## SANTA CRUZ BIOTECHNOLOGY, INC.

# 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  $\mu g$   $lgG_{2a}$  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  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> 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<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> 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  $\lg G_{2a}$ : sc-3765. Black line histogram represents the isotype control, normal mouse  $\lg G_{2a}$ : 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.
- 4. 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.
- 7. Hasan, M.N., et al. 2023. Flow cytometry-based quantification of genome editing efficiency in human cell lines using the L1CAM gene. PLoS ONE 18: e0294146.

## **RESEARCH USE**

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