



Product Information Sheet

Product Name:	Human MMP-13 (Recombinant, Catalytic domain)
Catalog Number:	AS-72257
Size:	1 µg
Concentration:	10µg/ml
Recommended dilution:	FRET-based assay 1:50 –1:100
Activity (Unit/µg):	Provided on the label
Unit definition:	One unit of protease hydrolyzes 1 picomole of MMP FRET substrate I (Mca-Pro-Leu-Gly-Leu-Dnp-Ala-Arg-NH ₂) (AnaSpec Cat#27076) per minute at pH 7.5 at 25 ⁰ C
Storage:	Store at -80°C. Avoid multiple freeze/thaw cycles

Instruction:

The matrix metalloproteinases (MMPs) constitute a family of zinc-dependent endopeptidases that function within the extracellular matrix. These enzymes are responsible for the breakdown of connective tissues and are important in bone remodeling, menstrual cycle and the repair of tissue damage. MMP-13 (collagenase-3),¹ is a member of the MMP family of extracellular proteases. Targets of MMP-13 include collagen, gelatin, aggrecan, plasminogen and CXCL12. The native MMP-13 is secreted as a 60-kDa proenzyme, and activated by cleavage to a mature 48-kDa MMP-13.

The sequence (Accession # 1EUB_A) corresponding to the catalytic domain (aa 104-274 aa) of human MMP-13 was expressed with 6-his tags in *E. coli*. The molecular weight of the recombinant Human MMP-13 catalytic Domain is 20.5 kDa. Its activity can be measured in FRET-based enzymatic assays (AnaSpec Cat# AS-71135, AS-71156). 10-20 ng of the enzyme is sufficient for FRET-based assay.

MMP-13 is stored in 0.1M Tris, pH 7.5, 0.1M NaCl, 10 mM CaCl₂, 0.05% Brij 35, 2mM sodium azide, 1 mg/mL BSA.

References

1. Freije, J. et al. *J. Biol. Chem.* 269, 16766 (1994).