Human Pepsinogen C / PGC Protein (His Tag)

Catalog Number: **12072-H07E**

General Information

Gene Name Synonym:

PEPC; PGII

Protein Construction:

A DNA sequence encoding the mature form of human PGC (P20142-1) (Ile153-Ile239) was expressed with a polyhistide tag at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

Stability:

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

Predicted N terminal: His

Molecular Mass:

The recombinant human PGC consists of 102 amino acids and predicts a molecular mass of 10.9 KDa. It migrates as an approximately 10 KDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 50mM Tris, 0.4M sucrose, 1mM EDTA, 50mM NaCl, pH 8.0

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:

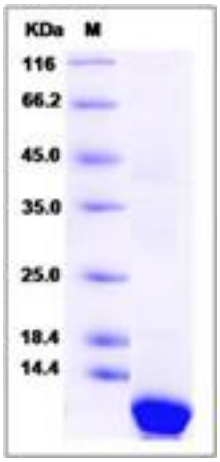
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Pepsinogen C, also known as PGC, is an aspartic proteinase that belongs to the peptidase family A1. Pepsinogen C is synthesized in the gastric mucosa as inactive precursors, known as zymogens. Pepsinogen C contains a prosegment that serves to stabilize the inactive form and prevent entry of the substrate to the active site. At low PH conditions, Pepsinogen C undergoes conversion into active enzyme. Pepsinogen C has been found expressed in all regions of the stomach mucosa and also in the proximal duodenal mucosa. In stomach cancer tissues and cancer cell lines, the expressions of the pepsinogen genes were decreased or lost, in good accordance with their pepsinogen productions. No gross structural changes of the pepsinogen genes were observed in these cancers, but the methylation patterns of the pepsinogen genes were found to be altered in different ways in different cancers. Serum levels of Pepsinogen C are used as a biomarker for certain gastric diseases including Helicobacter pylori related gastritis.

References

1.Richter C, *et al.* (1998) Mechanism of activation of the gastric aspartic proteinases: pepsinogen, progastricsin and prochymosin. Biochem J. 1 (335): 481-90. 2.Westerveld BD, *et al.* (1987) Gastric proteases in Barrett's esophagus. Gastroenterology. 93 (4): 774-8. 3.Ichinose M, *et al.* (1991) Methylation and expression of human pepsinogen genes in normal tissues and their alteration in stomach cancer. Jpn J Cancer Res. 82 (6): 686-92.