

## Recombinant Human Matrix metalloproteinase-14

### Information

<b>Gene ID</b>	4323
<b>Accession #</b>	P50281
<b>Alternate Names</b>	MMP-X1, MT-MMP 1, MT1-MMP
<b>Source</b>	Escherichia coli.
<b>M.Wt</b>	Approximately 29.6 kDa, a single non-glycosylated polypeptide chain containing 264 amino acids.
<b>AA Sequence</b>	ALASLGSAQS SSFSPEAWLQ QYGYLPPGDL RTHTQRSPQS LSAAIAAMQK FYGLQVTGKA DADTMKAMRR PRCGVDPKFG AEIKANVRRK RYAIQGLKWQ HNEITFCIQN YTPKVGEYAT YEAIKAFRV WESATPLRFR EVPYAYIREG HEKQADIMIF FAEGFHGDST PFDGEGGFLA HAYFPGPNIG GDTHFDSAEP WTVRNEDLNG NDIFLVAVHE LGHALGLEHS SDPSAIMAPF YQWMDTENFV LPDDDRRGIQ QLYG
<b>Appearance</b>	Sterile colorless liquid.
<b>Stability &amp; Storage</b>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 6 months from date of receipt, -20 to -70 °C as supplied - 3 months, -20 to -70 °C under sterile conditions after opening
<b>Formulation</b>	Supplied as a 0.2 µm filtered solution in 20 mM Tris-HCl, pH 7.4, 300 mM NaCl, 3 mM CaCl <sub>2</sub> , 10 µM ZnCl <sub>2</sub> , with 30 % glycerol.
<b>Reconstitution</b>	
<b>Biological Activity</b>	Test in Process.
<b>Shipping Condition</b>	Gel pack.
<b>Handling</b>	Centrifuge the vial prior to opening.
<b>Usage</b>	For Research Use Only! Not to be used in humans.

### Components and Storage

Components	10µg	100µg	500µg
Recombinant Human Matrix metalloproteinase-14	10µg	100µg	500µg

Use a manual defrost freezer and avoid repeated freeze-thaw cycles

- 6 months from date of receipt, -20 to -70 °C as supplied
- 3 months, -20 to -70 °C under sterile conditions after opening

## Quality Control

Purity	> 95 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuMMP-14 as determined by LAL method.

## Description

As the first member of membrane type (MT) MMPs, MMP-14, also known as MT1-MMP, plays an important role in extracellular matrix (ECM) remodeling by being able to degrade type I collagen, activate pro-MMP-2 and process cell adhesion molecules such as CD44 and integrin alpha V. MMP-14 is therefore a key enzyme in many physiological and pathological processes such as angiogenesis and tumor invasion. Structurally, MMP-14 consists of the following domains: a pro domain containing the 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 MMP-14 consists of the pro and catalytic domains, which can be activated by treatment with furin as described in Activity Assay Protocol.

## Reference

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