SANTA CRUZ BIOTECHNOLOGY, INC.

NUMB (P-20): sc-15590

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.

REFERENCES

1. Spana, E.P., et al. 1995. Asymmetric localization of NUMB autonomously determines sibling neuron identity in the *Drosophila* CNS. Development 121: 3489-3494.
2. Spana, E.P., et al. 1996. NUMB antagonizes Notch signaling to specify sibling neuron cell fates. Neuron 17: 21-26.

CHROMOSOMAL LOCATION

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

SOURCE

NUMB (P-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of NUMB of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-15594 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NUMB (P-20) is recommended for detection of NUMB of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

NUMB (P-20) is also recommended for detection of NUMB in additional species, including equine, canine, bovine and porcine.

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.

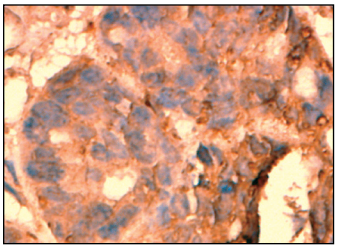
Molecular Weight (predicted) of NUMB isoforms: 65/66/71/72 kDa.

Molecular Weight (observed) of NUMB: 78 kDa.

STORAGE

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

DATA



NUMB (P-20): sc-15590. Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing membrane localization.

SELECT PRODUCT CITATIONS

1. Yogosawa, S., et al. 2003. Mammalian NUMB is a target protein of MDM2, ubiquitin ligase. Biochem. Biophys. Res. Commun. 302: 869-872.
2. Di Marcotullio, L., et al. 2006. NUMB is a suppressor of Hedgehog signalling and targets Gli1 for Itch-dependent ubiquitination. Nat. Cell Biol. 8: 1415-1423.
3. Kyriazis, G.A., et al. 2008. NUMB endocytic adapter proteins regulate the transport and processing of the amyloid precursor protein in an isoform-dependent manner: implications for Alzheimer disease pathogenesis. J. Biol. Chem. 283: 25492-25502.
4. Gulino, R., et al. 2010. Expression of cell fate determinants and plastic changes after neurotoxic lesion of adult mice spinal cord by cholera toxin-B saporin. Eur. J. Neurosci. 31: 1423-1434.
5. Kyriazis, G.A., et al. 2010. Stress-induced switch in Numb isoforms enhances Notch-dependent expression of subtype-specific transient receptor potential channel. J. Biol. Chem. 285: 6811-6825.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.