

Aminopeptidase P2 (E-12): sc-131381

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 P2, also known as XPNPEP2 (X-prolyl aminopeptidase (aminopeptidase P) 2, membrane-bound), is a 674 amino acid lipid-anchored cell membrane protein that belongs to the pita bread fold family of peptidase proteins. Expressed in colon, lung, kidney, heart, liver, placenta and small intestine, Aminopeptidase P2 exists as a homotrimer that functions as a metalloprotease and plays a role in Bradykinin metabolism, as well as in inflammatory responses throughout the body. Aminopeptidase P2 binds manganese as a cofactor and is subject to heavy post-translational glycosylation.

REFERENCES

1. Vanhoof, G., et al. 1992. Kininase activity in human platelets: cleavage of the Arg1-Pro2 bond of Bradykinin by Aminopeptidase P. *Biochem. Pharmacol.* 44: 479-487.
2. Venema, R.C., et al. 1997. Cloning and tissue distribution of human membrane-bound Aminopeptidase P. *Biochim. Biophys. Acta* 1354: 45-48.
3. Cottrell, G.S., et al. 1998. The cloning and functional expression of human pancreatic Aminopeptidase P. *Biochem. Soc. Trans.* 26: S248.
4. Sprinkle, T.J., et al. 1998. Assignment of the membrane-bound human Aminopeptidase P gene (XPNPEP2) to chromosome Xq25. *Genomics* 50: 114-116.
5. Duan, Q.L., et al. 2005. A variant in XPNPEP2 is associated with angioedema induced by angiotensin I-converting enzyme inhibitors. *Am. J. Hum. Genet.* 77: 617-626.
6. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 300145. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. Drouet, C., et al. 2008. Metalloprotease activities in hereditary angioedema: effect of androgen prophylaxis on plasma Aminopeptidase P. *J. Allergy Clin. Immunol.* 121: 429-433.

CHROMOSOMAL LOCATION

Genetic locus: XPNPEP2 (human) mapping to Xq26.1; Xpnpep2 (mouse) mapping to X A4.

SOURCE

Aminopeptidase P2 (E-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Aminopeptidase P2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-131381 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Aminopeptidase P2 (E-12) is recommended for detection of Aminopeptidase P2 of mouse, rat and 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).

Aminopeptidase P2 (E-12) is also recommended for detection of Aminopeptidase P2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Aminopeptidase P2 siRNA (h): sc-72488, Aminopeptidase P2 siRNA (m): sc-141047, Aminopeptidase P2 shRNA Plasmid (h): sc-72488-SH, Aminopeptidase P2 shRNA Plasmid (m): sc-141047-SH, Aminopeptidase P2 shRNA (h) Lentiviral Particles: sc-72488-V and Aminopeptidase P2 shRNA (m) Lentiviral Particles: sc-141047-V.

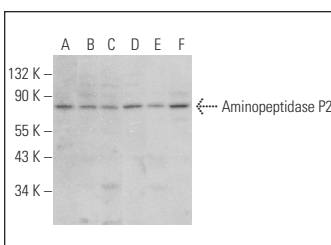
Molecular Weight of Aminopeptidase P2: 76 kDa.

Positive Controls: HEK293 whole cell lysate: sc-45136, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Aminopeptidase P2 (E-12): sc-131381. Western blot analysis of Aminopeptidase P2 expression in NIH/3T3 (A), HeLa (B), HEK293 (C), Jurkat (D), WiDR (E) and AMJ2-C8 (F) 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.