

neurolysin (35): sc-136335

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, α 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 β -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; Nln (mouse) mapping to 13 D1.

SOURCE

neurolysin (35) is a mouse monoclonal antibody raised against amino acids 2-108 of neurolysin of rat origin.

PRODUCT

Each vial contains 200 μ g IgA in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

PROTOCOLS

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

APPLICATIONS

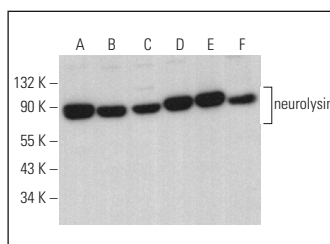
neurolysin (35) is recommended for detection of neurolysin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

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.

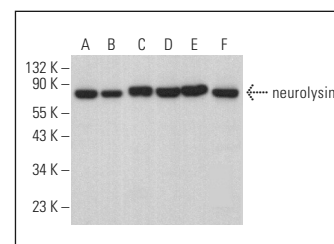
Molecular Weight of neurolysin: 75 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, EOC 20 whole cell lysate: sc-364187 or IMR-32 cell lysate: sc-2409.

DATA



neurolysin (35): sc-136335. Western blot analysis of neurolysin expression in Hep G2 (A), c4 (B), PC-12 (C), MCF7 (D), ES-2 (E) and NIH/3T3 (F) whole cell lysates.



neurolysin (35): sc-136335. Western blot analysis of neurolysin expression in Neuro-2A (A), EOC 20 (B), H4 (C), IMR-32 (D) and HeLa (E) whole cell lysates and mouse postnatal brain tissue extract (F).

RESEARCH USE

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