

# LAP3 (E-24): sc-130800

## BACKGROUND

LAP3 (leucine aminopeptidase 3), also known as LAPEP or PEPS, is a 519 amino acid protein that localizes to the cytoplasm and belongs to the peptidase M17 family. Existing as a homohexamer, LAP3 uses zinc as a cofactor to catalyze the release of an N-terminal proline from a target peptide and is, therefore, involved in the processing and turnover of intracellular proteins. Multiple isoforms of LAP3 exist due to alternative splicing events. The gene encoding LAP3 maps to human chromosome 4, which houses nearly 6% of the human genome and has the largest gene deserts (regions of the genome with no protein encoding genes) of all of the human chromosomes. Defects in some of the genes located on chromosome 4 are associated with Huntington's disease, Ellis-van Creveld syndrome, methylmalonic acidemia and polycystic kidney disease.

## REFERENCES

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- Schmutz, S.M. and Simpson, N.E. 1983. Suggested assignment of peptidase S (PEPS) to 4p11-4q12 by exclusion using gene dosage, accounting for variability in fibroblasts. *Hum. Genet.* 64: 134-138.
- Kohno, H., Kanda, S. and Kanno, T. 1986. Immunoaffinity purification and characterization of leucine aminopeptidase from human liver. *J. Biol. Chem.* 261: 10744-10748.
- Matsushima, M., Takahashi, T., Ichinose, M., Miki, K., Kurokawa, K. and Takahashi, K. 1991. Structural and immunological evidence for the identity of prolyl aminopeptidase with leucyl aminopeptidase. *Biochem. Biophys. Res. Commun.* 178: 1459-1464.
- Kim, H. and Lipscomb, W.N. 1993. Differentiation and identification of the two catalytic metal binding sites in bovine lens leucine aminopeptidase by x-ray crystallography. *Proc. Natl. Acad. Sci. USA* 90: 5006-5010.

## CHROMOSOMAL LOCATION

Genetic locus: LAP3 (human) mapping to 4p15.32.

## SOURCE

LAP3 (E-24) is a purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of LAP3 of human origin.

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

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

LAP3 (E-24) is recommended for detection of LAP3 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), immunohistochemistry (including paraffin-embedded sections) (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 LAP3 siRNA (h): sc-75411, LAP3 shRNA Plasmid (h): sc-75411-SH and LAP3 shRNA (h) Lentiviral Particles: sc-75411-V.

Molecular Weight of monomer LAP3: 55 kDa.

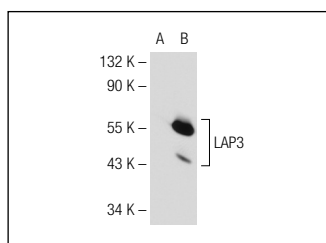
Molecular Weight of homohexamer LAP3: 300 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or LAP3 (h): 293T Lysate: sc-117059.

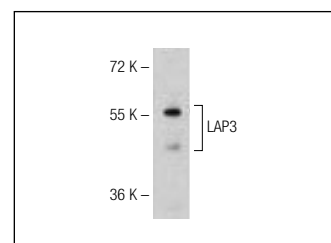
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



LAP3 (E-24): sc-130800. Western blot analysis of LAP3 expression in non-transfected: sc-117752 (A) and human LAP3 transfected: sc-117059 (B) 293T whole cell lysates.



LAP3 (E-24): sc-130800. Western blot analysis of LAP3 expression in Hep G2 whole cell lysate.

## RESEARCH USE

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