

Aminopeptidase P3 (B-9): sc-393767

BACKGROUND

Aminopeptidases comprise a family of enzymatic proteins that are widely distributed in both eukaryotes and prokaryotes and function to catalyze the removal of amino acids from the N-termini of proteins. Aminopeptidase P3, also known as APP3 or XPNPEP3, is a 507 amino acid protein that belongs to the aminopeptidase family. Expressed throughout the body, Aminopeptidase P3 uses manganese as a cofactor to catalyze the release of any proline-linked N-terminal amino acid, including those that exist in di- or tripeptides. Aminopeptidase P3 exists as three alternatively spliced isoforms which are encoded by a gene that maps to chromosome 22. Chromosome 22 houses over 500 genes, some of which are involved in Phelan-McDermid syndrome, schizophrenia and neurofibromatosis type 2.

REFERENCES

- Hawthorne, S.J., et al. 1997. Evaluation of some fluorogenic substrates for continuous assay of aminopeptidase P. *Anal. Biochem.* 253: 13-17.
- Mook-Jung, I. and Saitoh, T. 1997. Amyloid precursor protein activates phosphotyrosine signaling pathway. *Neurosci. Lett.* 235: 1-4.
- Dunham, I., et al. 1999. The DNA sequence of human chromosome 22. *Nature* 402: 489-495.
- Bouwmeester, T., et al. 2004. A physical and functional map of the human TNF- α /NF κ B signal transduction pathway. *Nat. Cell Biol.* 6: 97-105.
- Er ahin, C., et al. 2005. Aminopeptidase P isozyme expression in human tissues and peripheral blood mononuclear cell fractions. *Arch. Biochem. Biophys.* 435: 303-310.
- Frottin, F., et al. 2006. The proteomics of N-terminal methionine cleavage. *Mol. Cell. Proteomics* 5: 2336-2349.
- Arinami, T. 2006. Analyses of the associations between the genes of 22q11 deletion syndrome and schizophrenia. *J. Hum. Genet.* 51: 1037-1045.
- Li, W., et al. 2008. Prediction of protein structural classes using hybrid properties. *Mol. Divers.* 12: 171-179.

CHROMOSOMAL LOCATION

Genetic locus: XPNPEP3 (human) mapping to 22q13.2; Xpnpep3 (mouse) mapping to 15 E1.

SOURCE

Aminopeptidase P3 (B-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 100-123 within an internal region of Aminopeptidase P3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-393767 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Aminopeptidase P3 (B-9) is recommended for detection of Aminopeptidase P3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Aminopeptidase P3 (B-9) is also recommended for detection of Aminopeptidase P3 in additional species, including equine and canine.

Suitable for use as control antibody for Aminopeptidase P3 siRNA (h): sc-105061, Aminopeptidase P3 siRNA (m): sc-141048, Aminopeptidase P3 shRNA Plasmid (h): sc-105061-SH, Aminopeptidase P3 shRNA Plasmid (m): sc-141048-SH, Aminopeptidase P3 shRNA (h) Lentiviral Particles: sc-105061-V and Aminopeptidase P3 shRNA (m) Lentiviral Particles: sc-141048-V.

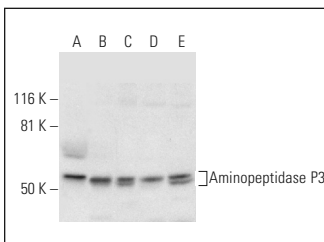
Molecular Weight of Aminopeptidase P3: 57 kDa.

Positive Controls: human heart extract: sc-363763, human liver extract: sc-363766 or HeLa whole cell lysate: sc-2200.

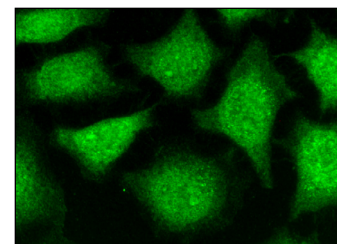
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



Aminopeptidase P3 (B-9): sc-393767. Western blot analysis of Aminopeptidase P3 expression in human heart (A) and human liver (B) tissue extracts and HeLa (C), A549 (D) and Jurkat (E) whole cell lysates.



Aminopeptidase P3 (B-9): sc-393767. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

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.