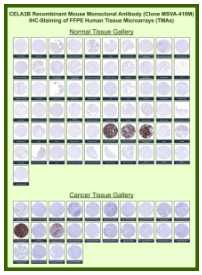
CELA3B Antibody for IHC / Chymotrypsin like elastase 3B [clone MSVA-410M] (V6076)

Catalog No.	Formulation	Size
V6076-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6076-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant | MOUSE MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	MSVA-410M
UniProt	P08861
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE) : 1:100-1:200
Limitations	This CELA3B/Chymotrypsin like elastase 3B antibody is available for research use only.



CELA3B Antibody for IHC Tissue Microarray (TMA). Immunohistochemistry analysis of Chymotrypsin-like elastase family member 3B CELA3B in formalin-fixed paraffin-embedded human normal and cancer tissue microarrays using recombinant mouse monoclonal antibody clone MSVA-410M. Tissue microarray (TMA) staining with HRP-DAB brown chromogen demonstrates strong cytoplasmic localization in pancreatic acinar cells, consistent with secretory enzyme expression, while most non-pancreatic tissues show minimal to absent staining. Within tumor tissue microarrays, strong cytoplasmic positivity is observed in pancreatic acinar cell carcinoma, whereas the majority of other tumor types remain negative, supporting lineage-associated expression. Evaluation across large TMA panels enables direct comparison of CELA3B expression across diverse tissue types under standardized conditions. The observed staining patterns align with reported expression profiles in the Human Protein Atlas and support its use as a marker of pancreatic acinar differentiation.

Description

CELA3B Antibody for IHC recognizes Chymotrypsin-like elastase family member 3B, a secreted digestive serine protease

commonly referred to as pancreatic elastase 3B or elastase 3B. The human CELA3B gene is located on chromosome 1p36.12 and encodes a protein that is highly expressed in pancreatic acinar cells, where it is synthesized, processed, and stored within zymogen granules prior to secretion into the duodenum. As a member of the chymotrypsin family of serine proteases, CELA3B plays an important role in dietary protein digestion through regulated proteolytic activity in the intestinal lumen.

Chymotrypsin-like elastase family member 3B belongs to the elastase subfamily of trypsin-like proteases and shares strong structural homology with CELA3A. The enzyme is produced as a preproprotein containing a signal peptide that directs entry into the secretory pathway, followed by an activation peptide that maintains the protease in an inactive state until cleavage by trypsin. The mature enzyme adopts the conserved serine protease fold with a catalytic triad that mediates peptide bond hydrolysis. Because of its secretory routing, CELA3B localizes to the endoplasmic reticulum and Golgi during biosynthesis and is concentrated within cytoplasmic secretory granules of pancreatic acinar cells prior to extracellular release.

CELA3B is sometimes referenced in clinical literature under the term fecal elastase 1, reflecting its stability in stool and its use as a biochemical marker of pancreatic exocrine function. In tissue-based research settings, elastase 3B is widely recognized as a lineage-associated marker of acinar differentiation. Immunohistochemical studies have demonstrated strong expression in normal pancreatic acinar cells, while comparative tumor profiling supports its relevance in the evaluation of pancreatic acinar cell carcinoma and other exocrine pancreatic neoplasms. These characteristics make CELA3B a useful target in research panels focused on pancreatic development, differentiation, and tumor classification.

Genetic investigations have also linked CELA3B variants to inherited or familial pancreatitis phenotypes, underscoring its biological importance in digestive enzyme regulation and pancreatic homeostasis. Dysregulation of digestive protease activation is a central mechanism in pancreatitis pathogenesis, and CELA3B contributes to the tightly controlled proteolytic environment of the exocrine pancreas. The recombinant mouse monoclonal clone MSVA-410M is designed to detect CELA3B expression in formalin-fixed, paraffin-embedded tissue samples, supporting research applications centered on pancreatic acinar biology and elastase family protein expression.

This antibody is also part of a broader collection of IHC antibodies validated by tissue microarray analysis, supporting consistent staining across normal and cancer tissues.

Application Notes

1. Optimal dilution of the CELA3B antibody for IHC should be determined by the researcher.

2. This CELA3B/Chymotrypsin like elastase 3B antibody is recombinantly produced by expression in human HEK293 cells.

3. Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Immunogen

Recombinant human CELA3B protein fragment (around amino acids 82-238) (exact sequence is proprietary) was used as the immunogen for the CELA3B antibody for IHC.

Storage

CELA3B/Chymotrypsin like elastase 3B antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.