Product Information Sheet

Product Name: Human MMP-12 (Recombinant, Catalytic Domain)

Catalog Number: AS-55525-50

Size: 50 µg

Activity: Provided on the label

Unit Definition: One unit of MMP-12 hydrolyzes 1 picomole of QXL® 520-γ-Abu-P-Cha-Abu-Smc-HA-Dab(5 - FAM) - AK-NH₂ (AnaSpec Cat.#AS-60581) per minute at pH 7.4 at 25° C. *Supplied enzyme does not require pre-activation.*

Purity: Greater than 95% as determined by SDS-PAGE.

Storage: Store at -80 ºC. Avoid repeated freeze-thaw cycles.

Instructions:

Matrix metalloproteinases (MMPs) belong to a family of secreted or membrane-associated zinc endopeptidases capable of digesting extracellular matrix components (1,2). MMP-12 (macrophage elastase) is involved in smoke-induced emphysema, tumor and other diseases (3,4). MMP-12 is secreted as a 54-kDa zymogen and becomes the mature 45-kDa active form after proteolytic cleavage. MMP-12 has a broad range of substrates, including α-1 proteinase inhibitor, α-2 antiplasmin, plasminogen activator inhibitor-2, collagen IV, laminin, fibronectin, elastin, but not interstitial collagens.

Recombinant human MMP-12 enzyme was expressed as catalytic domain (aa 106-267) along with 6-his tag in *E. coli.* The recombinant human MMP-12 was purified from bacterial lysate and refolded using proprietary technique. The molecular weight of the recombinant Human MMP-12 Catalytic Domain is 18 kDa. Its activity can be measured in FRET-based enzymatic assays (AnaSpec Cat.# AS71137, AS-71157). 10-20 ng of the enzyme is sufficient for FRET-based assay.

MMP-12 is stored in 150 mM NaCl, 20 mM Tris-HCl, 10 mM CaCl₂, 1 µM ZnCl₂, pH=7.5.

For Research Use Only.

References: