

# NPEPL1 (B-12): sc-100556

## 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., Serero, A. and Giglione, C. 2006. Impact of the N-terminal amino acid on targeted protein degradation. *Biol. Chem.* 387: 839-851.
4. Herrera-Camacho, I., Rosas-Murrieta, N.H., Rojo-Domínguez, A., Millán, L., Reyes-Leyva, J., Santos-López, G. and Suárez-Rendueles, P. 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., Marino, T., Fang, W.H., Russo, N. and Himo, F. 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 .

## SOURCE

NPEPL1 (B-12) is a mouse monoclonal antibody raised against recombinant NPEPL1 of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>3</sub> kappa light chain in 1.0 ml of 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](http://www.scbt.com) for detailed protocols and support products.

## APPLICATIONS

NPEPL1 (B-12) is recommended for detection of NPEPL1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 NPEPL1 siRNA (h): sc-75953, NPEPL1 shRNA Plasmid (h): sc-75953-SH and NPEPL1 shRNA (h) Lentiviral Particles: sc-75953-V.

Molecular Weight of NPEPL1: 56 kDa.

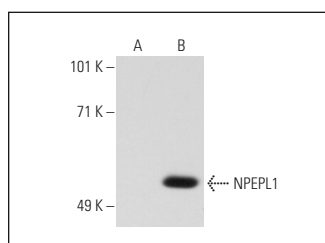
Positive Controls: MCF7 whole cell lysate: sc-2206 or NPEPL1 (h): 293 Lysate: sc-113179.

## RECOMMENDED SUPPORT REAGENTS

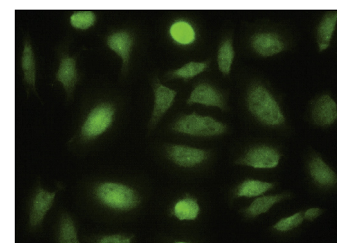
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



NPEPL1 (B-12): sc-100556. Western blot analysis of NPEPL1 expression in non-transfected: sc-110760 (A) and human NPEPL1 transfected: sc-113179 (B) 293 whole cell lysates.



NPEPL1 (B-12): sc-100556. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear localization.

## RESEARCH USE

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