Datasheet for ABIN2666505

# MMP2 Protein (AA 34-662, C-Term)

3 Images

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## Overview

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| Quantity: | 10 µg |
| Target: | MMP2 |
| Protein Characteristics: | C-Term, AA 34-662 |
| Origin: | Mouse |
| Source: | HEK-293 Cells |
| Protein Type: | Recombinant |
| Biological Activity: | Active |
| Application: | Western Blotting (WB), Immunofluorescence (IF) |

## Product Details

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| Purity: | > 95 % , as determined by Coomassie stained SDS-PAGE. |
| Sterility: | 0.22 µm filtered |
| Endotoxin Level: | Less than 0.1 EU per µg of protein as determined by the LAL method. |

## Target Details

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| Target: | MMP2 |
| Alternative Name: | MMP-2 (MMP2 Products) |
| Background: | MMP-2, also known as gelatinase A, is a member of matrix metalloproteinase family proteins (MMPs). MMPs are structurally related, zinc-containing enzymes that degrade the extracellular matrix (ECM) and connective tissue proteins in normal physiological processes such as embryonic development, reproduction, and tissue remodeling as well as in disease processes |

## Target Details

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| | such as arthritis and metastasis. MMP-2 consists of a prodomain, which is cleaved upon activation, a catalytic domain containing the zinc binding site, a fibronectin-like domain (that plays a role in the substrate targeting), and a carboxyl terminal (hemopexin-like repeats) domain. Activation of MMP-2 requires proteolytic processing: a complex of membrane type 1 MMP (MT1-MMP) and tissue inhibitor of metalloproteinase 2 recruits pro-MMP-2 from the extracellular milieu to the cell surface. Next, the MMP-2 is activated by active MT1-MMP and subsequently undergoes auto-catalytic cleavage. Substrates of MMP-2 include type IV collagen, aggrecan, link protein, decorin, fibronectin, and type X and XI collagens, all of which are components of the articular cartilaginous matrix. Importantly, MMP-2 secretion is elevated in several types of human cancers and its elevated expression has been associated with poor prognosis. Mutations in the MMP2 gene are associated with Torg-Winchester syndrome, multicentric osteolysis, arthritis syndrome, and possibly keloids. MMP-2 deficient mice exhibit slightly delayed growth, reduced neovascularization, retarded tumor progression, an exaggerated asthma response to allergens, and impaired branching morphogenesis of the mammary gland. |
| Molecular Weight: | This 663 amino acid recombinant protein has a predicted molecular mass of approximately 74.5 kDa. The protein migrates at about 72 kDa in DTT-reducing conditions and about 71 kDa in non-reducing conditions by SDS-PAGE.The predicted N-terminal amino acid i |
| Pathways: | Activation of Innate immune Response |

## Application Details

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| Application Notes: | Optimal working dilution should be determined by the investigator. |
| Comment: | Biological activity: Mouse MMP-2 cleaves the peptide substrate Mca-PLGL-Dpa-AR-NH2 with an activity above 1400 pmol/min/µg. |
| Restrictions: | For Research Use only |

## Handling

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| Format: | Liquid |
| Reconstitution: | For maximum results, quick spin vial prior to opening. |
| Buffer: | 0.22 µm filtered protein solution is in TCN (25 mM TRIS, 5 mM CaCl2, 150 mM NaCl, pH 7.5). |
| Handling Advice: | Avoid repeated freeze/thaw cycles. |
| Storage: | -20 °C |

## Handling

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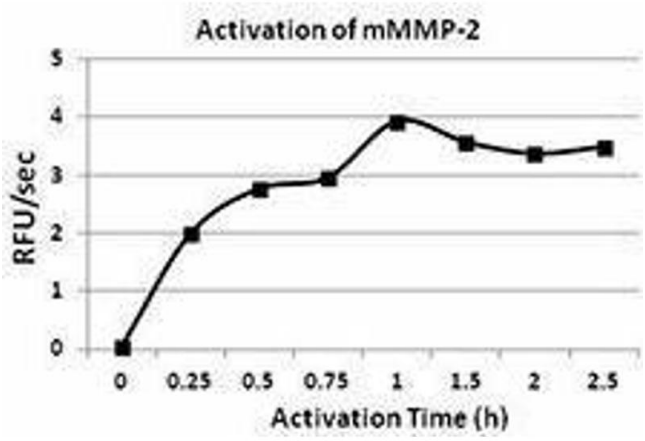
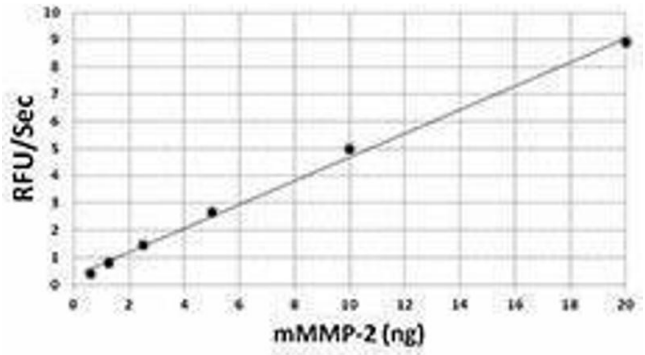
| Storage Comment: | Unopened vial can be stored at -70°C for six months. |

## Images



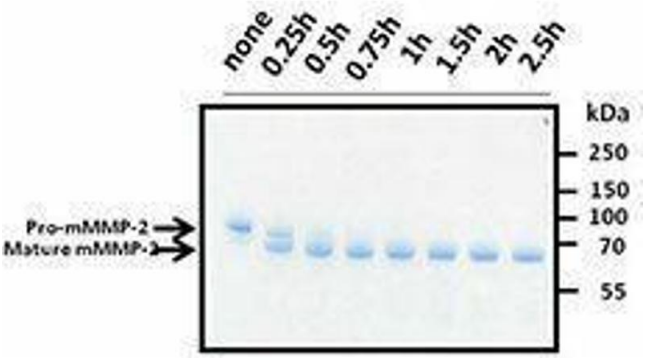

**ELISA**

**Image 1.**




**ELISA**

**Image 2.**




**SDS-PAGE**

**Image 3.**