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- Expressversand

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# Mast Cell Protease 7 (m): 293T Lysate: sc-121523

## 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 tryptases are major elements of mast cell granules with a variety of forms and functions. Mast cell proteases are a family of rodent protein homologs to human tryptases that are specifically expressed in mast cell secretory granules and may serve as highly specific markers in the analysis of mast cell heterogeneity, differentiation and function. Mast Cell Protease 7, also known as Tryptase  $\alpha/\beta$  1 or MMCP-7, is predominantly expressed in differentiated mast cells. It functions to degrade Fibrinogen at the endothelium/blood barrier and may be involved in regulating the formation of fibrin-platelet clots. The transcription of the gene encoding Mast Cell Protease 7 is regulated by Activin A, TGF $\beta$  and Smad3.

## REFERENCES

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- Ghildyal, N., et al. 1994. Lack of expression of the tryptase mouse Mast Cell Protease 7 in mast cells of the C57BL/6J mouse. J. Immunol. 153: 2624-2630.
- Matsumoto, R., et al. 1995. Packaging of proteases and proteoglycans in the granules of mast cells and other hematopoietic cells. A cluster of histidines on mouse Mast Cell Protease 7 regulates its binding to heparin Seryglycin proteoglycans. J. Biol. Chem. 270: 19524-19531.
- Huang, C., et al. 1998. The tryptase, mouse Mast Cell Protease 7, exhibits anticoagulant activity *in vivo* and *in vitro* due to its ability to degrade Fibrinogen in the presence of the diverse array of protease inhibitors in plasma. J. Biol. Chem. 272: 31885-31893.
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- Gu, Y., et al. 2002. Rac 2, a hematopoiesis-specific Rho GTPase, specifically regulates mast cell protease gene expression in bone marrow-derived mast cells. Mol. Cell. Biol. 22: 7645-7657.
- Funaba, M., et al. 2003. Transcriptional activation of mouse Mast Cell Protease 7 by Activin and transforming growth factor- $\beta$  is inhibited by microphthalmia-associated transcription factor. J. Biol. Chem. 278: 52032-52041.

## CHROMOSOMAL LOCATION

Genetic locus: Tpsab1 (mouse) mapping to 17 A1.

## PRODUCT

Mast Cell Protease 7 (m): 293T Lysate represents a lysate of mouse Mast Cell Protease 7 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

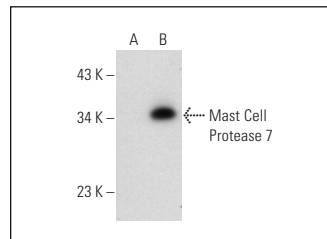
## APPLICATIONS

Mast Cell Protease 7 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Mast Cell Protease 7 antibodies. Recommended use: 10-20  $\mu$ 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 Protease 7 (CC40): sc-80533 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Mast Cell Protease 7 expression in Mast Cell Protease 7 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## DATA



Mast Cell Protease 7 (CC40): sc-80533. Western blot analysis of Mast Cell Protease 7 expression in non-transfected: sc-117752 (A) and mouse Mast Cell Protease 7 transfected: sc-121523 (B) 293T whole cell lysates.

## 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.

## PROTOCOLS

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