

# Recombinant Human CLPS/Colipase Protein (His Tag)

Catalog Number:PKSH030591



**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

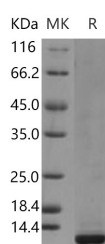
## Description

<b>Synonyms</b>	CLPS
<b>Species</b>	Human
<b>Expression Host</b>	Baculovirus-Insect Cells
<b>Sequence</b>	Met 1-Gln 112
<b>Accession</b>	P04118
<b>Calculated Molecular Weight</b>	11.5 kDa
<b>Observed molecular weight</b>	12 kDa
<b>Tag</b>	C-His
<b>Bioactivity</b>	Immobilized human CLPS-His at 10µg/mL(100µL/well) can bind biotinylated human PNLIP-His. The EC50 of biotinylated human PNLIP-His is 0.57-1.33µg/mL.

## Properties

<b>Purity</b>	> 90 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per µg of the protein as determined by the LAL method.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile PBS, 500mM NaCl, pH 7.0, 10% glycerol Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

## Data



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## Background

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 lipoxygenases 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

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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.

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