SANTA CRUZ BIOTECHNOLOGY, INC.

Tryptase ε (H-55): sc-98445

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 ε (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 17 A3.3 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 prostasin gene structure, promoter analysis, and restricted expression in lung and kidney. Am. J. Respir. Cell Mol. Biol. 30: 519-529.
6. Yasuda, S., et al. 2005. Urokinase-type plasminogen activator is a preferred substrate of the human epithelium serine protease tryptase ε/PRSS22. Blood 105: 3893-3901.

CHROMOSOMAL LOCATION

Genetic locus: PRSS22 (human) mapping to 16p13.3; Prss22 (mouse) mapping to 17 A3.3.

SOURCE

Tryptase ε (H-55) is a rabbit polyclonal antibody raised against amino acids 108-160 mapping within an internal region of Tryptase ε 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.

STORAGE

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

APPLICATIONS

Tryptase ε (H-55) is recommended for detection of Tryptase ε of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

Tryptase ε (H-55) is also recommended for detection of Tryptase ε in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for Tryptase ε siRNA (h): sc-93094, Tryptase ε siRNA (m): sc-108026, Tryptase ε shRNA Plasmid (h): sc-93094-SH, Tryptase ε shRNA Plasmid (m): sc-108026-SH, Tryptase ε shRNA (h) Lentiviral Particles: sc-93094-V and Tryptase ε shRNA (m) Lentiviral Particles: sc-108026-V.

Molecular Weight of Tryptase ε zymogen: 36 kDa.

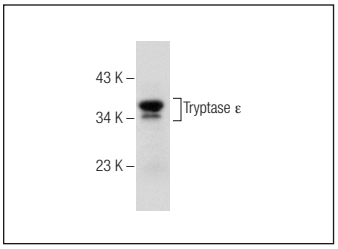
Molecular Weight of Tryptase ε active form: 31 kDa.

Positive Controls: Mv 1 Lu cell lysate: sc-3810 or TT whole cell lysate: sc-364195.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Tryptase ε (H-55): sc-98445. Western blot analysis of Tryptase ε expression in Mv 1 Lu whole cell lysate

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.