Product Information Sheet

Product Name:	MMP-3, Human, Catalytic domain
Catalog Number:	AS-72006
Size:	1 µg
Concentration:	10 µg/mL
Activity (Unit/µg):	Provided on the label
Unit definition:	One unit of protease hydrolyzes 1 picomole of Mca-Arg-Pro-Lys-Pro-Val-Glu Nva-Trp-Arg-Lys(Dnp)-NH2 (AnaSpec Cat#AS-27114) per minute at pH 7.5 at 25°C.
Storage:	Store at -80°C. Avoid multiple freeze/thaw cycles.

Instruction:

Matrix metalloproteinases (MMPs) belong to a family of secreted or membrane-associated zinc endopeptidases capable of digesting extracellular matrix components.[1,2] The importance of MMPs in tumor development and invasion as well as other diseases is well known. MMP-3 (stromelysin-1, transin-1) has been shown to involved in tumor metastasis[3] and rheumatoid arthritis[4,5]. Therefore it is proposed as a therapeutic target for these diseases. The native pro-MMP-3 is *Mr* 59/57-kDa doublet, which can be autocatalyzed to an active form of 45-kDa, and is then processed partially to a second active form of 28-kDa.[6]

Recombinant human MMP-3 was expressed as catalytic domain in *E. coli*. The molecular mass is 19.5 kDa. Purity is $\geq$ 95% by SDS-PAGE.

Recombinant human MMP-3 enzyme catalytic domain does not need APMA activation before enzyme assay. Its activity can be measured in FRET-based enzymatic assays (AnaSpec Cat#71130, Cat#71152). 10-20 ng of enzyme is sufficient for FRET-based assay. MMP-3 is stored in 50 mM HEPES, pH 7.5, 0.05% Brij 35, 10 mM $CaCl_2$, 1 mg/mL BSA, 2mM sodium azide.

References

1. Woessner, J. et al. *J. Biol. Chem.* 263, 16918 (1988).
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3. Matrisian, L. et al. *Proc. Natl. Acad. Sci. U.S.A* 83, 9413 (1986).
4. Chin, J. et al. *J. Biol. Chem.* 260, 12367 (1985).
5. Okada, Y. et al. *J Biol. Chem.* 261, 14245 (1986).
6. Okada, Y. et al. *J. Biol. Chem*. 261, 14245 (1986)