

Trypsin X3 (D-12): sc-137873

BACKGROUND

The human pancreas secretes three different isoforms of the inactive trypsinogen into the small intestine, namely cationic trypsinogen, anionic trypsinogen (the two major isoforms) and mesotrypsinogen (a minor isoform). In the small intestine, each isoform is cleaved by Enterokinase into its active form, Trypsin-1, Trypsin-2 and Trypsin-3, respectively. All Trypsins are members of the serine protease Trypsin family. The activated Trypsins go on to activate other protease zymogens and play a role in the autoactivation of trypsinogens, suggesting an important role for Trypsins in digestion. Trypsin X3, also known as TRYX3 or TRY1, is a 241 amino acid secreted protein that contains one peptidase S1 domain and functions to catalyze the cleavage of specific amino acid bonds.

REFERENCES

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2. Rinderknecht, H., et al. 1984. Mesotrypsin: a new inhibitor-resistant protease from a zymogen in human pancreatic tissue and fluid. *Gastroenterology* 86: 681-692.
3. Rowen, L., et al. 1996. The complete 685-kilobase DNA sequence of the human β T cell receptor locus. *Science* 272: 1755-1762.
4. Kleeff, J., et al. 2000. Chronic pancreatitis: pathogenesis and molecular aspects. *Ann. Ital. Chir.* 71: 3-10.
5. Sahin-Tóth, M., et al. 2006. Human cationic trypsinogen is sulfated on Tyr154. *FEBS J.* 273: 5044-5050.
6. Keim, V. 2008. Role of genetic disorders in acute recurrent pancreatitis. *World J. Gastroenterol.* 14: 1011-1015.
7. Teich, N. and Mössner, J. 2008. Hereditary chronic pancreatitis. *Best Pract. Res. Clin. Gastroenterol.* 22: 115-130.

CHROMOSOMAL LOCATION

Genetic locus: PRSS58 (human) mapping to 7q34; Prss58 (mouse) mapping to 6 B1.

SOURCE

Trypsin X3 (D-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of Trypsin X3 of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-137873 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Trypsin X3 (D-12) is recommended for detection of Trypsin X3 of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other Trypsin family members.

Suitable for use as control antibody for Trypsin X3 siRNA (h): sc-89834, Trypsin X3 siRNA (m): sc-154702, Trypsin X3 shRNA Plasmid (h): sc-89834-SH, Trypsin X3 siRNA (m): sc-154702-SH, Trypsin X3 shRNA (h) Lentiviral Particles: sc-89834-V and Trypsin X3 siRNA (m) Lentiviral Particles: sc-154702.

Molecular Weight of Trypsin X3: 27 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.