

## MMP3

### Recombinant Human Matrix Metalloproteinase 3

<b>Catalog No.</b>	CRM012A	<b>Quantity:</b>	2 µg
	CRM012B		10 µg
	CRM012C		1.0 mg

**Alternate Names:** MMP-3, Stromelysin 1, SL-1

**Description:** Recombinant Human MMP-3 produced in HEK293 cells is the proform of the Human MMP3 [Tyr18-Cys477 (Lys45Glu)] and fused with a C-terminal polyhistidine tag. 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 superactivates 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.

**Concentration:** P08254

**Gene ID:** 4314

**Source:** HEK293 cells.

**Molecular Weight:** 52 kDa

**Formulation:** The MMP-3 is supplied as a 0.2µm filtered solution in Tris, NaCl and Brij35.

**Purity:** Greater than 95% as determined by SDS-PAGE.

**Purification:** MMP-3 is purified by proprietary chromatographic techniques.

**Biological Activity:** The activity was measured by its ability to cleave the fluorogenic peptide substrate, Mca-RPKPVE-Nval-WRK(Dnp)-NH<sub>2</sub>. The specific activity is > 150 pmoles/min/µg.

**Recombinant Human MMP-3 protein pro form needs to be activated with Chymotrypsin.**

**Activation Protocol:**

1. Dilute MMP3 to 20µg/ml in the Assay Buffer: 50mM Tris, 10mM CaCl<sub>2</sub>, 150mM NaCl, 0.05% (w/v) and Brij 35, pH 7.5.
2. Activate MMP3 by adding Chymotrypsin(Sigma, Catalog#C-3142, 1mg/ml stock in 1mM HCl) to a final concentration of 5ug/ml.
3. Incubate at 37°C for 30 minutes.
4. Stop activation with 2mM PMSF. Pre-warm the PMSF to 37°C prior to adding to sample.

**Physical Appearance:** Sterile-filtered colorless solution.

**Storage & Stability:** Store at 2-8°C if entire vial will be used within 2-4 weeks. For longer storage, prepare working aliquots and store at -20°C to -80°C.

**Avoid multiple freeze-thaw cycles.**

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