Print Date: Sep 22nd 2020

Certificate of Analysis

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Product Name: **Pifithrin-α hydrobromide** **Catalog No.: 1267** **Batch No.: 3**

CAS Number: 63208-82-2

IUPAC Name: 1-(4-Methylphenyl)-2-(4,5,6,7-tetrahydro-2-imino-3(2*H*)-benzothiazolyl)ethanone hydrobromide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{16}H_{18}N_2OS.HBr$

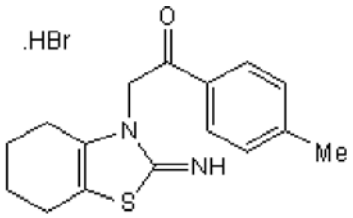
Batch Molecular Weight: 367.3

Physical Appearance: Off White solid

Solubility: DMSO to 100 mM

Storage: Desiccate at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.17 (Dichloromethane:Methanol :NH4OH[1:3:96])

HPLC: Shows 99.2% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	52.32	5.21	7.63
Found	52.29	5.16	7.61

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Product Information

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Description:

Inhibitor of p53; reversibly blocks p53-dependent transcriptional activation and apoptosis. Protects against neuronal death in models of stroke and neurodegenerative disorders. Active in vivo; protects mice from the side-effects of cancer therapy associated with p53 induction. Supresses self-renewal of embryonic stem cells. Also aryl hydrocarbon receptor (AHR) agonist, causes upregulation of AHR target gene CYP1A1 (EC_{50} = 1.1 μM). Cyclic analog available (Cat. No. 3843).

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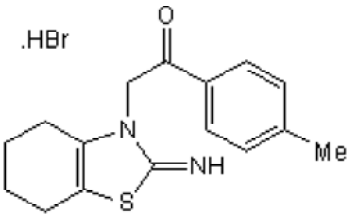

Storage: Desiccate at -20°C

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:

Abdelalim and Tooyama (2012) The p53 inhibitor, pifithrin-α, suppresses self-renewal of embryonic stem cells. Biochem.Biophys.Res.Comm. ***420*** 605. PMID: 22445757.

Hoagland *et al* (2005) The p53 inhibitor pifithrin-α is a potent agonist of the aryl hydrocarbon receptor. J.Pharmacol.Exp.Ther. ***314*** 603. PMID: 15843497.

Culmsee *et al* (2001) A synthetic inhibitor of p53 protects neurons against death induced by ischemic and excitotoxic insults, and amyloid β-peptide. J.Neurochem. ***77*** 220. PMID: 11279278.