

## Active Recombinant Human MMP14, His-tagged

**Cat. No.** MMP14-38H    **Lot. No.** (See product label)

### SPECIFICATION

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| <b>Product Overview</b>     | Recombinant Human MMP14(Ala21-Ser538), fused with an N-terminal human CD33 signal sequence, Arg108Pro mutation and a C-terminal 6-His tag, was expressed in Mouse NSO Cells.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Species</b>              | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Source</b>               | Mammalian Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>ProteinLength</b>        | 21-538 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Description</b>          | Proteins of the matrix metalloproteinase (MMP) family are involved in the breakdown of extracellular matrix in normal physiological processes, such as embryonic development, reproduction, and tissue remodeling, as well as in disease processes, such as arthritis and metastasis. Most MMP's are secreted as inactive proproteins which are activated when cleaved by extracellular proteinases. However, the protein encoded by this gene is a member of the membrane-type MMP (MT-MMP) subfamily; each member of this subfamily contains a potential transmembrane domain suggesting that these proteins are expressed at the cell surface rather than secreted. This protein activates MMP2 protein, and this activity may be involved in tumor invasion. |
| <b>Predicted N Terminal</b> | Ala21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Form</b>                 | Supplied as a 0.2 µ filtered solution in Sodium Acetate, NaCl, CaCl <sub>2</sub> , Glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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| <b>Bio-activity</b>   | Measured by its ability to cleave a fluorogenic peptide substrate Mca-KPLGL-Dpa-AR-NH <sub>2</sub> .                                                 |
| <b>Molecular Mass</b> | Predicted Molecular Mass: 60 kDa<br>SDS-PAGE: 60-65 kDa, reducing conditions                                                                         |
| <b>Endotoxin</b>      | < 1.0 EU per 1 µg of the protein by the LAL method.                                                                                                  |
| <b>Purity</b>         | >80%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain at 5 µg per lane.                                      |
| <b>Storage</b>        | Avoid repeated freeze-thaw cycles.<br>6 months from date of receipt, -70 °C as supplied.<br>3 months, -70 °C under sterile conditions after opening. |

## GENE INFORMATION

|                        |                                                                                                                                                                                                                                                                                                                                            |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | <a href="#">MMP14 matrix metalloproteinase 14 (membrane-inserted) [ Homo sapiens (human) ]</a>                                                                                                                                                                                                                                             |
| <b>Official Symbol</b> | MMP14                                                                                                                                                                                                                                                                                                                                      |
| <b>Synonyms</b>        | MMP14; matrixmetalloproteinase 14 (membrane-inserted); 1; MMP-14; MMP-X1; MT-MMP; MT1MMP; MTMMP1; MT1-MMP; MT-MMP 1; matrix metalloproteinase-14; OTTHUMP00000027917; membrane type 1 metalloproteinase; membrane-type matrixmetalloproteinase 1; membrane-type-1 matrix metalloproteinase; matrixmetalloproteinase 14 (membrane-inserted) |
| <b>Gene ID</b>         | <a href="#">4323</a>                                                                                                                                                                                                                                                                                                                       |
| <b>mRNA Refseq</b>     | <a href="#">NM_004995</a>                                                                                                                                                                                                                                                                                                                  |
| <b>Protein Refseq</b>  | <a href="#">NP_004986</a>                                                                                                                                                                                                                                                                                                                  |

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| <b>MIM</b>                 | 600754                                                                                                                                                                                          |
| <b>UniProt ID</b>          | P50281                                                                                                                                                                                          |
| <b>Chromosome Location</b> | 14q11.2                                                                                                                                                                                         |
| <b>Pathway</b>             | GnRHsignaling pathway; HIF-2-alpha transcription factor network; MatrixMetalloproteinases; Senescence and Autophagy; Signaling events mediated byfocal adhesion kinase                          |
| <b>Function</b>            | calciumion binding; integrin binding; metalloendopeptidase activity; peptidaseactivator activity; protein binding; sequence-specific DNA bindingtranscription factor activity; zinc ion binding |

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