

Mast Cell Tryptase (h): 293T Lysate: sc-114673

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-proenzyme 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.

REFERENCES

- Huang, R.Y., Blom, T. and Hellman, L. 1991. Cloning and structural analysis of MMCP-1, MMCP-4 and MMCP-5, three mouse mast cell-specific serine proteases. *Eur. J. Immunol.* 21: 1611-1621.
- Caughey, G.H., Zerweck, E.H. and Vanderslice, P. 1991. Structure, chromosomal assignment and deduced amino acid sequence of a human gene for mast cell chymase. *J. Biol. Chem.* 266: 12956-12963.
- Caughey, G.H., Schaumberg, T.H., Zerweck, E.H., Butterfield, J.H., Hanson, R.D., Silverman, G.A. and Ley, T.J. 1993. The human mast cell chymase gene (CMA1): mapping to the cathepsin G/granzyme gene cluster and lineage-restricted expression. *Genomics* 15: 614-620.
- Gurish, M.F. and Austen, K.F. 2001. The diverse roles of mast cells. *J. Exp. Med.* 194: F1-F5.
- Online Mendelian Inheritance in Man, OMIM[™]. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 118938. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- LocusLink Report (LocusID: 7176). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: TPSAB1 (human) mapping to 16p13.3.

PRODUCT

Mast Cell Tryptase (h): 293T Lysate represents a lysate of human Mast Cell Tryptase transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

APPLICATIONS

Mast Cell Tryptase (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Mast Cell Tryptase antibodies. Recommended use: 10-20 μ l per lane.

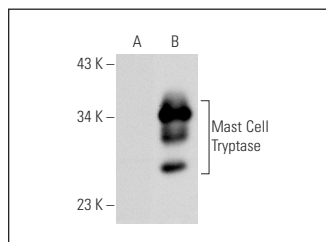
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Mast Cell Tryptase (G-3): sc-33676 is recommended as a positive control antibody for Western Blot analysis of enhanced human Mast Cell Tryptase expression in Mast Cell Tryptase transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

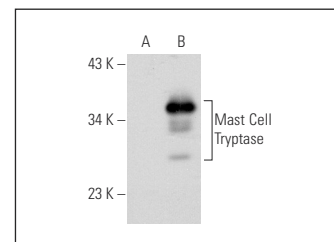
RECOMMENDED SUPPORT REAGENTS

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.

DATA



Mast Cell Tryptase (G-3): sc-33676. 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.



Mast Cell Tryptase (AA1): sc-59587. 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.

PROTOCOLS

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