

Active Recombinant Human MMP7

Cat. No. MMP7-40H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant Human Matrix Metalloproteinase-7 produced in *E. Coli* is a single, non-glycosylated, polypeptide chain containing having a molecular mass of 19.13 kDa. The MMP-7 is purified by proprietary chromatographic techniques.

Species Human

Source E.coli

Description Matrix metalloproteinase-7 (MMP-7) also known as matrilysin and PUMP (EC 3.4.24.23) cleaves a number of substrates including collagen types IV and X, elastin, fibronectin, gelatin, laminin and proteoglycans. MMP-7 is closely related to the stromelysin family members but is encoded by a different gene. MMP-7 is the smallest of all the MMPs consisting of a pro-peptide domain and a catalytic domain. It lacks the hemopexin-like domain common to other members of the MMPs. MMP-7 is secreted as a 28 kDa proenzyme and can be activated in vitro by organomercurials and trypsin and in vivo by MMP-3 to a 18 kDa active MMP-7 enzyme. Once activated, MMP-7 can activate pro-MMP-1 and pro-MMP-9 but not pro-MMP-2. MMP-7 is widely expressed having been reported in elevated levels in cycling endometrium as well as in colorectal cancers and adenomas, hepatocellular carcinomas, rectal carcinomas, and approximately 50% of gliomas.

Physical Appearance Sterile clear liquid solution.

Purity Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by

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| | SDS-PAGE. |
| Formulation | The protein (0.83 mg/ml) contains the following additives 10 mM HEPES (pH 7.4), 5 mM CaCl ₂ and 150 mM NaCl. |
| Biological Activity | The specific activity was found to be 3100 IU/mg. |
| Unit Definition | One unit is defined as the digestion of 1 g Azocoll/min at 37°C. |
| Recommended Use | Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure antibody using ECL technique). ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (1:10-50K for neat serum and 0.5-1 ug/ml for affinity pure). Histochemistry & Immunofluorescence: Not tested. |
| Stability | Matrilysin although stable at 4°C for 3 weeks, should be stored desiccated below -18°C. Please prevent freeze-thaw cycles. |

GENE INFORMATION

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| Gene Name | MMP7 matrix metalloproteinase 7 (matrilysin, uterine) [Homo sapiens] |
| Synonyms | MMP7; matrix metalloproteinase 7 (matrilysin, uterine); MMP-7; MP-1; PUMP-1; matrix metalloproteinase 7; matrin; uterine matrilysin; EC 3.4.24.23; Matrix metalloproteinase-7; Pump-1 protease; Uterine metalloproteinase; PUMP1; Matrin |
| Gene ID | 4316 |
| mRNA Refseq | NM_002423 |
| Protein Refseq | NP_002414 |

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| MIM | 178990 |
| UniProt ID | P09237 |
| Chromosome Location | 11q21-q22 |
| Pathway | Wnt signaling pathway |
| Function | calcium ion binding; metalloendopeptidase activity; peptidase activity; zinc ion binding |

PDB rendering based on 1mmp.



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