

# Aminopeptidase P3 (P-20): sc-86284

## 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., Harriott, P., Lim, J., Turner, A.J., Walker, B. and Williams, C.H. 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., Shimizu, N., Roe, B.A., Chisoe, S., Hunt, A.R., Collins, J.E., Bruskiwich, R., Beare, D.M., Clamp, M., Smink, L.J., Ainscough, R., Almeida, J.P., Babbage, A., Bagguley, C., Bailey, J., Barlow, K., et al. 1999. The DNA sequence of human chromosome 22. *Nature* 402: 489-495.
- Bouwmeester, T., Bauch, A., Ruffner, H., Angrand, P.O., Bergamini, G., Coughton, K., Cruciat, C., Eberhard, D., Gagneur, J., Ghidelli, S., Hopf, C., Huhse, B., Mangano, R., Michon, A.M., Schirle, M., Schlegl, J., Schwab, M., et al. 2004. A physical and functional map of the human TNF- $\alpha$ /NF $\kappa$ B signal transduction pathway. *Nat. Cell Biol.* 6: 97-105.
- Er ahin, C., Szpaderska, A.M., Orawski, A.T. and Simmons, W.H. 2005. Aminopeptidase P isozyme expression in human tissues and peripheral blood mononuclear cell fractions. *Arch. Biochem. Biophys.* 435: 303-310.
- Frottin, F., Martinez, A., Peynot, P., Mitra, S., Holz, R.C., Giglione, C. and Meinel, T. 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., Lin, K., Feng, K. and Cai, Y. 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 (P-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of Aminopeptidase P3 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-86284 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Aminopeptidase P3 (P-20) is recommended for detection of Aminopeptidase P3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

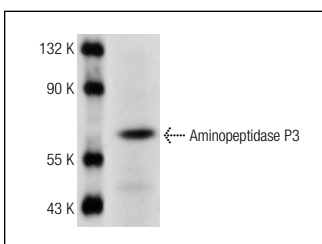
Aminopeptidase P3 (P-20) is also recommended for detection of Aminopeptidase P3 in additional species, including equine and canine.

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: mouse heart extract: sc-2254.

## DATA



Aminopeptidase P3 (P-20): sc-86284. Western blot analysis of Aminopeptidase P3 expression in mouse heart tissue extract.

## 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.

## PROTOCOLS

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