

# Tryptase $\epsilon$ (G-9): sc-377427

## BACKGROUND

Tryptase  $\epsilon$ , 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  $\epsilon$  is a major product of the normal pulmonary epithelial cells. It is secreted as an active enzyme and, unlike other family members, Tryptase  $\epsilon$  can autoactivate. Tryptase  $\epsilon$ , 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  $\epsilon$  converts uPA into its mature, enzymatically active form and therefore plays an important role in fibrinolysis, connective tissue remodeling and innate immunity.

## REFERENCES

- Riccio, A., et al. 1985. The human urokinase-plasminogen activator gene and its promoter. *Nucleic Acids Res.* 13: 2759-2771.
- 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.
- 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.
- 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.
- Vergheze, 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  $\epsilon$  (G-9) is a mouse monoclonal antibody raised against amino acids 108-160 mapping within an internal region of Tryptase  $\epsilon$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Tryptase  $\epsilon$  (G-9) is available conjugated to agarose (sc-377427 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377427 HRP), 200  $\mu$ 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  $\mu$ 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  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

Tryptase  $\epsilon$  (G-9) is recommended for detection of Tryptase  $\epsilon$  of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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  $\epsilon$  siRNA (h): sc-93094, Tryptase  $\epsilon$  shRNA Plasmid (h): sc-93094-SH and Tryptase  $\epsilon$  shRNA (h) Lentiviral Particles: sc-93094-V.

Molecular Weight of Tryptase  $\epsilon$  zymogen: 36 kDa.

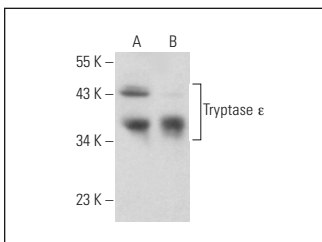
Molecular Weight of Tryptase  $\epsilon$  active form: 31 kDa.

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

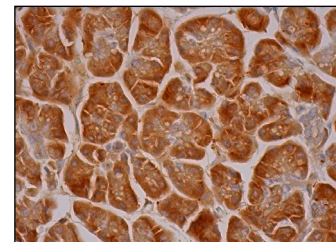
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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 $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



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



Tryptase  $\epsilon$  (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.