abcam

ab250920

Anti-Chymotrypsin antibody [EPR13859] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR13859
Purification technique	Affinity purification Protein A
Concentration	1.024 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-

Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information CTRC

Function	Regulates activation and degradation of trypsinogens and procarboxypeptidases by targeting specific cleavage sites within their zymogen precursors. Has chymotrypsin-type protease activity and hypocalcemic activity.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab250920 is the carrier-free version of ab187164.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Chymotrypsin also known as chymotrypsinogen when in its inactive precursor form and chymotrypsine stands out as a serine protease enzyme with a molecular weight around 25 kDa. Mechanically chymotrypsin catalyzes the hydrolysis of peptide bonds especially those containing aromatic amino acids like phenylalanine tyrosine and tryptophan. The enzyme exhibits a preference for cleaving at the carboxyl side of these amino acids. Chymotrypsin is mainly expressed in the acinar cells of the pancreas where it aids in the digestive process. The enzyme becomes active upon cleavage by trypsin another serine protease forming chymotrypsin and trypsin as active proteolytic enzymes.
Biological function summary	The enzyme plays an essential role in the digestion of proteins within the small intestine. Chymotrypsin contributes significantly to breaking down dietary proteins into smaller peptides and amino acids which are easier to absorb. During this process chymotrypsin partners with other pancreatic enzymes such as trypsin making up a proteolytic cascade. Chymotrypsin activity ensures efficient protein digestion which is important for nutrient absorption and metabolism. The enzyme's product which results from substrate cleavage is integral to various physiological processes.
Pathways	Chymotrypsin is intricately involved in the digestive enzymatic cascade that ensures proper digestion and absorption of nutrients. The proteolytic activity of chymotrypsin and trypsin in the digestive system forms part of the broader system of exocrine pancreatic secretion. This pathway which involves various enzymes like elastase and chemotrypsin facilitates the efficient processing of proteins and is critical for maintaining metabolic homeostasis. Chymotrypsin's interaction with other enzymes highlights its significance in these pathways.

Associated diseases and disorders	Abnormal chymotrypsin activity can link to certain pancreatic disorders such as chronic pancreatitis where enzyme secretion disrupts. This disruption may relate through the dysfunction of other enzymes including trypsin. Moreover hereditary pancreatitis associates with mutations affecting the regulation of the enzyme or its precursor chymotrypsinogen. Understanding these associations helps to elucidate the role of chymotrypsin protein in various pathological states shedding light on the importance of maintaining its normal function to prevent disease progression.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

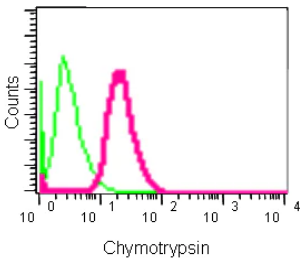
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

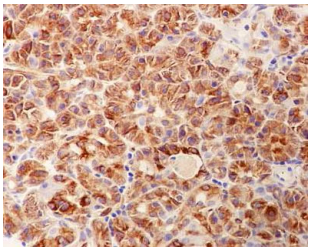
2 product images



Flow Cytometry (Intracellular) - Anti-Chymotrypsin antibody [EPR13859] - BSA and Azide free (ab250920)

Chymotrypsin Flow Cytometry (Intracellular) staining using rabbit Anti-Chymotrypsin antibody

This data was developed using ab187164, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of 2% paraformaldehyde-fixed SH-SY5Y cells labeling Chymotrypsin with ab187164 at 1/270 dilution (red), compared to a Rabbit monclonal IgG isotype control (green), followed by Goat anti rabbit IgG (FITC) secondary antibody at 1/150 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Chymotrypsin antibody [EPR13859] - BSA and Azide free (ab250920)

Chymotrypsin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Chymotrypsin antibody

This data was developed using ab187164, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human pancreas tissue labeling Chymotrypsin with ab187164 at 1/2000 dilution, followed by prediluted HRP Polymer for Rabbit IgG. Counter stained with Hematoxylin.

Perform heat mediated antigen retrieval with EDTA buffer pH 9 before commencing with IHC staining protocol.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.