

Active Recombinant Human MMP7

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

SPECIFICATION

Product Overview	Recombinant Human Matrix Metalloproteinase-7 produced in <i>E. Coli</i> 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

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

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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 µg Azocoll/min at 37°C.
Recommended Use	Western Blotting (1:1K-5K for neat serum and 1-10 µg/ml for affinity pure antibody using ECL technique). ELISA: Control peptide can be used to coat ELISA plates at 1 µg/ml and detected with antibodies (1:10-50K for neat serum and 0.5-1 µg/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

Gene Name	MMP7 matrix metalloproteinase 7 (matrilysin, uterine) [Homo sapiens]
Synonyms	MMP7; matrix metalloproteinase 7 (matrilysin, uterine); MMP-7; MPSL1; 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

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