Matrix metalloproteinase (MMP) multipack-2

The MMP multipack-2 contains 10µg each of five highly active recombinant MMP catalytic domains: MMP-3, MMP-7, MMP-10, MMP-11, and MMP-12.

The matrix metalloproteinases, or MMPs, are extracellular proteases that function at a neutral pH to cleave a wide variety of substrates. These include basement membrane and extracellular matrix components, growth and death factors, cytokines, and cell and matrix adhesion molecules. The broad range of substrate specificities and expression patterns of MMPs results in their involvement in many different processes, both normal and pathological. Aberrant expression has been noted in cancer, angiogenesis, arthritis, inflammation, periodontal disease, emphysema, multiple sclerosis, pre-eclampsia, and chronic wounds, among others. The general structure of an MMP protein consists of a pre domain to direct secretion from the cell, a pro domain, a catalytic domain, and a C-terminal hemopexin domain. The catalytic site involves a coordinately-bound zinc ion. The inactive, or zymogen, form of the enzyme is activated by disruption of one of the coordinate bonds, usually via proteolytic removal of the pro domain.

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Ordering Information

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BML-AK014-0001	1Kit

Manuals, SDS & CofA

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Handling & Storage

Use/Stability	As indicated on product label or CoA when stored as recommended.
Handling	Avoid freeze/thaw cycles.
Long Term Storage	-80°C
Shipping	Dry Ice

Regulatory Status

RUO - Research Use Only

Product Details

Application	FUNC, HTS
Application Notes	Enzyme regulation and kinetics, comparative studies of substrate or inhibitor specificities, cleavage of target proteins. Assay or digest conditions can vary widely, but concentrations for the MMP enzymes can range between 10 and 300nM, or higher. Reaction temperatures can be between 25 and 37°C, and reaction times can range from 10 min to overnight, again depending on application and substrate. A typical assay buffer is 50mM HEPES, pH 7.0, 10mM $CaCl_2$, 0.05% Brij-35. For more information, contact Enzo Life Sciences Technical Support.
Concentration	Please refer to Certificate of Analysis for individual lot numbers of component(s).
Contents	Contains 10µg of each enzyme, provided in a screw-cap microfuge tube. MMP-3 (catalytic domain) (human), (recombinant) (Prod. No. BML-SE109), MMP-7 (catalytic domain) (human), (recombinant) (Prod. No. BML-SE181), MMP-10 (catalytic domain) (human), (recombinant) (Prod. No. BML-SE329), MMP-11 (catalytic domain) (human), (recombinant) (Prod. No. BML-SE282), MMP-12 (catalytic domain) (human), (recombinant) (Prod. No. BML-SE138).

Formulation

Liquid. Each enzyme is supplied in 50mM TRIS, pH 7.5, containing 5mM $CaCl_2$, 300mM NaCl, 20µM $ZnCl_2$, 30% glycerol, 0.5% Brij-35.

Technical Info / Product Notes

Note: MMP-3 is unique in that its pH optimum is 6.0. Activity of this enzyme in pH 7.0 buffers is significantly reduced.
Note: Human (but not mouse) MMP-11 has very unique substrate preferences, and only poorly cleaves typical MMP substrates. Use much higher substrate concentrations and longer incubation times.

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