

Certificate of Analysis

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Product Name: Pifithrin- μ

Catalog No.: 2653

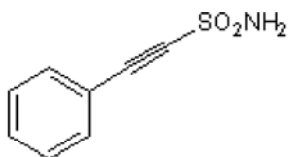
Batch No.: 2

CAS Number: 64984-31-2

IUPAC Name: 2-Phenylethynylsulfonamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₈H₇NO₂S
Batch Molecular Weight: 181.21
Physical Appearance: White solid
Solubility: DMSO to 100 mM
ethanol to 100 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.3% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	53.02	3.89	7.73
Found	53.02	3.83	7.72

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

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Batch No.: 2

CAS Number: 64984-31-2

IUPAC Name: 2-Phenylethynylsulfonamide

Description:

Pifithrin- μ inhibits p53 binding to mitochondria by reducing its affinity for antiapoptotic proteins Bcl-2 and Bcl-XL. Displays no effect on the transactivational or cell cycle checkpoint control function of p53. Potentially increases reprogramming efficiency of human somatic cells to induced pluripotent stem cells (iPSCs) by silencing p53. Pifithrin- μ reduces cell death induced by γ -radiation in vitro and protects mice from doses of radiation that cause lethal hematopoietic syndrome. Selectively inhibits heat shock protein 70 (HSP70) activity.

Physical and Chemical Properties:

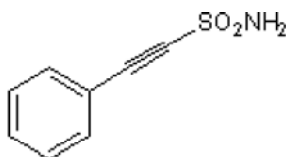
Batch Molecular Formula: C₈H₇NO₂S

Batch Molecular Weight: 181.21

Physical Appearance: White solid

Minimum Purity: \geq 99%

Batch Molecular Structure:



References:

Kawamura et al (2009) Linking the p53 tumor suppressor pathway to somatic cell reprogramming. *Nature* **460** 1140. PMID: 19668186.

Leu et al (2009) A small molecule inhibitor of inducible heat shock protein 70 (HSP70). *Mol.Cell* **36** 15. PMID: 19818706.

Steele et al (2009) 2-phenylacetylenesulfonamide (PAS) induces p53-independent apoptotic killing of B-chronic lymphocytic leukemia (CLL) cells. *Blood* **114** 1217. PMID: 19515722.

Storage: Store at +4°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

ethanol 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.

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