

Product Data Sheet

Cat # RP-360

Recombinant Human Matrix Metalloproteinase-7

Size: 5 ug

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.

Usage: This item is for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

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Source: *Escherichia Coli*. Matrix Metalloproteinase-7 Recombinant 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. The protein (0.83 mg/ml) contains the following additives 10mM HEPES (pH 7.4), 5mM CaCl₂ and 150mM NaCl.

Applications and Suggested Dilutions: Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE. 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. Users must optimize the appropriate concentration and conditions for each assay.

Storage and Stability: Matrilysin although stable at 4°C for 3 weeks, should be stored desiccated below -18°C. **Please prevent freeze-thaw cycles.** If supplied in powder then reconstitute it in 100 ul water for 1 mg/ml stock and store in liquid at 4°C for ~1 week or aliquots in suitable size and store at -20°C for long term storage.

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.

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