



Product name: MMP1 – Catalytic Domain

Product details: Human, Recombinant. Folding state checked by NMR.

Technical Specifications

Date

Quantity

Batch number

DESCRIPTION

MW = 17.6kDa. Recombinant matrix metalloproteinase-1 (MMP-1, fibroblast collagenase, collagenase-1, interstitial collagenase) cloned from human cDNA, expressed in *E. coli*. The enzyme consists of the catalytic domain of human MMP-1 (residues 106-261, swissprot accession P03956).

EC#: 3.4.24.7

SEQUENCE

				110	120
				M-NPRWE	QTHLTYRIEN
130	140	150	160	170	180
YTPDLPRADV	DHAIEKAFQL	WSNVTPLTFT	KVSEGQADIM	ISFVRGDHRD	NSPFDGPGGN
190	200	210	220	230	240
LAHAHQPGPG	IGGDAHFDDE	ERWTNNFREY	NLHRVAAHEL	GHSLGLSHST	DIGALMYPST
250	260				
TFSGDVQLAQ	DDIDGIQAIY	G			

PURITY

> 95% by SDS-PAGE. The protein was observed as a single band migrating at a molecular weight of between 19.5 and 14.4kDa.

SPECIFIC ACTIVITY

> 100U/μg. Activity described as U=100 pmol/min at 25°C using a colorimetric assay with thiopeptide Ac-Pro-Leu-Gly-[2-mercapto-4-methyl-pentanoyl]-Leu-Gly-OC₂H₅ (Biomol) as substrate.

USAGE

Enzyme kinetic studies, cleavage of target substrates and screening of inhibitors.

SUPPLIED AS

0.2mg/ml in Tris 20mM pH 7.2, CaCl₂ 10mM, ZnCl₂ 0.1mM, NaCl 0.3M, Acetohydroxamic Acid (AHA) 0.2M. The concentration is calculated from the absorbance at 280nm ($\epsilon_{280} = 25440 \text{ M}^{-1}\text{cm}^{-1}$).

CHARACTERISTICS

Under the above described conditions, to avoid precipitation or protein dimerization, the product can be concentrated to a maximum concentration of 1mM.

STORAGE

-80°C. The enzyme is stable at -20°C for at least 1 week. After initial defrost, aliquot enzyme into individual tubes and refreeze at -80°C. Avoid repeated freeze/defrost cycles.

REFERENCES

I. Bertini et al. *J. Med. Chem.* 2005, 48, 7544.

L. J. McCawley et al. *Curr. Opin. Cell. Biol.* 2001, 13, 534.

W. G. Stetler-Stevenson et al. *Semin Cancer Biol.* 2001, 11, 143.

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