

Matrix Metalloproteinase 1 (MMP1) Active Protein | MMP1 active protein

Active Matrix Metalloproteinase 1 (MMP1)

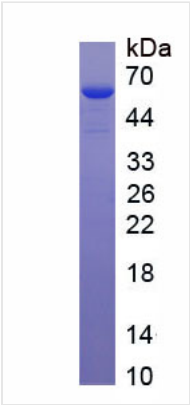
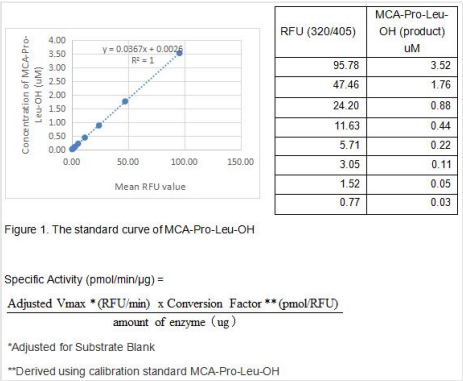
CATALOG # AAA161685	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Matrix Metalloproteinase 1 (MMP1); Active Matrix Metalloproteinase 1 (MMP1); Matrix Metalloproteinase 1; CLGN; CLG1; Collagenase; Interstitial Collagenase; Vertebrate Collagenase; Fibroblast Collagenase4; MMP1 active protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	Greater than 90% by SDS-PAGE
Form/Format	Freeze-dried powder; PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Sequence	Phe19~Asn4 67
Applicable Applications for MMP1 active protein	Activity Assay, Cell Culture
Species	Sheep
Expression System	Prokaryotic expression
Tag	N-terminal His Tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	6.4
Research Area	Tumor immunity, Infection immunity, Cardiovascular biology, Rheumatology
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months



SDS-PAGE
Figure. SDS-PAGE

Bioactivity

MMP1 is a zinc-dependent enzymes capable of cleaving components of the extracellular matrix, which belongs to the matrix metalloproteinase (MMP) family. MMP-1 (interstitial collagenase), can degrade a broad range of substrates including types I, II, III, VII, VIII, and X collagens as well as casein, gelatin and so on. MMP-1 is expressed by fibroblasts, keratinocytes, endothelial cells, monocytes and macrophages. Structurally, MMP-1 may be divided into several distinct domains; a pro-domain which is cleaved upon activation; a catalytic domain containing the zinc binding site; a short hinge region and a carboxyl terminal (hemopexin-like) domain. The activity of recombinant sheep MMP1 is measured by its ability to cleave a fluorogenic peptide substrate Mca-KPLGL-Dpa-AR-NH2 in the assay buffer 50 mM Tris, 10 mM CaCl2, 150 mM NaCl, 0.05% (w/v) Brij-35, pH 7.5. The rsMMP1 is diluted to 50 ug/ml in assay buffer, then activated by p-aminophenylmercuric acetate (APMA) in a final concentration of 1 mM incubated at 37 degree C for 2 hours. The activated rsMMP-1 is diluted to 1 ug/mL in assay buffer. Loading into a black well plate 50 uL of 1 ug/mL rsMMP-1 and start the reaction by adding 50 uL of 20 uM substrate, with a substrate blank containing 50 uL assay buffer, 50 uL substrate, and no rsMMP-1. Then read at excitation and emission wavelengths of 320 nm and 405 nm, respectively, in kinetic mode for 5 minutes. The specific activity of recombinant sheep MMP1 is > 40 pmol/min/ug.

ADDITIONAL INFORMATION

Product Categories/Family for MMP1 active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

UniProt Accession #	W5P5K5
Molecular Weight	58kDa

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-active-protein/matrix-metalloproteinase-1-mmp1/161685>