

MMP3 Inhibitor Screening Assay Kit (Colorimetric) ab139439

4 图像

概述	
产品名称	MMP3抑制剂Screening Assay试剂盒(Colorimetric)
检测方法	Colorimetric
样品类型	Inhibitor compounds
检测类型	Enzyme activity
产品概述	Abcam's MMP3 Inhibitor Screening Assay Kit (Colorimetric) (ab139439) is a complete assay system designed to screen MMP3 inhibitors using a thiopeptide as a chromogenic substrate (Ac-PLG-[2-mercapto-4-methyl-pentanoyl]-LG-OC ₂ H ₅). The MMP cleavage site peptide bond is replaced by a thioester bond in the thiopeptide. Hydrolysis of this bond by an MMP produces a sulfhydryl group, which reacts with DTNB [5,5'-dithiobis(2-nitrobenzoic acid), Ellman's reagent] to form 2-nitro-5-thiobenzoic acid, which can be detected by its absorbance at 412 nm ($\epsilon=13,600\text{ M}^{-1}\text{cm}^{-1}$ at pH 6.0 and above). The assays are performed in a convenient 96-well microplate format
说明	<p>This kit is useful to screen inhibitors of MMP3, a potential therapeutic target. The MMP inhibitor NNGH is also included as a prototypic control inhibitor.</p> <p>Thiol inhibitors should not be used with this kit, as they may interfere with the colorimetric assay.</p>
平台	Microplate reader
性能	

存放说明 Please refer to protocols.

组件	1 x 96 tests
96-well Clear Microplate (1/2 Volume)	1 unit
Colorimetric Assay Buffer	1 x 20ml
MMP Inhibitor	1 x 50µl
MMP Substrate	1 x 50µl
MMP3 Enzyme (Human, Recombinant)	1 x 30µl

功能 Can degrade fibronectin, laminin, gelatins of type I, III, IV, and V; collagens III, IV, X, and IX, and

序列相似性

cartilage proteoglycans. Activates procollagenase.

Belongs to the peptidase M10A family.

Contains 4 hemopexin-like domains.

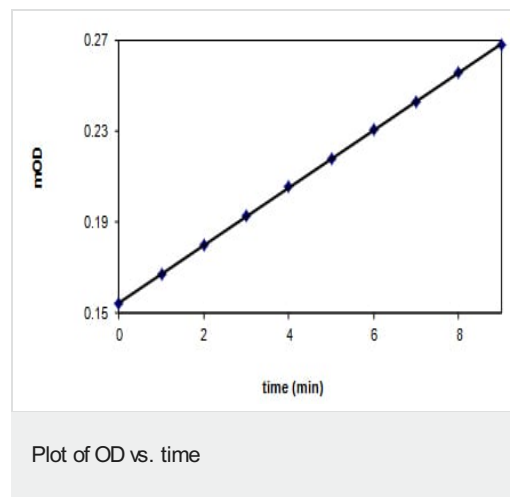
结构域

The conserved cysteine present in the cysteine-switch motif binds the catalytic zinc ion, thus inhibiting the enzyme. The dissociation of the cysteine from the zinc ion upon the activation-peptide release activates the enzyme.

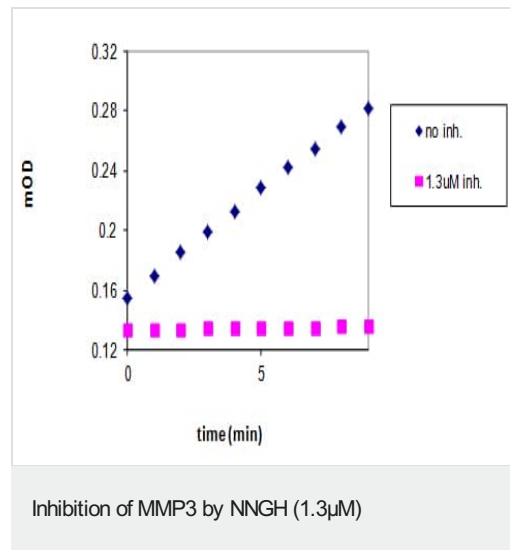
细胞定位

Secreted > extracellular space > extracellular matrix.

图片



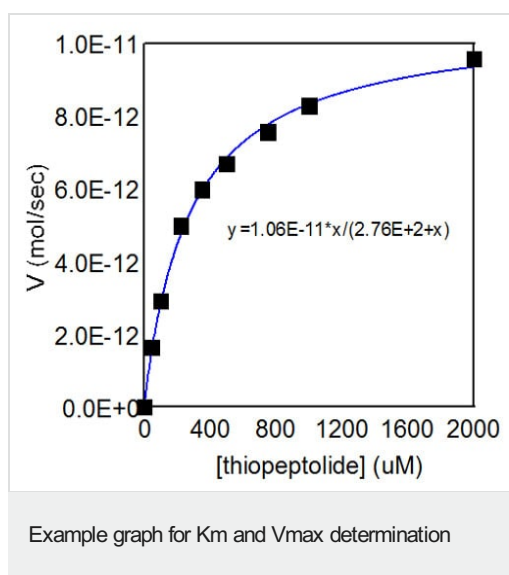
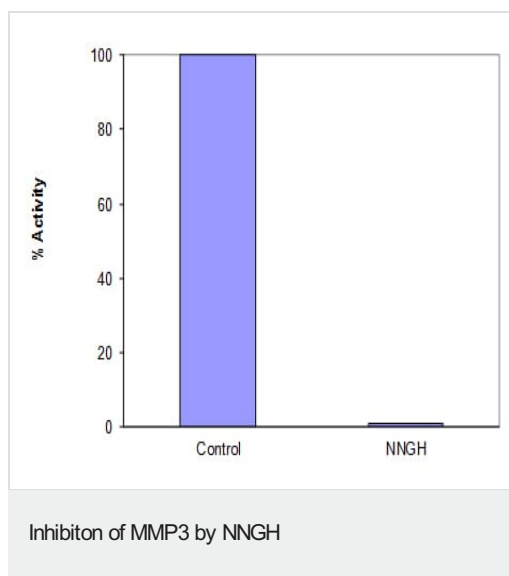
Slope = $V = 1.185 \times 10^{-2}$ OD/min



control slope = 1.4×10^{-2} OD/min

inhibitor slope = 1.3×10^{-4} OD/min

inhibitor % activity remaining = $(1.3 \times 10^{-4} / 1.4 \times 10^{-2}) \times 100 = 0.9\%$



$K_m = 276 \mu M$

$V_{max} = 10.6 \text{ pmol/sec}$

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