Neutrophil elastase colorimetric drug discovery kit

It is a complete assay system designed to screen inhibitors of neutrophil elastase, providing enough material to perform at least 96 assays. Neutrophil elastase, also known as leukocyte elastase (LE), is a serine protease found in polymorphonuclear neutrophils (PMNs) that functions in inflammation. It can cleave a variety of proteins, including fibrous elastin, collagen, clotting factors, TNF-α, and α1-antichymotrypsin. It has been shown to be taken up by tumor cells and accelerate tumor growth through its degradation of insulin receptor substrate-1 (IRS-1). Because of its potential roles in cancer and inflammatory diseases such as emphysema, cystic fibrosis, and atherosclerosis, it is a target for drug discovery. The kit uses the chromogenic substrate MeOSuc-Ala-Ala-Pro-Val-pNA; cleavage of p-nitroaniline (pNA) from the substrate increases absorbance at 405nm. A neutrophil elastase inhibitor, elastatinal, is included for use as a control.

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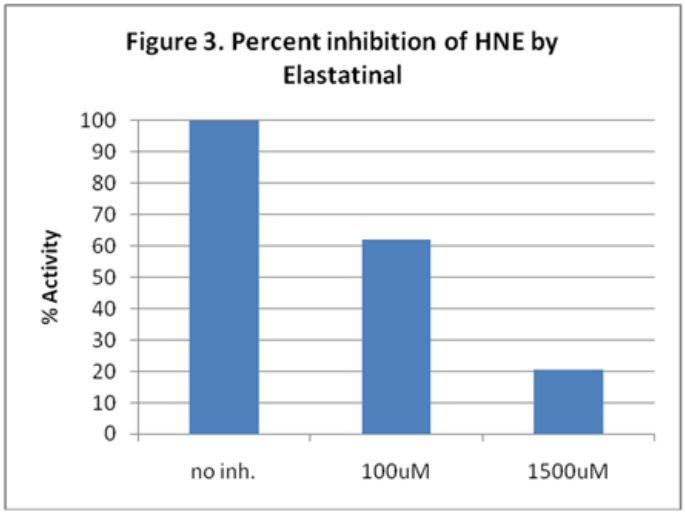
Ordering Information

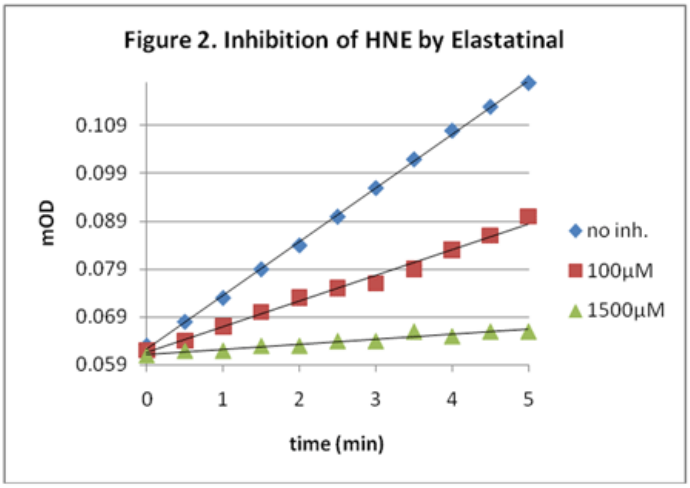
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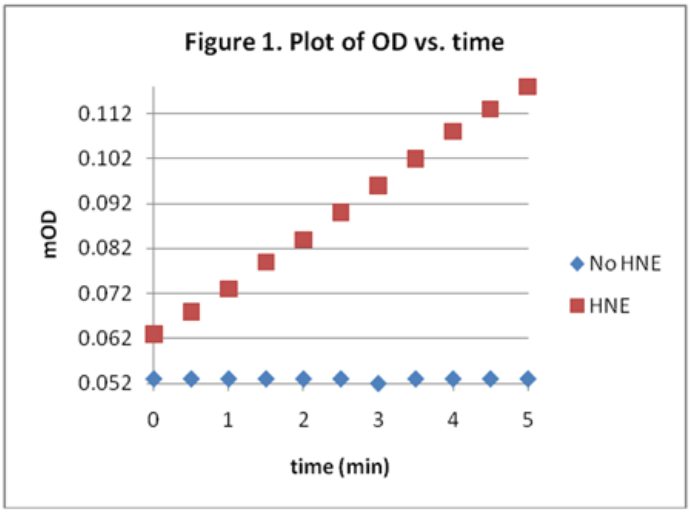
BML-AK497-0001	96 wells

Manuals, SDS & CofA

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Figure 3. Percent inhibition of HNE by Elastatinal
% Activity
100
90
80
70
60
50
40
30
20
10
0
no inh.
100uM
1500uM


Figure 2. Inhibition of HNE by Elastatinal
mOD
0.109
0.099
0.089
0.079
0.069
0.059
0
1
2
3
4
5
time (min)
no inh.
100µM
1500µM


Figure 1. Plot of OD vs. time
mOD
0.112
0.102
0.092
0.082
0.072
0.062
0.052
0
1
2
3
4
5
time (min)
No HNE
HNE

Handling & Storage

Use/Stability	Substrates and inhibitor are in DMSO and are stable for up to 6 months. Neutrophil elastase activity decreases with time, even at -80°C.
Handling	Keep frozen at all times.
Long Term Storage	-80°C
Shipping	Dry Ice

Regulatory Status

RUO - Research Use Only

Product Details

Application	Activity assay, Colorimetric detection, HTS
Application Notes	Screening of neutrophil elastase inhibitors.
Compatibility	This product is compatible with the **Absorbance 96 Plate Reader**.
Contents	**Neutrophil elastase (human), (purified)** (Prod. No. BML-SE284-9090) **pNA substrate** (MeOSuc-AAPV-pNA) (Prod. No. BML-P213-9090)(60µl; 20mM in DMSO) **pNA calibration standard** (p-nitroaniline) (Prod. No. BML-KI106)(1ml; 50µM in assay buffer) **Elastatinal** (inhibitor) (Prod. No. BML-PI103-9090)(10µl; 20mM in DMSO) **Neutrophil elastase assay buffer** (Prod. No. BML-KI581)(20ml; 100mM HEPES, pH 7.25, 500mM NaCl, 0.05% Tween-20; liquid in a screw-cap plastic bottle) **96-well microplate** (Prod. No. BML-KI101)
UniProt ID	P08246

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