

Human ANPEP / CD13 Protein (603 Met/Ile, His Tag)

Catalog Number: 10051-H08H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

APN; CD13; GP150; LAP1; P150; PEPN

Protein Construction:

A DNA sequence encoding the metalloprotease domain (Lys 69-Lys 967, 603 Met/Ile) of the mature form of human ANPEP (NP_001141.2) was expressed with N-terminal signal peptide and C-terminal polyhistidine tag.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 97 % as determined by SDS-PAGE

Bio Activity:

Measured by its ability to cleave the fluorogenic peptide substrate, Ala-7-amido-4-methylcoumarin (Ala-AMC). The specific activity is >2,500 pmoles/min/μg.

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Lys 69

Molecular Mass:

The recombinant human ANPEP protein consists of 910 amino acids and has a predicted molecular mass of 104.2 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rhANPEP is approximately 135-140 kDa due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.3

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

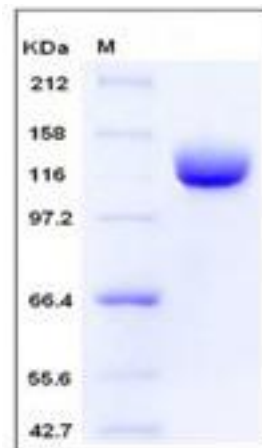
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Aminopeptidase N (ANPEP or APN), also known as CD13, is a cell-surface metalloprotease located in the small-intestinal and renal microvillar membrane, as well as other plasma membranes. It belongs to the peptidase M1 family. CD13 plays a role in the final digestion of peptides generated from hydrolysis of proteins by gastric and pancreatic proteases and is involved in the metabolism of regulatory peptides by diverse cell types. CD13/APN is a potent regulator of angiogenesis which is essential for tumor invasion and metastasis, and its transcription in activated endothelial cells is induced by angiogenic growth factors via the RAS/MAPK pathway. In addition, this enzyme has been shown to participate in antigen processing and presentation, and accordingly, defects in this gene appear to be a cause of various types of leukemia or lymphoma and carcinomas.

References

1. Pasqualini R, *et al.* (2000) Aminopeptidase N is a receptor for tumor-homing peptides and a target for inhibiting angiogenesis. *Cancer Res.* 60(3): 722-7.
2. Mabeesh SJ, *et al.* (2005) Aminopeptidase N gene expression and abundance in caprine mammary gland is influenced by circulating plasma peptide. *J Dairy Sci.* 88(6): 2055-64.
3. Dunkel B, *et al.* (2009) Neutrophil and platelet activation in equine recurrent airway obstruction is associated with increased neutrophil CD13 expression, but not platelet CD41/61 and CD62P or neutrophil-platelet aggregate formation. *Vet Immunol Immunopathol.* 131(1-2): 25-32.

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