SANTA CRUZ BIOTECHNOLOGY, INC.

NUMB (48): sc-136554

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Neuronal cell fate decisions are directed in *Drosophila* by NUMB, a signaling adapter protein with two protein-protein interaction domains: a phosphotyrosine-binding domain and a proline-rich SH3-binding region (PRR). Mammalian NUMB homologs play a role in the determination of cell fates during development and bind with Eps15, LNX1 and Notch 1. Conditional mouse mutants with deletion of NUMB in developing sensory ganglia show a reduction in axonal arborization in afferent fibers. Changes in cellular calcium homeostasis influences NUMB-dependent cell fate decisions during development of the nervous system. Chicken NUMB (c-NUMB) protein is localized to the basal cortex of mitotic neuroepithelial cells.

CHROMOSOMAL LOCATION

Genetic locus: NUMB (human) mapping to 14q24.2; Numb (mouse) mapping to 12 D1.

SOURCE

NUMB (48) is a mouse monoclonal antibody raised against amino acids 176-291 of NUMB of mouse 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-136554 X, 200 µg/0.1 ml.

NUMB (48) is available conjugated to agarose (sc-136554 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-136554 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-136554 PE), fluorescein (sc-136554 FITC), Alexa Fluor® 488 (sc-136554 AF488), Alexa Fluor® 594 (sc-136554 AF594) or Alexa Fluor® 647 (sc-136554 AF647), 200 µg/ml, for IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-136554 AF680) or Alexa Fluor® 790 (sc-136554 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

NUMB (48) is recommended for detection of NUMB of mouse, rat, human and canine 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 NUMB siRNA (h): sc-42146, NUMB siRNA (m): sc-42147, NUMB shRNA Plasmid (h): sc-42146-SH, NUMB shRNA Plasmid (m): sc-42147-SH, NUMB shRNA (h) Lentiviral Particles: sc-42146-V and NUMB shRNA (m) Lentiviral Particles: sc-42147-V.

NUMB (48) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of NUMB isoforms: 65/66/71/72 kDa.

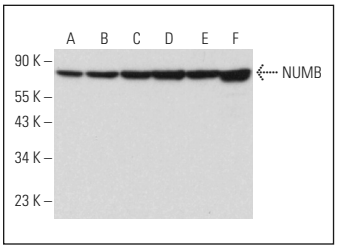
Molecular Weight (observed) of NUMB: 78 kDa.

Positive Controls: c4 whole cell lysate: sc-364186, C6 whole cell lysate: sc-364373 or U-87 MG cell lysate: sc-2411.

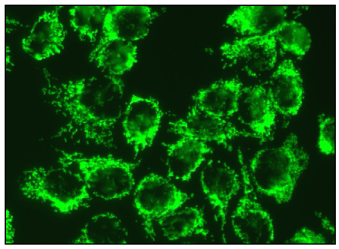
STORAGE

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

DATA



NUMB (48): sc-136554. Western blot analysis of NUMB expression in C6 (**A**), U-87 MG (**B**), Neuro-2A (**C**), c4 (**D**), Hep G2 (**E**) and T98G (**F**) whole cell lysates.



NUMB (48): sc-136554. Immunofluorescence staining of formalin-fixed HeLa cells showing cytoplasmic vesicles localization.

SELECT PRODUCT CITATIONS

1. Lian, W., et al. 2017. AP-2α reverses vincristine-induced multidrug resistance of SGC7901 gastric cancer cells by inhibiting the Notch pathway. Apoptosis 22: 933-941.
2. Lapierre, L.A., et al. 2017. Interaction of phosphorylated Rab11-FIP2 with Eps15 regulates apical junction composition. Mol. Biol. Cell 28: 1088-1100.
3. Loeffler, D., et al. 2019. Asymmetric lysosome inheritance predicts activation of haematopoietic stem cells. Nature 573: 426-429.
4. Chen, M., et al. 2021. Farnesoid X receptor via Notch1 directs asymmetric cell division of Sox9+ cells to prevent the development of liver cancer in a mouse model. Stem Cell Res. Ther. 12: 232.
5. Li, M.R., et al. 2022. MAD2B promotes podocyte injury through regulating NUMB-dependent Notch 1 pathway in diabetic nephropathy. Int. J. Biol. Sci. 18: 1896-1911.
6. Im, D.S., et al. 2022. Cdk5-mediated JIP1 phosphorylation regulates axonal outgrowth through Notch1 inhibition. BMC Biol. 20: 115.
7. Sasamoto, Y., et al. 2022. Limbal BCAM expression identifies a proliferative progenitor population capable of holoclone formation and corneal differentiation. Cell Rep. 40: 111166.
8. Guo, Y., et al. 2023. UBE2S and UBE2C confer a poor prognosis to breast cancer via downregulation of NUMB. Front. Oncol. 13: 992233.

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.