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Print Date: Jan 15th 2016

Certificate of Analysis

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Product Name: **PT 1** **Catalog No.: 4039** **Batch No.: 1**

CAS Number: 331002-70-1

IUPAC Name: 2-Chloro-5-[[5-[[5-(4,5-Dimethyl-2-nitrophenyl)-2-furanyl]methylene]-4,5-dihydro-4-oxo-2-thiazolyl]amino]benzoic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{23}H_{16}ClN_3O_6S.H_2O$

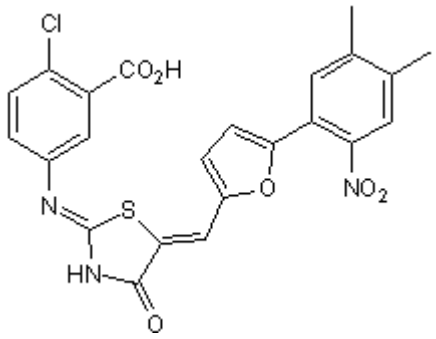
Batch Molecular Weight: 515.93

Physical Appearance: Brown solid

Solubility: DMSO to 100 mM
1.1eq. NaOH to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.9% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	53.55	3.52	8.14
Found	53.16	3.39	8.04

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

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Product Information

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Description:

AMP-activated protein kinase (AMPK) activator. Stimulates AMPK heterotrimer (α1β1γ1) activity (EC_{50} = 0.3 μM). Selectively increases the activity of γ1- but not γ3-containing complexes. Thought to directly activate AMPK by antagonizing autoinhibition.

Physical and Chemical Properties:

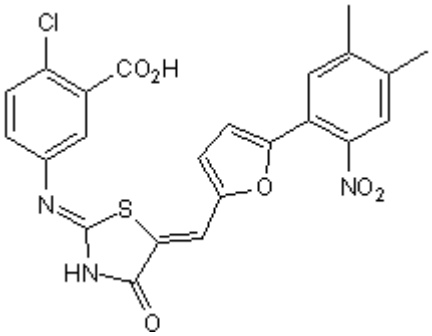
Batch Molecular Formula: $C_{23}H_{16}ClN_3O_6S.H_2O$

Batch Molecular Weight: 515.93

Physical Appearance: Brown solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM
1.1eq. NaOH 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:

Pang *et al* (2007) Small molecule antagonizes autoinhibition and activates AMP-activated protein kinase in cells. J.Biol.Chem. ***283*** 16051.

Zorn and Wells (2010) Turning enzymes ON with small molecules. Nat.Chem.Biol. ***6*** 179. PMID: 20154666.

Jensen *et al* (2015) PT-1 selectively activates AMPK-γ1 complexes in mouse skeletal muscle, but activates all three γ subunit complexes in cultured human cells by inhibiting the respiratory chain. Biochem.J. ***467*** 461. PMID: 25695398.

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