Rat CLPS / Colipase Protein (His Tag)

Catalog Number: 80729-R08H

General Information

Gene Name Synonym:
CLPS

Protein Construction:
A DNA sequence encoding the rat Clps (NP_037271.1) (Met1-Gln112) was expressed with a polyhistidine tag at the C-terminus.

Source: Rat
Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE.

Endotoxin:
< 1.0 EU per μg 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: Ala 18

Molecular Mass:
The recombinant rat Clps consists 106 amino acids and predicts a molecular mass of 11.9 kDa.

Formulation:
Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannanol 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.

Protein Description

Colipase belongs to the colipase family. Structural studies of the complex and of colipase alone have revealed the functionality of its architecture. It is a small protein with five conserved disulphide bonds. Structural analogies have been recognised between a developmental protein, the pancreatic lipase C-terminal domain, the N-terminal domains of lipoxigenases and the C-terminal domain of alpha-toxin. Colipase can only be detected in pancreatic acinar cells, suggesting regulation of expression by tissue-specific elements. Colipase allows lipase to anchor noncovalently to the surface of lipid micelles, counteracting the destabilizing influence of intestinal bile salts. Without colipase the enzyme is washed off by bile salts, which have an inhibitory effect on the lipase. Colipase is a cofactor needed by pancreatic lipase for efficient dietary lipid hydrolysis. It binds to the C-terminal, non-catalytic domain of lipase, thereby stabilising as active conformation and considerably increasing the overall hydrophobic binding site.

References