Active Recombinant Human MMP15 protein, His-tagged

Cat. No. MMP15-608H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human MMP15(Glu47-Pro565) fused with His tag at C-terminal was expressed in NS0.
Species	Human
Source	Mammalian Cells
ProteinLength	Glu47-Pro565
Description	Matrix metalloproteinases (MMPs) are a family of zinc and calcium dependent endopeptidases with the combined ability to degrade all the components of the extracellular matrix. They play critical roles in tissue remodeling, angiogenesis, tumor invasion, and rheumatoid arthritis. MMP-15, also known as MT2-MMP, is a membrane-type MMP that is expressed in many tumor tissues including urothelial carcinoma, oral cancer, ovarian carcinoma, melanoma, and astrocytoma. Structurally, MMP-15 consists of the following domains:a pro domain containing a furin cleavage site, a catalytic domain containing the zinc-binding site, a hinge region, a hemopexin-like domain, a transmembrane domain, and a cytoplasmic tail. Recombinant Human (rh) MMP-15, consists of the pro domain, catalytic domain, hinge region and hemopexin-like domain. The pro domain contains the mutations R128P and R129G, which prevent activation by furin cleavage. Activation of rhMMP-15 is possible by treatment with rhTrypsin 3 as described in the Activity Assay Protocol.
Predicted N Terminal	Glu47

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Form	Supplied as a 0.2 μm filtered solution in MES, NaCl and Glycerol.
Bio-activity	Measured by its ability to cleave a fluorogenic peptide substrate Mca-KPLGL-Dpa-AR-NH2. The specific activity is >200 pmol/min/μg, as measured under the described conditions.
Molecular Mass	Predicted Molecular Mass: 61 kDa; SDS-PAGE: 60-65 kDa, reducing conditions.
Endotoxin	<1.0 EU per 1 μg of the protein by the LAL method.
Purity	>70%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain at 5 μg per lane
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 6 months from date of receipt, -70 centigrade as supplied. 3 months, -70 centigrade under sterile conditions after opening.
Shipping	The product is shipped with dry ice or equivalent. Upon receipt, store it immediately at the temperature recommended below.

GENE INFORMATION

Gene Name	MMP15 matrix metallopeptidase 15 (membrane-inserted) [Homo sapiens]
Official Symbol	MMP15
Synonyms	MMP15; matrix metallopeptidase 15 (membrane-inserted); matrix metalloproteinase 15 (membrane inserted); matrix metalloproteinase-15; MT2 MMP; MTMMP2; SMCP 2; MMP-15; MT2MMP; MT-MMP 2; membrane-type matrix metalloproteinase 2; membrane-type-2 matrix metalloproteinase; matrix metalloproteinase 15 (membrane-

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	inserted); SMCP-2; MT2-MMP;
Gene ID	4324
mRNA Refseq	NM_002428
Protein Refseq	NP_002419
MIM	602261
UniProt ID	P51511
Chromosome Location	16q13
Pathway	Activation of Matrix Metalloproteinases, organism-specific biosystem; Degradation of the extracellular matrix, organism-specific biosystem; Extracellular matrix organization, organism-specific biosystem; Matrix Metalloproteinases, organism-specific biosystem;
Function	calcium ion binding; enzyme activator activity; metalloendopeptidase activity; peptidase activity; protein binding; zinc ion binding;

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