

Certificate of Analysis

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Product Name: Cariporide

Catalog No.: 5358

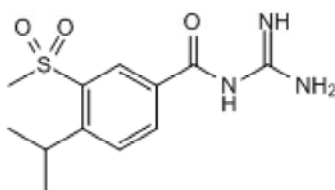
Batch No.: 3

CAS Number: 159138-80-4

IUPAC Name: *N*-(Aminoiminomethyl)-4-(1-methylethyl)-3-(methylsulfonyl)benzamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₂H₁₇N₃O₃S
Batch Molecular Weight: 283.35
Physical Appearance: White solid
Solubility: DMSO to 100 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.9% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	50.87	6.05	14.83
Found	50.43	6.16	14.85

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

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Description:

Selective Na⁺/H⁺ exchanger isoform 1 (NHE1) inhibitor (IC₅₀ values are 0.05, 3 and 1000 μM for NHE1, NHE3 and NHE2 respectively). Attenuates ischemia-induced cardiomyocyte apoptosis in vitro. Reduces cardiac arrhythmia in vivo. Also promotes apoptosis in cancer cells overexpressing NHE1. Orally active.

Physical and Chemical Properties:

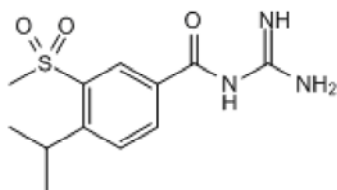
Batch Molecular Formula: C₁₂H₁₇N₃O₃S

Batch Molecular Weight: 283.35

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 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:

Harguindey et al (2013) Cariporide and other new and powerful NHE1 inhibitors as potentially selective anticancer drugs--an integral molecular/biochemical/metabolic/clinical approach after one hundred years of cancer research. *J. Transl. Med.* **11** 282. PMID: 24195657.

Teshima et al (2003) Cariporide (HOE642), a selective Na⁺-H⁺ exchange inhibitor, inhibits the mitochondrial death pathway. *Circulation* **108** 2275. PMID: 14568900.

Chakrabarti et al (1997) A rapid ischemia-induced apoptosis in isolated rat hearts and its attenuation by the sodium-hydrogen exchange inhibitor HOE 642 (cariporide). *J. Mol. Cell. Cardiol.* **29** 3169. PMID: 9405190.

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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