

ANPEP Antibody

Purified Mouse Monoclonal Antibody Catalog # AO1999a

Product Information

Application WB, FC, E **Primary Accession** P15144 Reactivity Human Host Mouse Monoclonal Clonality **Clone Names** 1C7D7 Isotype IgG1 **Calculated MW** 109540

Description 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.

Immunogen Purified recombinant fragment of human ANPEP (AA: Extra(781-967))

expressed in E. Coli.

Formulation Purified antibody in PBS with 0.05% sodium azide.

Additional Information

Gene ID 290

Other Names Aminopeptidase N, AP-N, hAPN, 3.4.11.2, Alanyl aminopeptidase,

Aminopeptidase M, AP-M, Microsomal aminopeptidase, Myeloid plasma membrane glycoprotein CD13, gp150, CD13, ANPEP, APN, CD13, PEPN

Dilution WB~~1/500 - 1/2000 FC~~1/200 - 1/400 E~~1/10000

Storage Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store

at -20°C in small aliquots to prevent freeze-thaw cycles.

ANPEP 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.

References

1. Br J Cancer. 2013 Feb 5;108(2):420-8. 2. Ann Surg Oncol. 2012 Jul;19 Suppl 3:S539-48.

Images

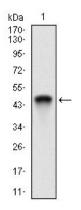
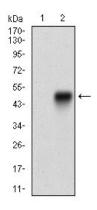


Figure 1: Western blot analysis using ANPEP mAb against human ANPEP (AA: Extra(781-967)) recombinant protein. (Expected MW is 47.4 kDa)

Figure 2: Western blot analysis using ANPEP mAb against HEK293 (1) and ANPEP (AA: Extra(781-967))-hIgGFc transfected HEK293 (2) cell lysate.



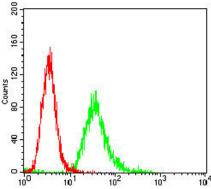


Figure 3: Flow cytometric analysis of Hela cells using ANPEP mouse mAb (green) and negative control (red).

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