Human PNLIP Protein (His Tag)

Catalog Number: **13564-H08H**

General Information

Gene Name Synonym:

PL; PNLIPD; PTL

Protein Construction:

A DNA sequence encoding the human PNLIP (P16233) (Met1-Cys465) was expressed with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

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 ℃

Predicted N terminal: Lys 17

Molecular Mass:

The recombinant human PNLIP consists of 460 amino acids and predicts a molecular mass of 51 KDa. It migrates as an approximately 51 KDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

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:

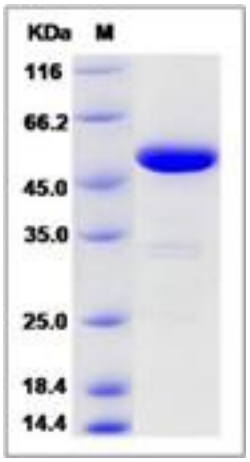
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

PNLIP is an enzyme which belongs to the lipase family. Secreted from the pancreas, PNLIP is the primary lipase that hydrolyzes dietary fat molecules in the human digestive system, converting triglyceride substrates found in ingested oils to monoglycerides and free fatty acids. Bile salts secreted from the liver and stored in gallbladder are released into the duodenum where they coat and emulsify large fat droplets into smaller droplets, thus increasing the overall surface area of the fat, which allows the lipase to break apart the fat more effectively. The resulting monomers (2 free fatty acids and one 2-monoacylglycerol) are then moved by way of peristalsis along the small intestine to be absorbed into the lymphatic system by a specialized vessel called a lacteal.

References

1.Hegele RA, *et al*. (2001) Polymorphisms in PNLIP, encoding pancreatic lipase, and associations with metabolic traits. J Hum Genet. 46(6):320-4. 2. Thomas A, *et al*. (2005) Role of the lid hydrophobicity pattern in pancreatic lipase activity. J Biol Chem. 280(48):40074-83. 3.Colin DY, *et al*. (2008) Exploring the active site cavity of human pancreatic lipase. Biochem Biophys Res Commun. 370(3):394-8.