

Recombinant Human MMP14, Hemopexin Domain, His-tagged

Cat. No. MMP14-812H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant human MT1-MMP hemopexin domain is produced as a periplasmic protein in E. coli. The protein consists of MT1-MMP amino acid residues G292PNIC . . . CPSGG489 followed by the His-tag VTHHHHHH. The calculated Mr of the recombinant protein is 24 238 Da.

Species Human

Source E.coli

Description Matrix metalloproteinases (MMPs) are Zn²⁺- and Ca²⁺-dependent endopeptidases which function in the turnover of extracellular matrix components. Presently fifteen secreted MMPs and six membranetype MMPs are known to be expressed in humans. MT1-MMP consists of 559 amino acid residues with a calculated Mr of 63 516 Da. The following domains and sequence regions are distinguished in MT1-MMP: Prodomain (Ser1 - Arg88), catalytic domain (Tyr89 - Gly261), junction between catalytic domain and hemopexin domain (Gly262 - Gly292), hemopexin-like domain (Pro293 - Cys485) and C-terminal sequence (Pro486 - Val559) with transmembrane segment. A soluble form of MT1-MMP without transmembrane segment has been found in culture medium of a breast carcinoma cell line.

Form The protein is solubilized in 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 5 mM CaCl₂.

Purity MT1-MMP hemopexin domain represents more than 95 % of total protein in the preparation.

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Applications

Isolated MT1-MMP hemopexin domain allows investigate interactions of this domain with low molecular weight ligands and with macromolecules. To detect and monitor recombinant hemopexin domain in such investigations the His-tag can be used. MT1-MMP hemopexin domain can also serve as antigen for generation of antibodies to MT1-MMP.

Storage And Stability

MT1-MMP hemopexin domain is stable until the expiry date given on the label if stored at -70°C. The protein can be kept at -20°C for several weeks and in ice for several days. Repeated freezing and thawing should be avoided.

GENE INFORMATION

Gene Name

MMP14 matrix metalloproteinase 14 (membrane-inserted) [Homo sapiens]

Synonyms

MMP14; matrix metalloproteinase 14 (membrane-inserted); MMP-X1; MTMMP1; MT1-MMP; MT1MMP; MT-MMP; matrix metalloproteinase 14; membrane type 1 metalloproteinase; membrane-type matrix metalloproteinase 1; membrane-type-1 matrix metalloproteinase; matrix metalloproteinase 14 (membrane-inserted); MMP-14; EC 3.4.24.80; Membrane-type-1 matrix metalloproteinase; Membrane-type matrix metalloproteinase 1

Gene ID

4323

mRNA Refseq

NM_004995

Protein Refseq

NP_004986

MIM

600754

UniProt ID

P50281

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Chromosome Location	14q11-q12
Pathway	GnRH signaling pathway
Function	calcium ion binding; metalloendopeptidase activity; peptidase activator activity; peptidase activity; protein binding; zinc ion binding



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