SANTA CRUZ BIOTECHNOLOGY, INC.

Tryptase γ (I-18): sc-244508

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The Power to Question

BACKGROUND

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 tend to cluster on chromosome 16p13.3. Tryptase γ, also known as TPSG1, PRSS31, serine protease 31 or TMT (transmembrane tryptase), is a 321 amino acid single-pass membrane protein. Belonging to the peptidase S1 family and Tryptase subfamily, Tryptase γ is composed of two alleles: γ-I and γ-II, and contains one peptidase S1 domain. Widely expressed, Tryptase γ is stored in secretory granules and is released upon mast cell activation.

REFERENCES

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2. Caughey, G.H., Raymond, W.W., Blount, J.L., Hau, L.W., Pallaoro, M., Wolters, P.J. and Verghese, G.M. 2000. Characterization of human γ-tryptases, novel members of the chromosome 16p mast cell tryptase and prostasin gene families. J. Immunol. 164: 6566-6575.
3. Wong, G.W., Foster, P.S., Yasuda, S., Qi, J.C., Mahalingam, S., Mellor, E.A., Katsoulotos, G., Li, L., Boyce, J.A., Krilis, S.A. and Stevens, R.L. 2002. Biochemical and functional characterization of human transmembrane tryptase (TMT)/tryptase γ. TMT is an exocytosed mast cell protease that induces airway hyperresponsiveness *in vivo* via an interleukin-13/interleukin-4 receptor α/signal transducer and activator of transcription (STAT) 6-dependent pathway. J. Biol. Chem. 277: 41906-41915.
4. Caughey, G.H. 2002. New developments in the genetics and activation of mast cell proteases. Mol. Immunol. 38: 1353-1357.
5. Xiang, M., Gu, Y., Zhao, F., Lu, H., Chen, S. and Yin, L. 2010. Mast cell tryptase promotes breast cancer migration and invasion. Oncol. Rep. 23: 615-619.

CHROMOSOMAL LOCATION

Genetic locus: TPSG1 (human) mapping to 16p13.3.

SOURCE

Tryptase γ (I-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Tryptase γ of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-244508 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

Tryptase γ (I-18) is recommended for detection of Tryptase γ of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with Mast Cell Tryptase or Tryptase ε.

Suitable for use as control antibody for Tryptase γ siRNA (h): sc-93092, Tryptase γ shRNA Plasmid (h): sc-93092-SH and Tryptase γ shRNA (h) Lentiviral Particles: sc-93092-V.

Molecular Weight of Tryptase γ: 34 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

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