



Product Information Sheet

Product Name:	Human MMP-1 (Recombinant, Catalytic Domain)
Catalog Number:	AS-55575-1
Size:	1 µg
Activity:	Provided on the label
Unit Definition:	One unit of MMP-1 hydrolyzes 1 picomole of QXL [®] 520-γ-Abu-P-Cha-Abu-Smc-HA-Dab(5 - FAM) - AK-NH ₂ (AnaSpec Cat.#AS-60581) per minute at pH 7.4 at 25° C. <i>Supplied enzyme does not require pre-activation.</i>
Purity:	Greater than 95% as determined by SDS-PAGE.
Storage:	Store at -80 °C. Avoid repeated freeze-thaw cycles.

Instructions:

Matrix metalloproteinases (MMP's) belong to a family of secreted or membrane-associated zinc endopeptidases capable of digesting extracellular matrix components (1,2). MMP-1 (collagenase-1) is involved in tumor development and metastasis and rheumatoid arthritis (3-5). It is proposed as a therapeutic target for these diseases. MMP-1 digests a broad range of substrates, including α-1 antitrypsin, myelin basic protein, collagen I, II, III, VII, VIII, casein, gelatin, and others (3-5).

Recombinant human MMP-1 enzyme was expressed as catalytic domain (aa 106-261) along with 6-his tag in *E. coli*. The recombinant human MMP-1 was purified from bacterial lysate and refolded using proprietary technique. The molecular weight of the recombinant Human MMP-1 Catalytic Domain is 17.5 kDa. Its activity can be measured in FRET-based enzymatic assays (AnaSpec Cat.# AS-71128, AS-71150). 10-20 ng of the enzyme is sufficient for FRET-based assay.

MMP-1 is stored in 300 mM NaCl, 20 mM Tris-HCl, 10 mM CaCl₂, 1 µM ZnCl₂, pH=7.5

For Research Use Only.

References:

1. Woessner, J. et al. *J. Biol. Chem.* 263 (1988): 16918-16925
2. Woessner, J. *FASEB J.* 5 (1991): 2145-2154
3. Goldberg G. I. et al. *Ann. N.Y. Acad. Sci.* 580 (1990): 375-384
4. W. G. Stetler-Stevenson et al, *Annu. Rev. Cell Biol.* 9 (1993): 541-573
5. E. M. Gravallesse et al. *Arthritis Rheum.* 34 (1991): 1076-1084