

Product datasheet for **DDX0281P-100**

MMP12 Mouse Monoclonal Antibody [Clone ID: 706F9.01]

Product data:

Product Type: Primary Antibodies
Clone Name: 706F9.01
Applications: ELISA, IHC, IP, WB
Recommend Dilution: **DDX0281P-50 DDX0281P-100 Purified:** Immunoprecipitation, Western Blot.
DDX0281HRPO-50 DDX0281HRPO-100 HRPO: Detecting.

Usage recommendation:

*This monoclonal antibody may be used:

Capture: 3µg/ml in Carbonate buffer (pH 9,6).

Detection: 5µg/ml in PBS-BSA-tween.

Positive standard: 1/200 = 10 ng/ml.

*Optimal dilution should be determined by each laboratory for each application.

Reactivity: Human
Host: Mouse
Isotype: IgG1
Clonality: Monoclonal
Immunogen: Recombinant HME.
Specificity: Human HME-MMP12.
Formulation: PBS 50% glycerol 100 µg in 200 µl Tris-NaCl pH 8.

State: Purified

Purification: QMA Hyper D ion exchange chromatography
Gene Name: matrix metalloproteinase 12
Database Link: [Entrez Gene 4321 Human](#)



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Background:

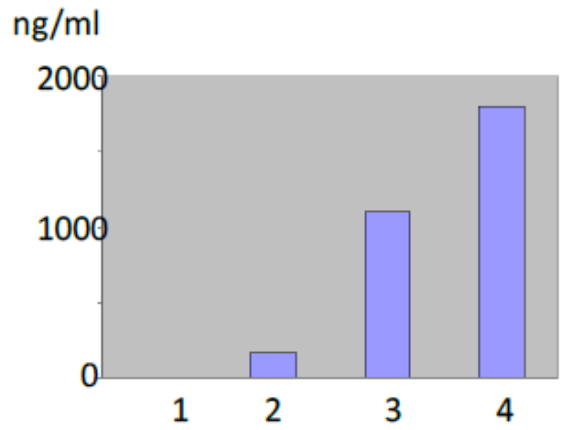
Proteins of the matrix metalloproteinase (MMP) family are involved in the breakdown of extracellular matrix in normal physiological processes. HME/MMP-12, also called metalloelastase, is reported only in a few cells, including tissue macrophages and hypertrophic chondrocytes. MMP-12 is critical for invasion and destruction in pathologies such as aneurysm and emphysema. The predicted molecular mass of the HME proenzyme is 54 kDa. HME mRNA and protein were detected in human alveolar macrophages. Similar to murine macrophage metalloelastase, HME readily undergoes NH₂- and COOH-terminal processing to a mature 22 kDa form. Both recombinant expressed in *Escherichia Coli* and native HME derived from human alveolar macrophage conditioned media degraded insoluble elastin. HME is a unique human metalloproteinase that displays elastolytic activity and is expressed in alveolar macrophages; MMP-12 mediates smoke-induced inflammation by releasing TNF α from macrophages, with subsequent endothelial activation, neutrophil influx, and proteolytic matrix breakdown caused by neutrophil-derived proteases. (*Demedts IK et al, 2006; Thorax, 61:196-201*).

Synonyms:

Macrophage metalloelastase, HME, ME, Matrix metalloproteinase-12, MMP12, Macrophage elastase

Product images:

IHC staining of human tonsil frozen section with clone 706F9 (DX0281)



ELISA with 706F9.01/701E4.03 anti-HME.

1= control.

2= HME-transfected cells.

3= CD34+ +GMCSF+TNF-α+IL4.

4= patient serum of Langerhans histiocytosis.