

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

Active Matrix Metalloproteinase 1 (MMP1)

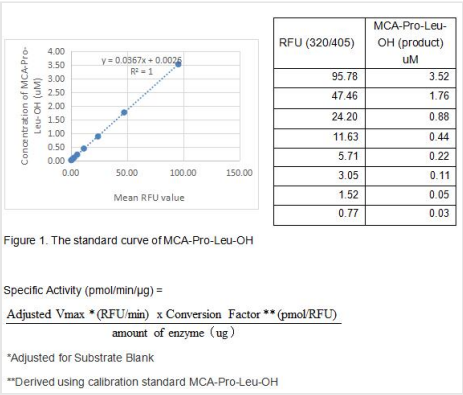
CATALOG # AAA161684	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

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 69
Applicable Applications for MMP1 active protein	Activity Assay, Cell Culture
Species	Bovine
Expression System	Prokaryotic expression
Tag	N-terminal His Tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	5.8
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

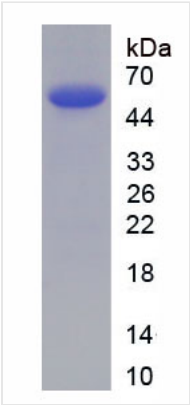


Bioactivity

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 bovine 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 rbMMP1 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 rbMMP-1 is diluted to 1 ug/mL in assay buffer. Loading into a black well plate 50 uL of 1 ug/mL rbMMP-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 rbMMP-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 bovine MMP1 is > 150 pmol/min/ug.

SDS-PAGE

Figure. SDS-PAGE



ADDITIONAL INFORMATION

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

NCBI GI #	27806541
NCBI GeneID	281308
NCBI Accession #	NP_776537.1
NCBI GenBank Nucleotide #	NM_174112.1
UniProt Accession #	P28053
Molecular Weight	53,354 Da
NCBI Official Full Name	interstitial collagenase
NCBI Official Symbol	MMP1
NCBI Official Synonym Symbols	MMP-1
NCBI Protein Information	interstitial collagenase
UniProt Protein Name	Interstitial collagenase
UniProt Gene Name	MMP1
UniProt Synonym Gene Names	CLG; MMP-1

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-mmp1/161684>