



Product Data Sheet

Cat # RP-372

Recombinant Human Matrix Metalloproteinase-3

Size: 5 ug

MMP-3 enzyme is also known as Stromelysin-1 or as Transin-1 which hydrolyzes natural collagen at physiological pH and temperature. It dissolves the intervertebral nucleus pulposus and annulus fibrosus of Herniated Lumbar Intervertebral Disk. MMP-3 hydrolyzes components of the extracellular matrix like proteoglycan, laminin, fibronectin, gelatin and collagen types III, IV and IX. It also activates pro-MMP-9 and pro-MMP-8 and super activates plasmin activated MMP-1. MMP-3 is secreted as a latent proenzyme and is activated by a variety of proteinases, e.g. plasmin, trypsin, chymotrypsin, cathepsin G or human neutrophil elastase. MMP-3 was found to be capable of activating the precursor of IL1-beta.

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-3 Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 230 amino acids and having a molecular mass of 22 kDa. The MMP-3 is purified by proprietary chromatographic techniques. The protein was lyophilized from a concentrated (1 mg/ml) solution with no additives.

Applications and Suggested Dilutions: It is recommended to reconstitute the lyophilized Stromelysin-1 in sterile 18MΩ-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions. Greater than 98% as determined by both: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE. Users must optimize the appropriate concentration and conditions for each assay.

Storage and Stability: Lyophilized Matrix Metalloproteinase-3 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution MMP-3 should be stored at 4°C between 2-7 days and for future use 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 ≥1,250 mU/mg protein (H. Nagase, et al; J. Biol. Chem. 269, 20952, 1994). One unit is defined as the amount of enzyme that hydrolyzes 1 µmol of MCA-Arg-Pro-Lys-Pro-Val-Glu-Nva-Trp-Arg-Lys(DNP)-NH₂ per min. at 37°C, pH 7.0.