

NPEPL1 (E-10): sc-515463

BACKGROUND

Amino peptidases are widely distributed in eukaryotes and prokaryotes. These enzymes catalyze the removal of amino acids from the N-termini of proteins or peptide substrates. Amino peptidases are involved in regulating hormone levels and are essential for digestive and intracellular protein metabolism. NPEPL1, also referred to as amino peptidase-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

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- Meinzel, T., Serero, A. and Giglione, C. 2006. Impact of the N-terminal amino acid on targeted protein degradation. *Biol. Chem.* 387: 839-851.
- 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 amino peptidase of the M17 family from *Schizosaccharomyces pombe*. *FEBS J.* 274: 6228-6240.
- Chen, S.L., Marino, T., Fang, W.H., Russo, N. and Himo, F. 2008. Peptide hydrolysis by the binuclear zinc enzyme amino peptidase from *Aeromonas proteolytica*: a density functional theory study. *J. Phys. Chem. B.* 112: 2494-2500.

CHROMOSOMAL LOCATION

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

SOURCE

NPEPL1 (E-10) is a mouse monoclonal antibody raised against amino acids 55-112 mapping near the N-terminus of NPEPL1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NPEPL1 (E-10) is available conjugated to agarose (sc-515463 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515463 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515463 PE), fluorescein (sc-515463 FITC), Alexa Fluor® 488 (sc-515463 AF488), Alexa Fluor® 546 (sc-515463 AF546), Alexa Fluor® 594 (sc-515463 AF594) or Alexa Fluor® 647 (sc-515463 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515463 AF680) or Alexa Fluor® 790 (sc-515463 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

NPEPL1 (E-10) is recommended for detection of NPEPL1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 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.

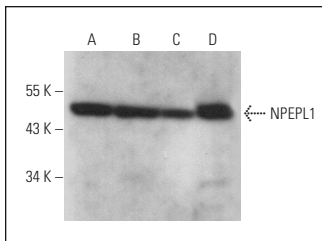
Molecular Weight of NPEPL1: 56 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, NPEPL1 (h): 293 Lysate: sc-113179 or MCF7 whole cell lysate: sc-2206.

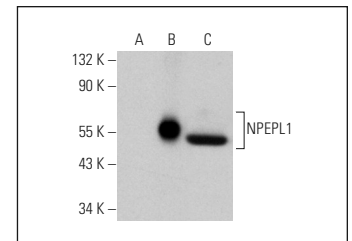
RECOMMENDED SUPPORT REAGENTS

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 (E-10): sc-515463. Western blot analysis of NPEPL1 expression in MCF7 (A), A549 (B), A-431 (C) and C2C12 (D) whole cell lysates.



NPEPL1 (E-10): sc-515463. Western blot analysis of NPEPL1 expression in non-transfected 293: sc-110760 (A), human NPEPL1 transfected 293: sc-113179 (B) and MCF7 (C) 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.

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