

# neurolysin (Y-18): sc-18250

## 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: Pt 12: 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; Nln (mouse) mapping to 13 D1.

## SOURCE

neurolysin (Y-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of neurolysin of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-18250 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

neurolysin (Y-18) is recommended for detection of neurolysin 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

neurolysin (Y-18) is also recommended for detection of neurolysin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for neurolysin siRNA (h): sc-42089, neurolysin siRNA (m): sc-42090, neurolysin shRNA Plasmid (h): sc-42089-SH, neurolysin shRNA Plasmid (m): sc-42090-SH, neurolysin shRNA (h) Lentiviral Particles: sc-42089-V and neurolysin shRNA (m) Lentiviral Particles: sc-42090-V.

Molecular Weight of neurolysin: 75 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## 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) or our catalog for detailed protocols and support products.



Try **neurolysin (B-3): sc-398420** or **neurolysin (35): sc-136335**, our highly recommended monoclonal alternatives to neurolysin (Y-18).