

## Certificate of Analysis

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**Product Name:** CA 074

**Catalog No.:** 4863

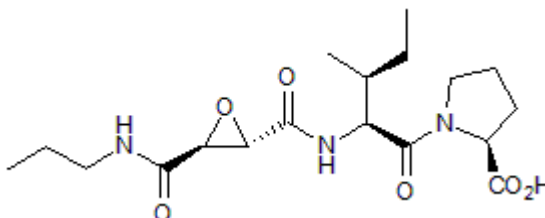
**Batch No.:** 2

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

<b>Batch Molecular Formula:</b>	C <sub>18</sub> H <sub>29</sub> N <sub>3</sub> O <sub>6</sub>
<b>Batch Molecular Weight:</b>	383.44
<b>Physical Appearance:</b>	White solid
<b>Solubility:</b>	DMSO to 20 mM ethanol to 20 mM
<b>Storage:</b>	Store at -20°C
<b>Batch Molecular Structure:</b>	



### 2. ANALYTICAL DATA

<b>HPLC:</b>	Shows 99.4% purity
<b>Optical Rotation:</b>	[α] <sub>D</sub> = -14.2 (Concentration = 1.1, Solvent = Ethanol)

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

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**Description:**

Inhibitor of cathepsin B ( $K_i = 2-5$  nM). Displays selectivity over cathepsins H and L ( $K_i = 40-200$   $\mu$ M). Shown to reduce bone metastasis in a 4T1.2 breast cancer model.

**Physical and Chemical Properties:**

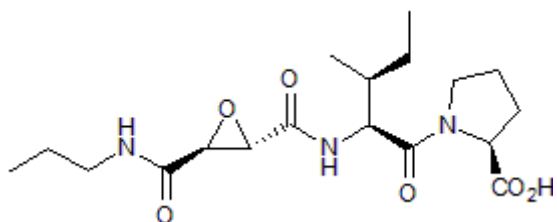
Batch Molecular Formula: C<sub>18</sub>H<sub>29</sub>N<sub>3</sub>O<sub>6</sub>

Batch Molecular Weight: 383.44

Physical Appearance: White solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**Storage:** Store at -20°C

**Solubility & Usage Info:**

DMSO to 20 mM

ethanol to 20 mM

**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. Our standard recommendations are:

**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:**

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

**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.

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

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