TOCRIS
a bio-techne brand

Print Date: Jan 15th 2016

Certificate of Analysis

www.tocris.com

Product Name: **Cilastatin sodium** **Catalog No.: 2709** **Batch No.: 1**

CAS Number: 81129-83-1 EC Number: 279-694-4

IUPAC Name: (2*Z*)-7-[[(2*R*)-2-Amino-2-carboxyethyl]thio]-2-[[[(1*S*)-2,2-dimethylcyclopropyl]carbonyl]amino]-2-heptenoic acid sodium salt

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{16}H_{25}N_2NaO_5S.H_2O$

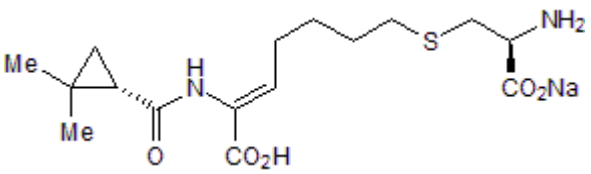
Batch Molecular Weight: 398.45

Physical Appearance: White solid

Solubility: water to 100 mM
DMSO to 10 mM

Storage: Desiccate at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows >99.7% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: $[\alpha]_D$ = +12.4 (Concentration = 0.5, Solvent = 0.1M HCl)

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	48.23	6.83	7.03
Found	48.19	6.67	7.16

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956

Product Information

Product Name: **Cilastatin sodium** **Catalog No.: 2709** **Batch No.: 1**

CAS Number: 81129-83-1 EC Number: 279-694-4

IUPAC Name: (2*Z*)-7-[[(2*R*)-2-Amino-2-carboxyethyl]thio]-2-[[[(1*S*)-2,2-dimethylcyclopropyl]carbonyl]amino]-2-heptenoic acid sodium salt

Description:

Dipeptidase inhibitor (LTDase, leukotriene D4 hydrolase, dehydropeptidase I) that displays a K_i value of 0.11 µM. Inhibits metabolism of LTD_4 to LTE_4 and the hydrolysis of β-lactam antibiotics. Nephroprotective; reduces toxic accumulation of cyclosporin A in kidney proximal tubule epithelial cells.

Physical and Chemical Properties:

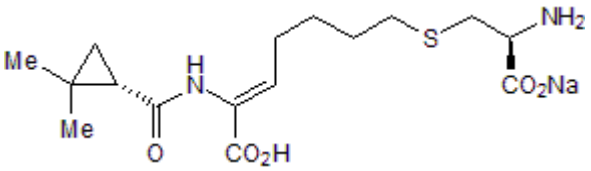
Batch Molecular Formula: $C_{16}H_{25}N_2NaO_5S.H_2O$

Batch Molecular Weight: 398.45

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Desiccate at -20°C

Solubility & Usage Info:

water to 100 mM
DMSO to 10 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:

Graham *et al* (1987) Inhibition of the mammalian β-lactamase renal dipeptidase (dehydropeptidase-I) by (*Z*)-2-(acylamino)-3-substituted-propenoic acids. J.Med.Chem. ***30*** 1074. PMID: 3495664.

White *et al* (1999) A continuous fluorometric assay for leukotriene D_4 hydrolase. Anal.Biochem. ***268*** 245. PMID: 10075814.

Perez *et al* (2004) Inhibition of brush border dipeptidase with cilastatin reduces toxic accumulation of cyclosporin A in kidney proximal tubule epithelial cells. Nephrol.Dial.Transplant. ***19*** 2445. PMID: 15252165.