

Certificate of Analysis

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Product Name: Balicatib

Catalog No.: 5585

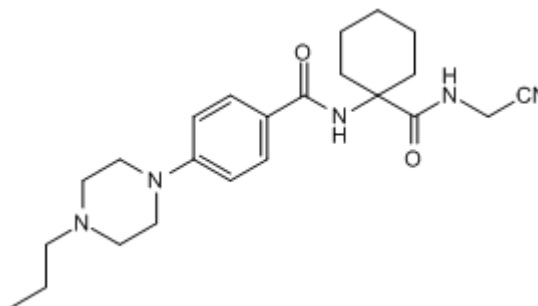
Batch No.: 1

CAS Number: 354813-19-7

IUPAC Name: *N*-[1-(Cyanomethylcarbamoyl)cyclohexyl]-4-(4-propylpiperazin-1-yl)benzamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₃H₃₃N₅O₂
Batch Molecular Weight: 411.54
Physical Appearance: White solid
Solubility: DMSO to 100 mM
ethanol to 10 mM with gentle warming
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	67.19	8.08	17.02
Found	66.97	7.99	16.93

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

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Description:

Potent and selective cathepsin K inhibitor (IC₅₀ values are 1.4, 56 and 480 nM for human, rat and mouse cathepsin K, respectively). Exhibits >300-fold selectivity for cathepsin K over cathepsins L, B and S. Long term suprathreshold dosing increases tissue levels of cathepsins L and B in rats.

Physical and Chemical Properties:

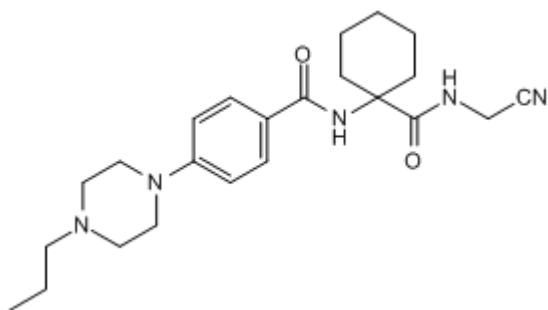
Batch Molecular Formula: C₂₃H₃₃N₅O₂

Batch Molecular Weight: 411.54

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM

ethanol to 10 mM with gentle warming

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:

Desmarais et al (2008) Effect of cathepsin k inhibitor basicity on *in vivo* off-target activities. *Mol.Pharmacol.* **73** 147. PMID: 17940194.

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