

Tryptase ϵ (G-9): sc-377427

BACKGROUND

Tryptase ϵ , also known as brain-specific serine protease 4 (BSSP-4) or serine protease 22, is a member of the human 16p13.3 family of serine proteases. It is expressed in a developmentally regulated manner in esophagus, trachea and lung. Tryptase ϵ is a major product of the normal pulmonary epithelial cells. It is secreted as an active enzyme and, unlike other family members, Tryptase ϵ can autoactivate. Tryptase ϵ , once activated, cannot effectively be inhibited by the protease inhibitors that are found in normal plasma. It is a potent activator of uPA (urokinase-type plasminogen activator precursor), a serine protease that is responsible for cleaving plasminogen. Tryptase ϵ converts uPA into its mature, enzymatically active form and therefore plays an important role in fibrinolysis, connective tissue remodeling and innate immunity.

REFERENCES

1. Riccio, A., et al. 1985. The human urokinase-plasminogen activator gene and its promoter. *Nucleic Acids Res.* 13: 2759-2771.
2. Wong, G.W., et al. 2001. Human tryptase epsilon (PRSS22), a new member of the chromosome 16p13.3 family of human serine proteases expressed in airway epithelial cells. *J. Biol. Chem.* 276: 49169-49182.
3. Netzel-Arnett, S., et al. 2003. Membrane anchored serine proteases: a rapidly expanding group of cell surface proteolytic enzymes with potential roles in cancer. *Cancer Metastasis Rev.* 22: 237-258.
4. Wong, G.W., et al. 2004. Mouse chromosome 17A3.3 contains 13 genes that encode functional tryptic-like serine proteases with distinct tissue and cell expression patterns. *J. Biol. Chem.* 279: 2438-2452.
5. Verghese, G.M., et al. 2004. Mouse prostatic gene structure, promoter analysis, and restricted expression in lung and kidney. *Am. J. Respir. Cell Mol. Biol.* 30: 519-529.

CHROMOSOMAL LOCATION

Genetic locus: PRSS22 (human) mapping to 16p13.3.

SOURCE

Tryptase ϵ (G-9) is a mouse monoclonal antibody raised against amino acids 108-160 mapping within an internal region of Tryptase ϵ of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Tryptase ϵ (G-9) is available conjugated to agarose (sc-377427 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377427 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377427 PE), fluorescein (sc-377427 FITC), Alexa Fluor® 488 (sc-377427 AF488), Alexa Fluor® 546 (sc-377427 AF546), Alexa Fluor® 594 (sc-377427 AF594) or Alexa Fluor® 647 (sc-377427 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377427 AF680) or Alexa Fluor® 790 (sc-377427 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Tryptase ϵ (G-9) is recommended for detection of Tryptase ϵ of human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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 Tryptase ϵ siRNA (h): sc-93094, Tryptase ϵ shRNA Plasmid (h): sc-93094-SH and Tryptase ϵ shRNA (h) Lentiviral Particles: sc-93094-V.

Molecular Weight of Tryptase ϵ zymogen: 36 kDa.

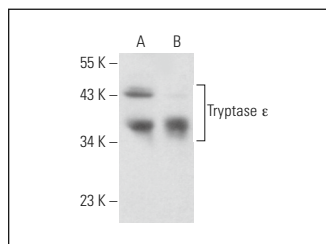
Molecular Weight of Tryptase ϵ active form: 31 kDa.

Positive Controls: TT whole cell lysate: sc-364195 or SK-BR-3 cell lysate: sc-2218.

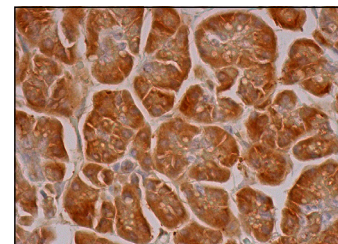
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Tryptase ϵ (G-9): sc-377427. Western blot analysis of Tryptase ϵ expression in TT (A) and SK-BR-3 (B) whole cell lysates.



Tryptase ϵ (G-9): sc-377427. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells.

STORAGE

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

RESEARCH USE

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