Print Date: Mar 14th 2022

Certificate of Analysis

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Product Name: **Cyclic Pifithrin-α hydrobromide** **Catalog No.: 3843** **Batch No.: 3**

CAS Number: 511296-88-1

IUPAC Name: 5,6,7,8-Tetrahydro-2-(4-methylphenyl)-imidazo[2,1-*b*]benzothiazole hydrobromide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{16}H_{16}N_2S.HBr.½H_2O$

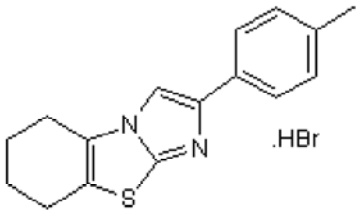
Batch Molecular Weight: 358.3

Physical Appearance: White solid

Solubility: DMSO to 100 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.3% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	53.64	5.06	7.82
Found	53.45	4.96	7.58

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Description:

Cyclic Pifithrin-α hydrobromide is a cyclic analog of pifithrin-α (Cat. No. 1267), a small molecule inhibitor of p53. Prevents dexamethasone-induced cell death in murine thymocytes (EC_{50} = 2.01 μM). Sensitizes p53-deficient tumors to radiotherapy and chemotherapy; increases apoptosis in target cells when used in combination with antimicrotubule agents.

Physical and Chemical Properties:

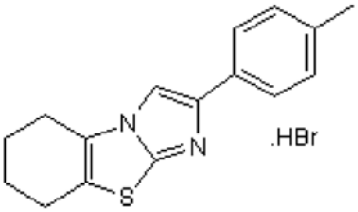
Batch Molecular Formula: $C_{16}H_{16}N_2S.HBr.½H_2O$

Batch Molecular Weight: 358.3

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Desiccate at RT

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:

Zuco and Zunino (2008) Cyclic Pifithrin-α sensitizes wild type p53 tumor cells to antimicrotubule agent-induced apoptosis. Neoplasia ***10*** 587. PMID: 18516295.

Barchechath *et al* (2005) Inhibitors of apoptosis in lymphocytes: synthesis and biological evaluation of compounds related to pifithrin-α. J.Med.Chem. ***48*** 6409. PMID: 16190767.

Pietrancosta *et al* (2005) Novel cyclized Pifithrin-alpha p53 inactivators: synthesis and biological studies. Bioorg.Med.Chem.Lett. ***15*** 1561. PMID: 15745797.

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