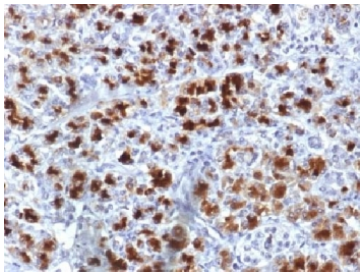
CELA3B Antibody - Microarray Validated / Elastase 3B [clone CELA3B/1757] (V3449)

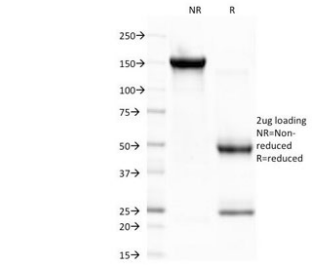
Catalog No.	Formulation	Size
V3449-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3449-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3449SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

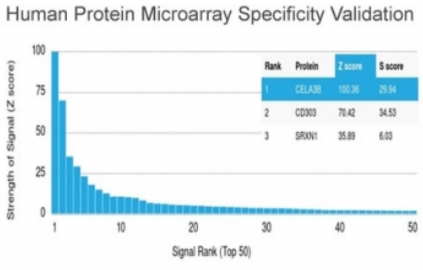
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	CELA3B/1757
Purity	Protein G affinity chromatography
UniProt	P08861
Localization	Cytoplasmic
Applications	ELISA : 2-4ug/ml (order BSA/azide-free format) Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This CELA3B antibody is available for research use only.



Immunohistochemistry of CELA3B antibody (microarray validated clone CELA3B/1757) in human pancreas. Formalin-fixed, paraffin-embedded human pancreatic tissue demonstrates strong granular cytoplasmic staining in acinar cells, consistent with the secretory localization of Chymotrypsin-like elastase family member 3B, while surrounding stromal and ductal structures show minimal staining. Required HIER: boil tissue sections in 10mM Tris with 1mM EDTA, pH 9, for 10-20 min followed by cooling at RT for 20 min.



SDS-PAGE Analysis of Purified, BSA-Free CELA3B Antibody (clone CELA3B/1757). Confirmation of Integrity and Purity of the Antibody.



CELA3B antibody Microarray Specificity Validation. Analysis was performed using the HuProt(TM) microarray containing more than 19,000 full-length human proteins. CELA3B was identified as the top-ranked target, demonstrating strong signal intensity relative to all other proteins on the array and supporting the high specificity of this microarray validated monoclonal antibody.
Z-score represents the strength of the signal generated when the antibody, in combination with a fluorescently tagged anti-IgG secondary antibody, binds to a specific protein on the HuProt(TM) array. Z-scores are expressed in standard deviations above the mean signal of all proteins on the array. Proteins are ranked in descending order based on Z-score. The S-score is defined as the difference in Z-scores between adjacent ranked proteins and reflects the relative target specificity of the antibody for its intended antigen.

Description

Chymotrypsin-like elastase family member 3B is a secreted digestive serine protease enriched in pancreatic acinar cells, where it contributes to exocrine pancreatic function and regulated protein digestion. The CELA3B Antibody - Microarray Validated (clone CELA3B/1757) is developed to detect this acinar-associated enzyme in research applications involving normal and tumor tissue analysis. The CELA3B gene is located on chromosome 1p36.12 and encodes a protease belonging to the chymotrypsin-like serine protease family, specifically within the elastase subfamily.

CELA3B is synthesized as a preproenzyme containing an N-terminal signal peptide that directs entry into the endoplasmic reticulum, followed by a propeptide segment that maintains the enzyme in an inactive zymogen state. After processing through the Golgi apparatus, it is packaged into cytoplasmic zymogen granules within pancreatic acinar cells. Upon physiologic stimulation, these granules undergo regulated exocytosis, releasing elastase 3B into the duodenal lumen where activation enables hydrolysis of dietary peptide substrates. The mature enzyme adopts the conserved serine protease fold with a catalytic triad characteristic of trypsin-like endopeptidases.

Chymotrypsin-like elastase family member 3B shares strong sequence similarity with CELA3A, and both proteins are often discussed in the context of fecal elastase 1 measurement because of their abundance and stability in pancreatic secretions. In tissue-based studies, CELA3B expression is largely restricted to pancreatic acinar cells and demonstrates strong granular cytoplasmic localization consistent with secretory compartments. Microarray-based validation further supports this tissue-restricted pattern, showing prominent pancreatic expression with minimal signal across most non-pancreatic tissues.

Genetic studies have linked specific CELA3B variants to hereditary pancreatitis phenotypes, underscoring the importance of tightly regulated protease activation in maintaining pancreatic homeostasis. Dysregulated digestive enzyme activity is a recognized contributor to pancreatitis pathogenesis. Clone CELA3B/1757 supports research focused on pancreatic acinar differentiation, digestive enzyme biology, and elastase family protein expression profiling.

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 CELA3B antibody should be determined by the researcher.

Immunogen

A recombinant partial protein (aa 82-238) was used as the immunogen for the microarray validated CELA3B antibody.

Storage

Store the CELA3B antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

CELA3B antibody, Elastase 3B pancreatic antibody, Chymotrypsin-like elastase family member 3B antibody, Pancreatic serine protease antibody, Acinar cell marker antibody

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