

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

Active Matrix Metalloproteinase 1 (MMP1)

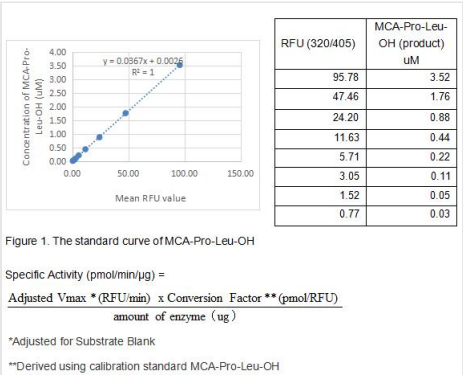
CATALOG # AAA161686	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

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	Phe100~Asn 469
Applicable Applications for MMP1 active protein	Activity Assay, Cell Culture
Species	Pig
Expression System	Prokaryotic expression
Tag	N-terminal His Tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	5.3
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

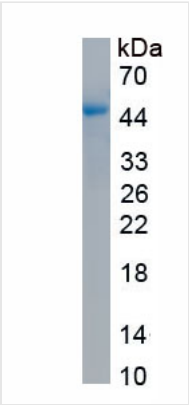


Bioactivity

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 pig 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 rpMMP1 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 rpMMP-1 is diluted to 1 ug/mL in assay buffer. Loading into a black well plate 50 uL of 1 ug/mL rpMMP-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 rpMMP-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 pig MMP1 is > 10 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 #	261249969
NCBI GeneID	397320
NCBI Accession #	NP_001159701.1
NCBI GenBank Nucleotide #	NM_001166229.1
UniProt Accession #	P21692
Molecular Weight	53,666 Da
NCBI Official Full Name	interstitial collagenase
NCBI Official Symbol	MMP1
NCBI Official Synonym Symbols	Mmp1a
NCBI Protein Information	interstitial collagenase
UniProt Protein Name	Interstitial collagenase
UniProt Gene Name	MMP1
UniProt Synonym Gene Names	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-mmp1/161686>