

# NPEPL1 (N-13): sc-86765

## BACKGROUND

Aminopeptidases are widely distributed in eukaryotes and prokaryotes. These enzymes catalyze the removal of amino acids from the N-termini of proteins or peptide substrates. Aminopeptidases are involved in regulating hormone levels and are essential for digestive and intracellular protein metabolism. NPEPL1, also referred to as aminopeptidase-like 1, is a 523 amino acid protein that belongs to the peptidase M17 family and is ubiquitously expressed. NPEPL1 may be involved in the processing, catabolism and degradation of intracellular proteins by catalyzing the removal of unsubstituted N-terminal amino acids from various peptides. NPEPL1 contains several zinc binding sites and is expressed as three isoforms due to alternative splicing events.

## REFERENCES

1. Taylor, A. 1993. Aminopeptidases: structure and function. *FASEB J.* 7: 290-298.
2. Taylor, A. 1993. Aminopeptidases: towards a mechanism of action. *Trends Biochem. Sci.* 18: 167-171.
3. Meinel, T., et al. 2006. Impact of the N-terminal amino acid on targeted protein degradation. *Biol. Chem.* 387: 839-851.
4. Herrera-Camacho, I., et al. 2007. Biochemical characterization and structural prediction of a novel cytosolic leucyl aminopeptidase of the M17 family from *Schizosaccharomyces pombe*. *FEBS J.* 274: 6228-6240.
5. Chen, S.L., et al. 2008. Peptide hydrolysis by the binuclear zinc enzyme aminopeptidase from *Aeromonas proteolytica*: a density functional theory study. *J. Phys. Chem. B* 112: 2494-2500.
6. SWISS-PROT/TrEMBL (Q8NDH3). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

## CHROMOSOMAL LOCATION

Genetic locus: NPEPL1 (human) mapping to 20q13.32; Npepl1 (mouse) mapping to 2 H4.

## SOURCE

NPEPL1 (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of NPEPL1 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-86765 P, (100 µg 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.

## RESEARCH USE

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

## APPLICATIONS

NPEPL1 (N-13) is recommended for detection of NPEPL1 of mouse 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).

Suitable for use as control antibody for NPEPL1 siRNA (h): sc-75953, NPEPL1 siRNA (m): sc-150049, NPEPL1 shRNA Plasmid (h): sc-75953-SH, NPEPL1 shRNA Plasmid (m): sc-150049-SH, NPEPL1 shRNA (h) Lentiviral Particles: sc-75953-V and NPEPL1 shRNA (m) Lentiviral Particles: sc-150049-V.

Molecular Weight of NPEPL1: 56 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.

## PROTOCOLS

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