

Mast Cell Tryptase (FL-275): sc-32889

BACKGROUND

Mast cells are connective tissue cells derived from blood-forming tissues that line arterial walls and secrete substances, which mediate inflammatory and immune responses. Mast cell chymase, known as CMA1, is a major secreted serine protease that is involved in vasoactive peptide generation, extracellular matrix degradation and regulation of gland secretion. The human chymase gene, which maps to human chromosome 14q11.2, encodes a pre-enzyme with a 19-amino acid signal peptide, an acidic 2-amino acid propeptide and a 226-amino acid catalytic domain. Tryptases comprise a family of trypsin-like serine proteases that are enzymatically active as heparin-stabilized tetramers. There are four functional genes for tryptase: α I, β I, β II and γ I, which map to human chromosome 16p13.3, with β tryptases representing the main isoenzymes expressed in mast cells. Mast cell proteases are a family of rodent protein homologs to human tryptases that are specifically expressed in mast cells and may serve as highly specific markers in the analysis of mast cell heterogeneity, differentiation and function.

CHROMOSOMAL LOCATION

Genetic locus: TPSAB1 (human) mapping to 16p13.3; Tpsb1 (mouse) mapping to 17 A3.3.

SOURCE

Mast Cell Tryptase (FL-275) is a rabbit polyclonal antibody raised against amino acids 1-275 representing full length Mast Cell Tryptase of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Mast Cell Tryptase (FL-275) is recommended for detection of Mast Cell Tryptase α , β and δ isoforms of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Mast Cell Tryptase siRNA (h): sc-43910, Mast Cell Tryptase siRNA (m): sc-44922, Mast Cell Tryptase shRNA Plasmid (h): sc-43910-SH, Mast Cell Tryptase shRNA Plasmid (m): sc-44922-SH, Mast Cell Tryptase shRNA (h) Lentiviral Particles: sc-43910-V and Mast Cell Tryptase shRNA (m) Lentiviral Particles: sc-44922-V.

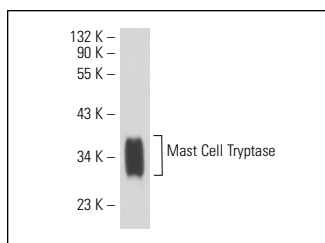
Molecular Weight of Mast Cell Tryptase: 31-36 kDa.

Positive Controls: human lung extract: sc-363767, Mast Cell Tryptase (h): 293T Lysate: sc-114673 or Jurkat whole cell lysate: sc-2204.

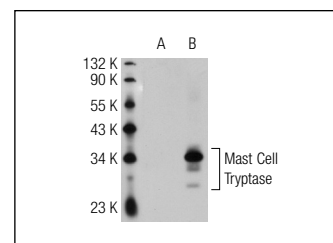
RESEARCH USE

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

DATA



Mast Cell Tryptase (FL-275): sc-32889. Western blot analysis of purified tryptase from human lung.



Mast Cell Tryptase (FL-275): sc-32889. Western blot analysis of Mast Cell Tryptase expression in non-transfected: sc-117752 (A) and human Mast Cell Tryptase transfected: sc-114673 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Stover, C.M., et al. 2008. Properdin plays a protective role in polymicrobial septic peritonitis. *J. Immunol.* 180: 3313-3318.
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- Chatterjee, V. and Gashev, A.A. 2012. Aging-associated shifts in functional status of mast cells located by adult and aged mesenteric lymphatic vessels. *Am. J. Physiol. Heart Circ. Physiol.* 303: H693-H702.
- Mortaz, E., et al. 2012. A relation between TGF- β and mast cell tryptase in experimental emphysema models. *Biochim. Biophys. Acta* 1822: 1154-1160.
- Hunt, L.C., et al. 2013. An anti-inflammatory role for leukemia inhibitory factor receptor signaling in regenerating skeletal muscle. *Histochem. Cell Biol.* 139: 13-34.

PROTOCOLS

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