



## Product Information Sheet

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Product Name:	Human MMP-3, Recombinant
Catalog Number:	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)-NH <sub>2</sub> (AnaSpec Cat#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.<sup>1,2</sup> 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 be involved in tumor metastasis<sup>3</sup> and rheumatoid arthritis<sup>4,5</sup>. 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.<sup>6</sup>

Human MMP-3 catalytic domain was expressed as 253 amino acid sequence (Pro19-Glu271) with His-tag in *E. coli*. The molecular mass is approximately 28/29 kDa on SDS-PAGE.

Recombinant human MMP-3 enzyme has catalytic domain only and 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<sub>2</sub>, 1 mg/mL BSA, 2mM sodium azide.

### References

1. Woessner, J. et al. *J. Biol. Chem.* 263, 16918 (1988).
2. Woessner, J. et al. *FASEB. J.* 5, 2145 (1991).
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)