SZABO SCANDIC

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Produktinformation

- Forschungsprodukte & Biochemikalien
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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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PRODUCT INFORMATION

Enteropeptidase (bovine, recombinant)

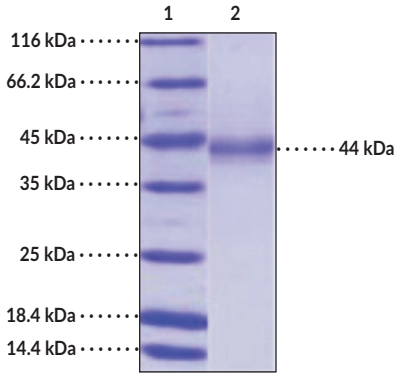
Item No. 32087

Overview and Properties

Synonyms:	Enterokinase, Serine Protease 7, Transmembrane Protease Serine 15
Source:	Recombinant bovine C-terminal His-tagged enterokinase expressed in yeast
Amino Acids:	801-1,035
Uniprot No.:	P98072-1
Molecular Weight:	27.1 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥95% estimated by SDS-PAGE
Supplied in:	Lyophilized from sterile 10 mM Tris-HCl, pH 7.2, with 2 mM calcium chloride, 100 mM sodium chloride, and 50% glycerol
Endotoxin Testing:	<1.0 EU/µg, determined by the LAL endotoxin assay

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

Image



Lane 1: MW Markers
Lane 2: Enteropeptidase

SDS-PAGE Analysis of Enteropeptidase. This protein has a calculated molecular weight of 27.1 kDa. It has an apparent molecular weight of approximately 44 kDa by SDS-PAGE under reducing conditions due to glycosylation.

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PRODUCT INFORMATION

Description

Enteropeptidase is a membrane-bound serine protease that converts the inactive enzyme trypsinogen to the active form trypsin, a protease that catalyzes the digestion of proteins in the gut.[1] It is composed of an N-terminal domain with a transmembrane segment that anchors enteropeptidase to the cell membrane and an extracellular C-terminal protease domain that contains the activation cleavage site for enteropeptidase activity and a catalytic aspartic acid-histidine-serine triad.[1,2] It is synthesized in the endoplasmic reticulum as a zymogen and transported to the brush border membrane of duodenal and jejunal enterocytes. Enteropeptidase activation occurs in a calcium- and pH-dependent manner and, upon activation, cleaves the Asp-Asp-Asp-Asp-Lys activation peptide on trypsinogen to produce trypsin.[1,3] Pharmacological inhibition of enteropeptidase activity decreases food intake, body weight gain, and liver triglyceride and total cholesterol levels in diet-induced obese mice and diabetic obese *ob/ob* mice.[4] Cayman's Enteropeptidase (bovine, recombinant) protein consists of 241 amino acids and has a calculated molecular weight of 27.1 kDa. By SDS-PAGE, under reducing conditions, the molecular weight of the protein is approximately 44 kDa due to glycosylation.

References

1. Zheng, X.L., Kitamoto, Y., and Sadler, J.E. Enteropeptidase, a type II transmembrane serine protease. *Front. Biosci. (Elite Ed.)* **1**, 242-249 (2009).
2. Antalis, T.M., Buggee, T.H., and Wu, Q. Membrane-anchored serine proteases in health and disease. *Proteases in Health and Disease.* Di Cera, E., editor, 1st edition, *Elsevier Inc.* (2011).
3. Sadler, J.E. Enteropeptidase. *Handbook of Proteolytic Enzymes.* Rawlings, N.D., and Salvesen, G., editors, 1st edition, *Academic Press* (2013).
4. Yashiro, H., Hamagami, K., Hiyoshi, H., *et al.* SCO-792, an enteropeptidase inhibitor, improves disease status of diabetes and obesity in mice. *Diabetes Obes. Metab.* **21(10)**, 2228-2239 (2019).

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