BioVision

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For research use only

Matrix Metalloproteinase-8 (MMP-8)

CATALOG #: 7784-5

AMOUNT: 5 µg

SOURCE: Human neutrophil granulocytes (Buffy Coat)

PURIFIED PROTEIN: MMP-8; (human neutrophil collagenase, EC 3.4.24.34)

FORM: Liquid, in 50 mM Tris-HCl, pH 7; 200 mM NaCl; 5 mM $CaCl_2$; 1 µM $ZnCl_2$; 0.05% Brij 35; 0,05% NaN_3

MOLECULAR WEIGHT: 42/40 kDa species

CONCENTRATION >100 mUnits/mg

STORAGE CONDITIONS:

MMP-8 is very stable if aliquoted and stored (prevents auto-activation) at -70°C. Repeated freezing and thawing should be avoided.

DESCRIPTION:

Human neutrophil collagenase (HNC) has been purified from extracts of fresh and outdated buffy coats and from exudates of phorbol myristate acetate-stimulated neutrophils. The MMP-8 present in the starting material can either be latent or active, or have an app. relative molecular mass of 75-kDa and/or 58-kDa. The rather complex pattern of activation of the **latent 58-kDa** and 75-kDa species by trypsin, organomercurials and oxidants has been investigated. MMP-8 was shown to preferentially hydrolyze type I over type II, and type III collagens in solution and to be a glycoprotein that contains complex N-linked oligosaccharides leading to multiple forms of MMP-8 in SDS-PAGE. The action of endoglycosidase on the latent 58-kDa form produces **42/40-kDa** species (Gao et al. 1992, Mallya et al. 1990). This indicates that MMP-8 is an N-linked, complex glycoprotein that appears to be glycosylated at multiple sites.

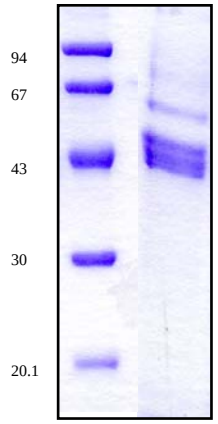
ACTIVATION:

The latent 58-kDa form can be activated by both p-chloromercuribenzoate PCMB (0.1 mM) and trypsin (10 µg/ml) at 25°C for 20 min, but PCMB is substantially more effective. The latent 58-kDa form can also be activated using 2 mM (final concentration) aminophenylmercuric acetate (APMA) or 1 mM mersalylic acid for 60 min. at 37°C. Either activation method will result in the preparation having a comparable catalytic efficiency against a peptide or gelatin substrate.

INHIBITORS:

The activated enzyme is inhibited by tissue inhibitors of matrix metalloproteinase-1 (TIMP-1) and by chelators of divalent cations like EDTA or o-phenanthroline.

IMAGE:



RELATED PRODUCTS:

MMP-8 Antibody: **(Cat# 3528R-100)**

MMP-8 Blocking Peptide: **(Cat# 3528RBP-50)**

Gentaur Europe BVBA Voortstraat 49, 1910 Kampenhout BELGIUM
Tel 0032 16 58 90 45 info@gentaur.com