

NCAM-L1 (5G3): sc-33686

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.

CHROMOSOMAL LOCATION

Genetic locus: L1CAM (human) mapping to Xq28.

SOURCE

NCAM-L1 (5G3) is a mouse monoclonal antibody raised against neuroblastoma cell line SK-N-AS 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.

NCAM-L1 (5G3) is available conjugated to agarose (sc-33686 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-33686 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-33686 PE), fluorescein (sc-33686 FITC), Alexa Fluor® 488 (sc-33686 AF488), Alexa Fluor® 546 (sc-33686 AF546), Alexa Fluor® 594 (sc-33686 AF594) or Alexa Fluor® 647 (sc-33686 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-33686 AF680) or Alexa Fluor® 790 (sc-33686 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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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 (5G3) is recommended for detection of NCAM-L1 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) and flow cytometry (1 µg per 1 x 10⁶ cells).

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

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

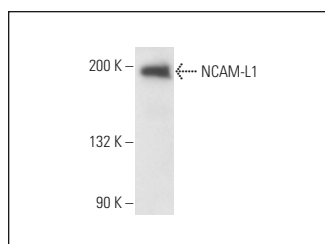
Molecular Weight of NCAM-L1 proteolytically cleaved form: 85 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, HeLa whole cell lysate: sc-2200 or SK-N-MC cell lysate: sc-2237.

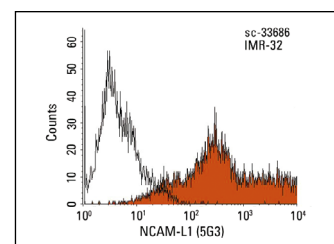
RECOMMENDED SUPPORT REAGENTS

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-L1 (5G3): sc-33686. Western blot analysis of NCAM-L1 expression in IMR-32 whole cell lysate.



NCAM-L1 (5G3): sc-33686. Indirect FCM analysis of IMR-32 cells stained with NCAM-L1 (5G3), followed by PE-conjugated goat anti-mouse IgG_{2a}: sc-3765. Black line histogram represents the isotype control, normal mouse IgG_{2a}: sc-3878.

SELECT PRODUCT CITATIONS

- Li, Y. and Galileo, D.S. 2010. Soluble L1CAM promotes breast cancer cell adhesion and migration *in vitro*, but not invasion. *Cancer Cell Int.* 10: 34.
- Chen, D.L., et al. 2013. L1cam promotes tumor progression and metastasis and is an independent unfavorable prognostic factor in gastric cancer. *J. Hematol. Oncol.* 6: 43.
- Linneberg, C., et al. 2019. L1cam-mediated developmental processes of the nervous system are differentially regulated by proteolytic processing. *Sci. Rep.* 9: 3716.
- Di, J., et al. 2021. The molecular tweezer CLR01 improves behavioral deficits and reduces tau pathology in P301S-Tau transgenic mice. *Alzheimers Res. Ther.* 13: 6.
- Dutta, S., et al. 2021. α-synuclein in blood exosomes immunoprecipitated using neuronal and oligodendroglial markers distinguishes Parkinson's disease from multiple system atrophy. *Acta Neuropathol.* 142: 495-511.
- Giordano, M., et al. 2021. L1CAM promotes ovarian cancer stemness and tumor initiation via FGFR1/SRC/STAT3 signaling. *J. Exp. Clin. Cancer Res.* 40: 319.

RESEARCH USE

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