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ANPEP/CD13 Antibody

Mouse Monoclonal Antibody (Mab)
Catalog # AM2079b

Product Information

Application	WB, E
Primary Accession	P15144
Other Accession	NP_001141.2
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2a
Clone Names	505CT12.1.2
Calculated MW	109540
Antigen Region	156-184

Additional Information

Gene ID	290
Other Names	Aminopeptidase N, AP-N, hAPN, Alanyl aminopeptidase, Aminopeptidase M, AP-M, Microsomal aminopeptidase, Myeloid plasma membrane glycoprotein CD13, gp150, CD13, ANPEP, APN, CD13, PEPN
Target/Specificity	This ANPEP/CD13 antibody is generated from mice immunized with a KLH conjugated synthetic peptide between 156-184 amino acids from human ANPEP/CD13.
Dilution	WB~~1:500~1000 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ANPEP/CD13 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ANPEP
Synonyms	APN, CD13, PEPN

Function	Broad specificity aminopeptidase which plays a role in the final digestion of peptides generated from hydrolysis of proteins by gastric and pancreatic proteases. Also involved in the processing of various peptides including peptide hormones, such as angiotensin III and IV, neuropeptides, and chemokines. May also be involved the cleavage of peptides bound to major histocompatibility complex class II molecules of antigen presenting cells. May have a role in angiogenesis and promote cholesterol crystallization. May have a role in amino acid transport by acting as binding partner of amino acid transporter SLC6A19 and regulating its activity (By similarity).
Cellular Location	Cell membrane; Single-pass type II membrane protein. Note=Also found as a soluble form
Tissue Location	Expressed in epithelial cells of the kidney, intestine, and respiratory tract; granulocytes, monocytes, fibroblasts, endothelial cells, cerebral pericytes at the blood-brain barrier, synaptic membranes of cells in the CNS. Also expressed in endometrial stromal cells, but not in the endometrial glandular cells. Found in the vasculature of tissues that undergo angiogenesis and in malignant gliomas and lymph node metastases from multiple tumor types but not in blood vessels of normal tissues. A soluble form has been found in plasma. It is found to be elevated in plasma and effusions of cancer patients.

Background

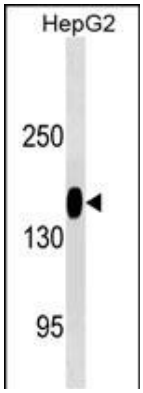
Aminopeptidase N is located in the small-intestinal and renal microvillar membrane, and also in other plasma membranes. In the small intestine aminopeptidase N plays a role in the final digestion of peptides generated from hydrolysis of proteins by gastric and pancreatic proteases. Its function in proximal tubular epithelial cells and other cell types is less clear. The large extracellular carboxyterminal domain contains a pentapeptide consensus sequence characteristic of members of the zinc-binding metalloproteinase superfamily. Sequence comparisons with known enzymes of this class showed that CD13 and aminopeptidase N are identical. The latter enzyme was thought to be involved in the metabolism of regulatory peptides by diverse cell types, including small intestinal and renal tubular epithelial cells, macrophages, granulocytes, and synaptic membranes from the CNS. Human aminopeptidase N is a receptor for one strain of human coronavirus that is an important cause of upper respiratory tract infections. Defects in this gene appear to be a cause of various types of leukemia or lymphoma.

References

Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :
Curnis, F., et al. J. Biol. Chem. 285(12):9114-9123(2010)
Wang, X., et al. PLoS ONE 5 (8), E11934 (2010) :
Ito, S., et al. Gen Thorac Cardiovasc Surg 57(11):591-598(2009)
Ju, S., et al. Cell Cycle 8(16):2578-2585(2009)

Images

ANPEP/CD13 Antibody (Cat. #AM2079b) western blot analysis in HepG2 cell line lysates (35µg/lane).This demonstrates the ANPEP/CD13 antibody detected the ANPEP/CD13 protein (arrow).



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.