

Human CellExp™ MMP-3, Human Recombinant

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| CATALOG NO: | P1310-10 10 µg |
| ALTERNATE NAMES: | Stromelysin-1, EC 3.4.24.17, Matrix metalloproteinase-3, MMP-3, Transin-1, SL-1, STMY, STR1, STMY1, MGC126102, MGC126103, MGC126104 |
| SOURCE: | HEK 293 cells (Tyr18 - Cys477) |
| PURITY: | > 95% by SDS-PAGE |
| MOL. WEIGHT: | This protein carries a polyhistidine tag at the C-terminus. The protein is a proform of the Human MMP3 [Tyr18-Cys477 (Lys45Glu)] and has a calculated MW of 52 kDa |
| FORM: | Liquid |
| FORMULATION: | Supplied as 0.2 µm filtered solution in 20mM Tris-HCl, 150mM NaCl and 0.05% Brij35, pH 7.5 |
| STORAGE CONDITIONS: | Store at 4°C for short term (use within 2-4 weeks). For long term aliquot and store at -20°C. Avoid multiple freeze-thaw cycles. |
| DESCRIPTION: | 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. |
| BIOLOGICAL ACTIVITY: | The activity was measured by its ability to cleave the fluorogenic peptide substrate, Mca-RPKPVE-Nval-WRK(Dnp)-NH ₂ . 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 CaCl₂, 150mM NaCl, 0.05% (w/v) and Brij 35, pH 7.5.
2. Activate MMP3 by adding Chymotrypsin to a final concentration of 5ug/ml.
3. Incubate at 37°C for 30 minutes.
4. Stop activation with 2 mM PMSF. Pre-warm the PMSF to 37°C prior to adding to sample

RELATED PRODUCTS:

- Human CellExp™ MMP-1, human recombinant (**Cat. No. 7244**)
- Human CellExp™ MMP-2, human recombinant (**Cat. No. 7245**)
- MMP-3, human recombinant (**Cat. No. 7783**)
- Human CellExp™ MMP-9, human recombinant (**Cat. No. 7246**)
- Pro-MMP-13, human recombinant (**Cat. No. 7785**)

FOR RESEARCH USE ONLY! Not to be used on humans.