

## Product datasheet for **DDX0284-HRPO-100**

### **MMP12 Mouse Monoclonal Antibody [Clone ID: 701E4.03]**

#### **Product data:**

**Product Type:** Primary Antibodies  
**Clone Name:** 701E4.03  
**Applications:** ELISA, WB  
**Recommend Dilution:** **DDX0284P-50 DDX0284P-100 Purified:** Capture, Immunoprecipitation, Western Blot.

#### **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.  
\*For DDX0284 recognition of the 54kDa form, a pre-treatment of the samples with DTT is required (Demedts IK et al, 2006; Thorax, 61:196-201).  
**Formulation:** Tris-NaCl pH 8  
Label: HRP  
**Purification:** QMA Hyper D ion exchange chromatography  
**Conjugation:** HRP  
**Gene Name:** matrix metalloproteinase 12  
**Database Link:** [Entrez Gene 4321 Human](#)



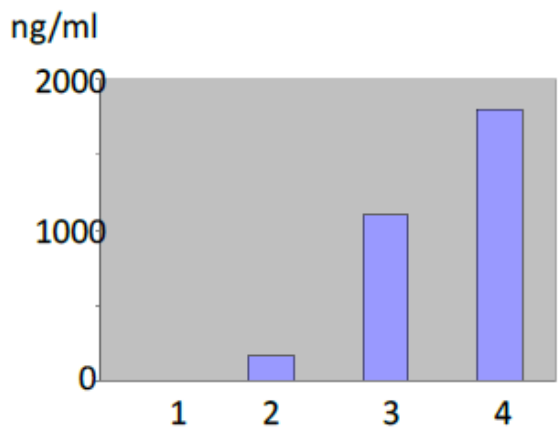
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**Background:**

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 NH<sub>2</sub>- 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 $\alpha$  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:**

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

1= control.

2= HME-transfected cells.

3= CD34+ +GMCSF+TNF- $\alpha$ +IL4.

4= patient serum of Langerhans histiocytosis.