

PRODUCT INFORMATION



Colipase (human, recombinant)

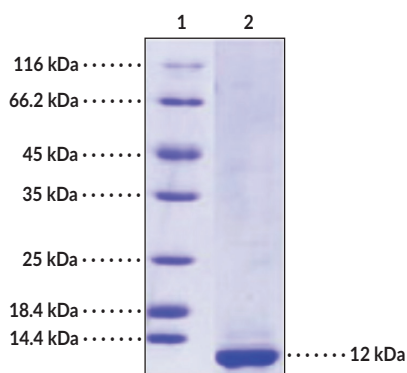
Item No. 37022

Overview and Properties

Source: Recombinant human C-terminal His-tagged colipase expressed in insect cells
Amino Acids: 18-112
Uniprot No.: P04118
Molecular Weight: 11.5 kDa
Storage: -80°C (as supplied)
Stability: ≥1 year
Purity: ≥90% estimated by SDS-PAGE
Supplied in: Lyophilized from sterile PBS, pH 7.0, 500 mM sodium chloride, and 10% glycerol
Endotoxin Testing: <1.0 EU/μg, determined by the LAL endotoxin assay
Protein Concentration: *batch specific* mg/ml

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: Colipase

SDS-PAGE Analysis of Colipase. This protein has a calculated molecular weight of 11.5 kDa. It has an apparent molecular weight of approximately 12 kDa by SDS-PAGE under reducing conditions.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 01/25/2023

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM

PRODUCT INFORMATION



Description

Colipase is a protein coenzyme required for the activity of pancreatic lipase.^{1,2} It is a polypeptide secreted by the pancreas as inactive pro-colipase, which is activated *via* removal of a 5-amino acid pro-peptide by trypsin in the intestines. Colipase binds to the C-terminus of pancreatic lipase to facilitate hydrolysis of dietary triglycerides in the presence of bile salts.^{3,4} Colipase deficiency induces steatorrhea, the excretion of excess fat in stool.⁵ Cayman's Colipase (human, recombinant) protein consists of 105 amino acids, has a calculated molecular weight of 11.5 kDa, and a predicted N-terminus of Ala18 after signal peptide cleavage.

References

1. Lowe, M.E. Structure and function of pancreatic lipase and colipase. *Annu. Rev. Nutr.* **17**, 141-158 (1997).
2. Borgström, B., Wieloch, T., and Erlanson-Albertsson, C. Evidence for a pancreatic pro-colipase and its activation by trypsin. *FEBS Lett.* **108(2)**, 407-410 (1979).
3. van Tilbeurgh, H., Bezzine, S., Cambillau, C., *et al.* Colipase: Structure and interaction with pancreatic lipase. *Biochim. Biophys. Acta* **1441(2-3)**, 173-184 (1999).
4. Ahmed, S.A., Ali, N., Qureshi, U., *et al.* Molecular dynamics simulation of human pancreatic lipase and lipase-colipase complex: Insight into the structural fluctuations and conformational changes. *Int. J. Comput. Theor. Chem.* **8(1)**, 19-26 (2020).
5. Hildebrand, H., Borgström, B., Békássy, A., *et al.* Isolated co-lipase deficiency in two brothers. *Gut* **23(3)**, 243-246 (1982).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM