Print Date: Feb 24th 2016

Certificate of Analysis

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Product Name: **PA 1 dihydrochloride** **Catalog No.: 5463** **Batch No.: 1**

IUPAC Name: 3,5-Diamino-6-chloro-*N*-[imino[[4-(2-phenyldiazenyl)phenyl]amino]methyl]-2-pyrazinecarboxamide dihydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{18}H_{16}ClN_9O.2HCl.1½H_2O$

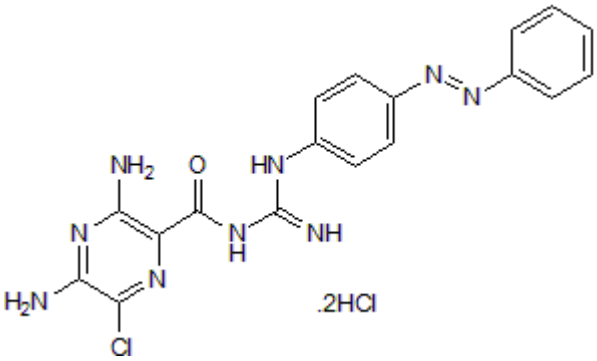
Batch Molecular Weight: 509.77

Physical Appearance: Orange solid

Solubility: DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.55 (Ethyl acetate:Methanol [98:2])

HPLC: Shows 98.9% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	42.41	4.15	24.73
Found	42.33	3.83	24.8

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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

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Description:

Photoswitchable epithelial sodium channel (ENaC) blocker (IC_{50} values are 90 and 390 nM for αβγ and δβγENaCs, respectively, in the trans conformation). Switches conformation from cis to trans at 500 nm and trans to cis at 400 nm. Blocks ENaCs with greater efficacy in the cis conformation, in comparison to the trans conformation, in Xenopus oocytes and HEK293t cells. Partially blocks δβγENaCs in the trans conformation and exhibits near maximal block of δβγENaCs in the cis conformation. Amiloride derivative.

Physical and Chemical Properties:

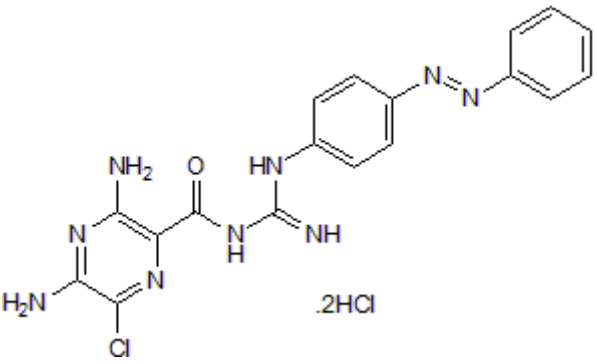
Batch Molecular Formula: $C_{18}H_{16}ClN_9O.2HCl.1½H_2O$

Batch Molecular Weight: 509.77

Physical Appearance: Orange solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

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:

Schönberger *et al* (2014) Controlling epithelial sodium channels with light using photoswitchable amilorides. Nat.Chem. ***6*** 712. PMID: 25054942.

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