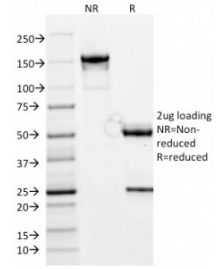
Chymotrypsin-like elastase family member 3B Antibody / CELA3B / Elastase 3B [clone CELA3B/1811] (V8919)

Catalog No.	Formulation	Size
V8919-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V8919-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V8919SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	CELA3B/1811
Purity	Protein A/G affinity
UniProt	P08861
Localization	Cytoplasmic
Applications	ELISA (order BSA-free Format For Coating) :
Limitations	This Chymotrypsin-like elastase family member 3B antibody is available for research use only.



SDS-PAGE analysis of purified, BSA-free Chymotrypsin-like elastase family member 3B antibody (clone CELA3B/1811) as confirmation of integrity and purity.

Description

Chymotrypsin-like elastase family member 3B antibody, targeting CELA3B, detects a secreted digestive serine protease

commonly referred to as pancreatic elastase 3B or elastase 3B. The CELA3B gene is located on chromosome 1p36.12 and encodes a protein that is highly enriched in pancreatic acinar cells, where it contributes to the exocrine function of the pancreas. As part of the elastase subfamily within the broader chymotrypsin-like serine protease family, CELA3B plays a defined role in the controlled breakdown of dietary proteins in the small intestine.

The protein is synthesized as a preproenzyme containing an N-terminal signal peptide that directs it into the secretory pathway, followed by an activation peptide that maintains the enzyme in an inactive zymogen form. After processing through the endoplasmic reticulum and Golgi apparatus, CELA3B is packaged into cytoplasmic zymogen granules within pancreatic acinar cells. Upon physiologic stimulation, these granules are released into the duodenum, where proteolytic activation allows elastase 3B to hydrolyze peptide bonds. Structurally, the mature enzyme adopts the conserved serine protease fold with a catalytic triad characteristic of trypsin-like endopeptidases.

CELA3B shares strong homology with CELA3A, and both are sometimes collectively referenced in clinical contexts related to fecal elastase 1 measurement due to their stability and abundance in pancreatic secretions. In tissue-based research, CELA3B expression is largely restricted to pancreatic acinar cells, supporting its use as a lineage-associated marker of acinar differentiation. Immunohistochemical studies have demonstrated robust cytoplasmic staining in normal pancreas and in pancreatic acinar cell carcinoma, while most non-pancreatic tissues exhibit minimal expression. This restricted distribution makes CELA3B a valuable target for research panels examining exocrine pancreatic tumors and acinar cell biology.

Genetic analyses have linked CELA3B variants to familial pancreatitis syndromes, underscoring the importance of tightly regulated protease activation in maintaining pancreatic homeostasis. Dysregulated digestive enzyme activation is a recognized contributor to pancreatitis pathogenesis. Clone CELA3B/1811 is developed to support research applications investigating pancreatic acinar differentiation, digestive enzyme regulation, and elastase family protein expression.

Researchers studying pancreatic differentiation, exocrine digestive enzyme biology, and acinar cell-associated tumor pathways may also be interested in our Elastase 3B Antibody / Pancreatic Digestive Enzyme page featuring validated immunohistochemistry and western blot applications for pancreatic research.

Application Notes

Optimal dilution of the Chymotrypsin-like elastase family member 3B antibody should be determined by the researcher.

Immunogen

A portion of amino acids 82-238 was used as the immunogen for the Chymotrypsin-like elastase family member 3B antibody.

Storage

Aliquot the Chymotrypsin-like elastase family member 3B antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.