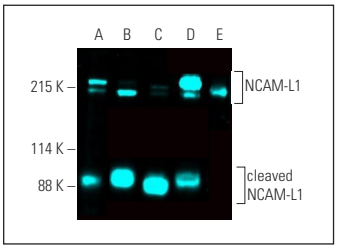
Suitable for use as control antibody for NCAM-L1 siRNA (h): sc-43172, NCAM-L1 siRNA (m): sc-43173, NCAM siRNA (r): sc-156119, NCAM-L1 shRNA Plasmid (h): sc-43172-SH, NCAM-L1 shRNA Plasmid (m): sc-43173-SH, NCAM shRNA Plasmid (r): sc-156119-SH, NCAM-L1 shRNA (h) Lentiviral Particles: sc-43172-V, NCAM-L1 shRNA (m) Lentiviral Particles: sc-43173-V and NCAM shRNA (r) Lentiviral Particles: sc-156119-V.

Molecular Weight of NCAM-L1 proteolytically cleaved form: 85 kDa.

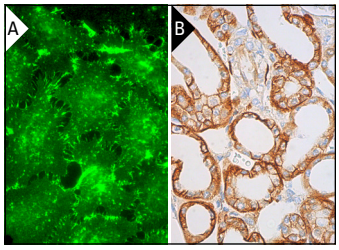
Molecular Weight of NCAM-L1 full length isoforms: 140/180/220 kDa.

Positive Controls: Neuro-2A whole cell lysate: sc-364185, IMR-32 cell lysate: sc-2409 or HeLa whole cell lysate: sc-2200.

DATA



NCAM-L1 (C-2) Alexa Fluor® 647: sc-514360 AF647. Direct fluorescent western blot analysis of NCAM-L1 expression in Neuro-2A (**A**), HS 294T (**B**), IMR-32 (**C**), HeLa (**D**) and SH-SY5Y (**E**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.



NCAM-L1 (C-2): sc-514360. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane and focal adhesions localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing membrane and cytoplasmic staining of cells in tubules (**B**).

SELECT PRODUCT CITATIONS

1. Mustapic, M., et al. 2017. Plasma extracellular vesicles enriched for neuronal origin: a potential window into brain pathologic processes. Front. Neurosci. 11: 278.
2. Loers, G., et al. 2022. The cell adhesion molecule L1 interacts with methyl CpG binding protein 2 via its intracellular domain. Int. J. Mol. Sci. 23: 3554.
3. Kleene, R., et al. 2023. The KDET motif in the intracellular domain of the cell adhesion molecule L1 interacts with several nuclear, cytoplasmic, and mitochondrial proteins essential for neuronal functions. Int. J. Mol. Sci. 24: 932.

RESEARCH USE

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