Product Information Sheet

Product Name:	Human MMP-9 (Recombinant, Catalytic Domain)
Catalog Number:	AS-55576-1
Lot Number:	See label on the vial
Amount/size:	1 μg
Activity:	>100 Units/μg (Exact value is supplied with Certificate of Analysis)
Activity Definition:	One unit of MMP-9 hydrolyzes 1 picomole of QXL™ 520-γ-Abu-Pro-Cha-Abu-Smc-His-Ala-Dab (5-FAM)-Ala-Lys-NH2 (AnaSpec Cat# 60581) per minute at pH 7.5 at 25° C. ***Supplied enzyme does not require pre-activation***.
Source:	The sequence (Accession # NP_004985.2) corresponding to the catalytic domain (aa 112-445) of Human MMP-9 ***along with 6-his tag*** was expressed 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.
Purity:	Greater than 95% as determined by SDS-PAGE.
Endotoxin (EU/μg):	Less than 1 EU per 1 μg of the protein as determined by Limulus Amebocyte Lysate (LAL) quantitative kinetic assay.
Storage:	The purified Human MMP-9 is supplied as sterile and frozen at 40 μg /ml in the following buffer: 300 mM NaCl, 50 mM Tris-HCl, 5 mM $CaCl_2$, 20 μM $ZnCl_2$, pH=7.5. Store at -80 ºC for up to 6 months. 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, a2-macroglobulin, elastin, vitronectin, and proteoglycans (1-4).

Figure 1.

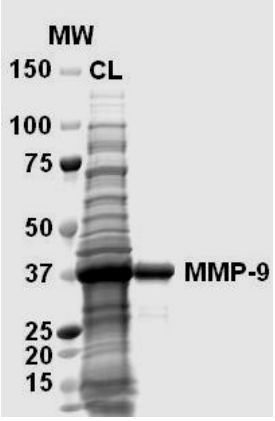

Figure 1. Recombinant Human MMP-9 (Catalytic Domain) on SDS-PAGE
The purified MMP-9 was loaded onto 4-15% Tris-HCl poly-acrylamide gel at 2 μg/well and resolved at 200V for 60 minutes.
Legend:
MW is Molecular Weight Markers in kilo Daltons,
CL is cell lysate of induced E.coli,
purified MMP-9.

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

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