



Product Information Sheet

Product Name:	Human MMP-9 (Recombinant, Catalytic Domain)
Catalog Number:	AS-55576-1
Size:	1 µg
Activity:	Provided on the label
Unit Definition:	One unit of MMP-9 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 (MMPs) belong to a family of secreted or membrane-associated zinc endopeptidases capable of digesting extracellular matrix components (1,2). MMP-9 (92-kDa gelatinase, collagenase-IV) is involved in a number of diseases such as cancer, angiogenesis, alopecia, and metastasis (3,4). MMP-9 is secreted as zymogen with prodomain, gelatin-binding domain consisting of three contiguous fibronectin type II units, catalytic domain, proline-rich linker region, and C-terminal hemopexin-like domain. It can degrade a variety of substrates, including gelatin, collagens type IV, V, XIV, α2-macroglobulin, elastin, vitronectin, and proteoglycans (1-4).

Recombinant human MMP-9 enzyme was expressed as catalytic domain (aa 112-445) along with 6-his tag in *E. coli*. The recombinant human MMP-9 was purified from bacterial lysate and refolded using proprietary technique. The molecular weight of the recombinant Human MMP-9 Catalytic Domain is 40 kDa. Its activity can be measured in FRET-based enzymatic assays (AnaSpec Cat.# AS-71134, AS-71155). 10-20 ng of the enzyme is sufficient for FRET-based assay.

MMP-9 is stored in 300 mM NaCl, 50 mM Tris-HCl, 5 mM CaCl₂, 20 µM ZnCl₂, pH=7.5.

For Research Use Only.

References:

1. J. F. Woessner et al., *J.Biol.Chem.* 263 (1988), 16918-16925
2. J. F. Woessner, Jr., *FASEB J.* 5 (1991), 2145-2154
3. S. M. Wilhelm et al., *J.Biol.Chem.* 264 (1989), 17213-17221
4. A. J. Fosang et al., *Biochem.J.* 295 (1993), 273-276