

DESCRIPTION

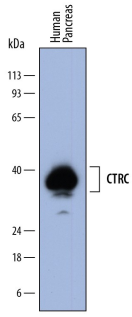
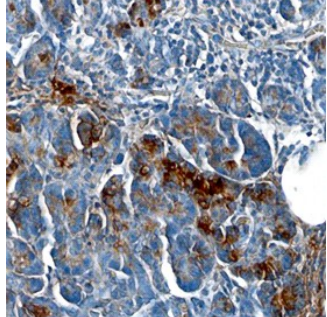
Species Reactivity	Human
Specificity	Detects human Chymotrypsin C/CTRC in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Chymotrypsin C/CTRC Cys17-Leu268 Accession # Q99895
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below

DATA

<p>Western Blot</p>  <p>Detection of Human Chymotrypsin C/CTRC by Western Blot. Western blot shows lysates of human pancreas tissue. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Human Chymotrypsin C/CTRC Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6907) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Chymotrypsin C/CTRC at approximately 33-40 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1. </P></p>	<p>Immunohistochemistry</p>  <p>Chymotrypsin C/CTRC in Human Pancreas. Chymotrypsin C/CTRC was detected in immersion fixed paraffin-embedded sections of human pancreas using Sheep Anti-Human Chymotrypsin C/CTRC Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6907) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counter-stained with hematoxylin (blue). Specific staining was localized to cytoplasm of exocrine cells. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.</p>
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PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Chymotrypsin C (CTRC), also known as caldecrin, is a serine protease and a member of the peptidase S1 family. The CTRC gene encodes a serum calcium-decreasing factor that has chymotrypsin-like protease activity (1). CTRC has broad substrate specificity, but prefers to cleave on the carboxyl side of hydrophobic residues. The enzyme is expressed primarily in the pancreas, and is secreted into the digestive tract. CTRC is a key regulator of activation and degradation of cationic trypsinogen (2, 3). The inappropriate activation of cationic trypsinogen can contribute to the development of pancreatitis (2, 3). CTRC inhibits osteoclast differentiation by suppression of NFATc1 function by a mechanism independent of its proteolytic activity (4).

References:

1. Tomomura, A. *et al.* (1995) *J. Biol. Chem.* **270**:30315.
2. Szmola, R. and M. Sahin-Toth (2007) *Proc. Natl. Acad. Sci. USA* **104**:11227.
3. Nemoda, Z. and M. Sahin-Toth (2006) *J. Biol. Chem.* **281**:11879.
4. Hasegawa, H. *et al.* (2010) *J. Biol. Chem.* **285**:25448.