



ANTIPAIN PROTEASE INHIBITOR

CATALOG NUMBER:

EI3

QUANTITY:

100 mg

LOT NUMBER:

BACKGROUND:

Inhibition spectrum: Inhibits papain, trypsin and plasmin to a lesser extent. More specific for papain and trypsin than leupeptin. The inhibitory potency of antipain is 100-fold higher than that of elastatinal.

Mechanism of action: Formation of a hemiacetal adduct between the aldehyde group of the inhibitor and the active serine of the proteinase.

DESCRIPTION:

Antipain is a serine and cysteine reversible protease inhibitor. It inhibits papain and trypsin. Plasmin is inhibited to a small extent as well. More specific than leupeptin for papain and trypsin.

Sequence:

[(S)-1-Carboxy-2-Phenylethyl]-Carbamoyl-L-Arg-L-Val-Argininal-HCL-2H₂O.

M.W: 604.71

Working solutions: 1-100μM. Stable for several hours.

Stock solutions of 10mM in water or buffer are stable for 1 week at 4°C, 1 month at -20°C. Also soluble in methanol or DMSO.

5mg/827 microliters of water = 10mM solution. Dilute 1:100 for a 100μM solution.

ACTIVITY:

Varies with lot, IC50 is approximately 0.20μg/mL (papain/casein, pH 7.4 37°C).

APPLICATIONS:

Proteinase inhibitor; Inhibits papain and trypsin. Plasmin is inhibited to a small extent.

PURITY:

Pale yellow powder; material is isolated from cultured media of microorganisms. As with many of these compounds, they are too inherently unstable to allow for high standards of purity. The homogeneity of these compounds cannot be guaranteed except for their specific inhibitory activities.

SOURCE:

Microbial origin, not synthetically made.

PRESENTATION:

Lyophilized no preservatives.

STORAGE/HANDLING:

Maintain dry at -20°C for up to 18 months. Store reconstituted product in aliquots at -20°C for up to 9 months. Do not thaw and refreeze.

REFERENCES:

Suda, H., et al. (1972). Antipain, a new protease inhibitor isolated from actinomycetes. {original article}. J. Antibiotics (Tokyo) 25:263-266.

Umezawa, S et al. (1972). Structure of antipain, a new Sakaguchi-positive product of streptomyces {Structure}. J. Antibiotics (Tokyo) 25(4):267-270.



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Important Note: During shipment, small volumes of product will occasionally become entrapped in the seal of the product vial. For products with volumes of 200 μ L or less, we recommend gently tapping the vial on a hard surface or briefly centrifuging the vial in a tabletop centrifuge to dislodge any liquid in the container's cap.

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PROCEDURES. NOT FOR HUMAN OR ANIMAL CONSUMPTION**

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