abcam

Product datasheet

MMP8 Inhibitor Screening Assay Kit (Colorimetric) ab139452

1 References 4 图像

概述

产品名称	MMP8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 MMP8 Inhibitor Screening Assay Kit (Colorimetric) (ab139452) is a complete assay system designed to screen MMP8 inhibitors using a thiopeptide as a chromogenic substrate (Ac-PLG-[2-mercapto-4-methyl-pentanoyl]-LG-OC_2H_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 (e=13,600 $M^{-1}cm^{-1}$ at pH 6.0 and above). The assays are performed in a convenient 96-well microplate format.
说明	This kit is useful to screen inhibitors of MMP8, a potential therapeutic target. The MMP inhibitor NNGH is also included as a prototypic control inhibitor. Thiol inhibitors should not be used with this kit, as they may interfere with the colorimetric assay.
平台	Microplate reader

性能

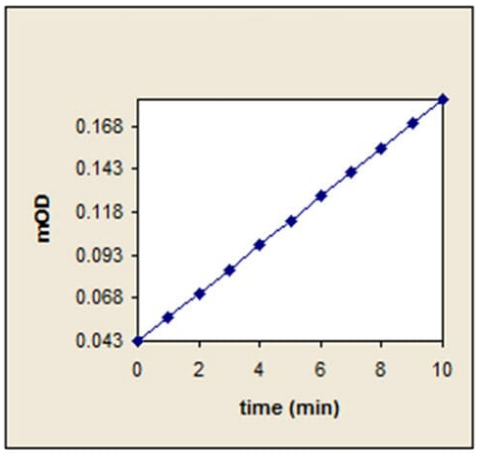
存放说明	Please refer to protocols.

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
MMP8 Enzyme (Human, Recombinant)	1 x 22µl

功能	Can degrade fibrillar type I, II, and III collagens.

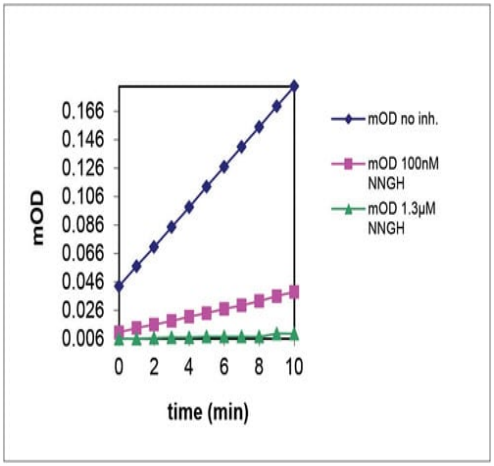
组织特异性	Neutrophils.
序列相似性	Belongs to the peptidase M10A family. Contains 4 hemopexin-like domains.
结构域	The conserved cysteine present in the cysteine-switch motif binds the catalytic zinc ion, thus inhibiting the enzyme. The dissociation of the cysteine from the zinc ion upon the activation-peptide release activates the enzyme.
细胞定位	Cytoplasmic granule. Secreted > extracellular space > extracellular matrix. Stored in intracellular granules.

图片



Plot of OD vs. time.

Slope = V = 1.39E-02 OD/min

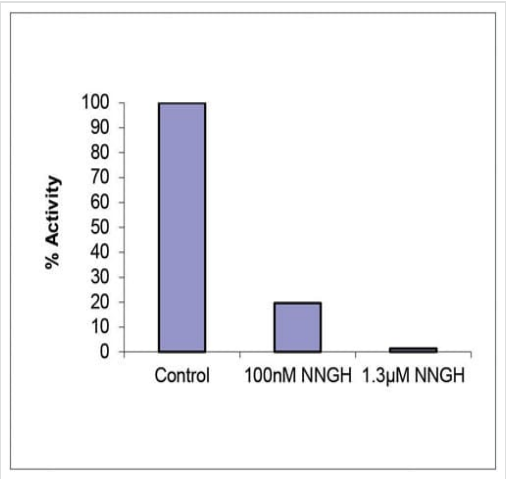


Inhibition of MMP8 by NNGH

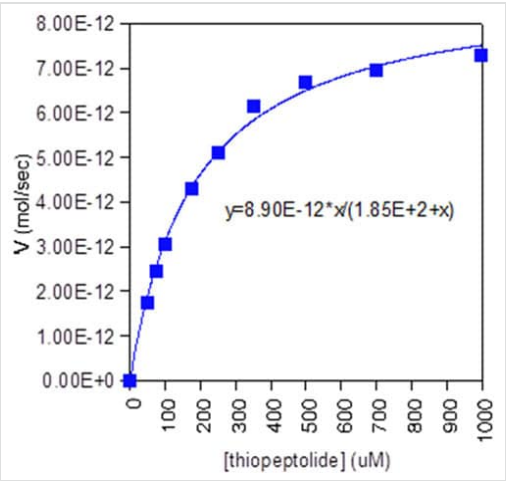
control slope = 1.39E-02 OD/min

inhibitor slope (100nM) = 2.73E-03 OD/min

inhibitor % activity remaining = (2.73E-03/1.39E-02) x 100 = 19.6%



Inhibition of MMP8 by NNGH



Example graph for Km and Vmax determination

Km = 185 µM

Vmax = 8.90 pmol/sec

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