

Certificate of Analysis

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Product Name: CA 074

Catalog No.: 4863

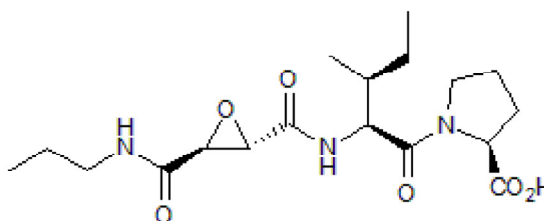
Batch No.: 3

CAS Number: 134448-10-5

IUPAC Name: *N*-[[[(2*S*,3*S*)-3-[(Propylamino)carbonyl]-2-oxiranyl]carbonyl]-L-isoleucyl-L-proline

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₈H₂₉N₃O₆
Batch Molecular Weight: 383.44
Physical Appearance: White solid
Solubility: ethanol to 20 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.1% purity
Mass Spectrum: Consistent with structure

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

CA 074 is an inhibitor of cathepsin B (K_i = 2-5 nM). Displays selectivity over cathepsins H and L (K_i = 40-200 μ M). Shown to reduce bone metastasis in a 4T1.2 breast cancer model.

Physical and Chemical Properties:

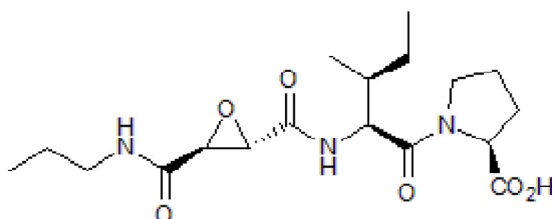
Batch Molecular Formula: C₁₈H₂₉N₃O₆

Batch Molecular Weight: 383.44

Physical Appearance: White solid

Minimum Purity: $\geq 98\%$

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

ethanol to 20 mM

This product is supplied in lyophilized form. It may appear as a solid, gel or film and be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Withana *et al* (2012) Cathepsin B inhibition limits bone metastasis in breast cancer. *Cancer Res.* **72** 1199. PMID: 22266111.

Gillet *et al* (2009) Voltage-gated sodium channel activity promotes cysteine cathepsin-dependent invasiveness and colony growth of human cancer cells. *J.Biol.Chem.* **284** 8680. PMID: 19176528.

Towatari *et al* (1991) Novel epoxysuccinyl peptides. A selective inhibitor of cathepsin B, in vivo. *FEBS Lett.* **280** 311. PMID: 2013329.

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