



# neurolysin (B-3): sc-398420

## BACKGROUND

Oligopeptidases are endopeptidases that act only on smaller polypeptides or oligopeptides. These enzymes are believed to influence biological functions that include the modification or destruction of peptide messenger molecules. Oligopeptidases have few naturally occurring inhibitors and possess a distinct specificity that prevents them from interacting with the ubiquitous protease inhibitor,  $\alpha$ 2-Macroglobulin. Neuropeptidases are oligopeptidases that modify the activity of small peptide neurotransmitters and neurohormones. The neuropeptidase neurolysin is a zinc dependent metallopeptidase that acts only on short peptides and accepts a variety of cleavage-site sequences. The connecting loop regions of the five-stranded  $\beta$ -sheet and the two active site helices are extended in neurolysin and may account for the ability of the enzyme to cleave a variety of sequences. Neurolysin is ubiquitously expressed within brain and specifically localizes to neuronal perikarya in rat brain.

## REFERENCES

1. Barrett, A.J., et al. 1992. Oligopeptidases, and the emergence of the prolyl oligopeptidase family. *Biol. Chem. Hoppe Seyler* 373: 353-360.
2. Serizawa, A., et al. 1995. Characterization of a mitochondrial metallopeptidase reveals neurolysin as a homologue of thimet oligopeptidase. *J. Biol. Chem.* 270: 2092-2098.
3. Massarelli, E.E., et al. 1999. Differential subcellular distribution of neurolysin (EC 3.4.24.16) and thimet oligopeptidase (EC 3.4.24.15) in the rat brain. *Brain Res.* 851: 261-265.
4. Lian, W., et al. 2000. Crystallization and preliminary analysis of neurolysin. *Acta Crystallogr. D Biol. Crystallogr.* 56: 1644-1646.
5. Brown, C.K., et al. 2001. Structure of neurolysin reveals a deep channel that limits substrate access. *Proc. Natl. Acad. Sci. USA* 98: 3127-3132.

## CHROMOSOMAL LOCATION

Genetic locus: NLN (human) mapping to 5q12.3.

## SOURCE

neurolysin (B-3) is a mouse monoclonal antibody raised against amino acids 644-704 mapping at the C-terminus of neurolysin of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG $\kappa$  light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

neurolysin (B-3) is available conjugated to agarose (sc-398420 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398420 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398420 PE), fluorescein (sc-398420 FITC), Alexa Fluor<sup>®</sup> 488 (sc-398420 AF488), Alexa Fluor<sup>®</sup> 546 (sc-398420 AF546), Alexa Fluor<sup>®</sup> 594 (sc-398420 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-398420 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-398420 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-398420 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

neurolysin (B-3) is recommended for detection of neurolysin 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for neurolysin siRNA (h): sc-42089, neurolysin shRNA Plasmid (h): sc-42089-SH and neurolysin shRNA (h) Lentiviral Particles: sc-42089-V.

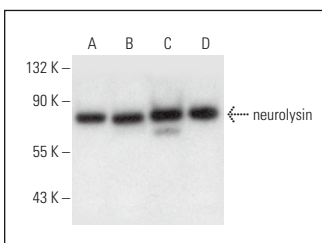
Molecular Weight of neurolysin: 75 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or A549 cell lysate: sc-2413.

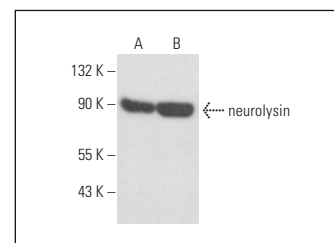
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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



neurolysin (B-3): sc-398420. Western blot analysis of neurolysin expression in HeLa (A), Hep G2 (B), A549 (C) and MCF7 (D) whole cell lysates.



neurolysin (B-3): sc-398420. Western blot analysis of neurolysin expression in HeLa (A) and Caco-2 (B) whole cell lysates.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.