

Product Name: U0126

Catalog No.: 1144

Batch No.: 5

CAS Number: 109511-58-2

IUPAC Name: 1,4-Diamino-2,3-dicyano-1,4-bis[2-aminophenylthio]butadiene

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₈H₁₆N₆S₂·0.75C₂H₅OH

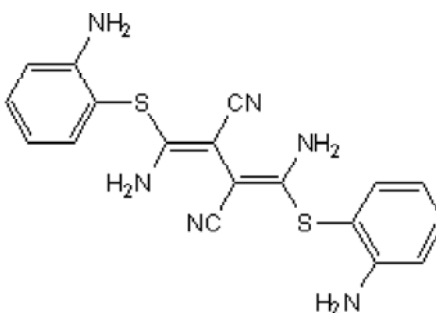
Batch Molecular Weight: 415.04

Physical Appearance: Off White solid

Solubility: DMSO to 100 mM

Storage: Desiccate at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.0% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

| | Carbon | Hydrogen | Nitrogen |
|-------------|--------|----------|----------|
| Theoretical | 56.43 | 4.98 | 20.25 |
| Found | 56.23 | 4.82 | 19.95 |

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

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Description:

Potent and selective non-competitive inhibitor of MAP kinase kinase. Inhibits MEK-1 and MEK-2 (IC₅₀ values of 0.07 and 0.06 μM respectively) with little or no effect on the activities of PKC, Abl, Raf, MEKK, ERK, JNK, MKK-3, MKK-4/SEK, MKK-6, Cdk2 or Cdk4. Brain penetrant. Helps maintain human pluripotent stem cells in undifferentiated state. Negative Control also available.

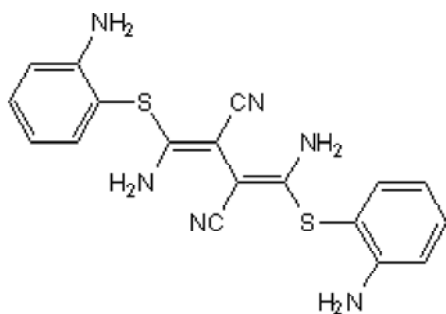
Physical and Chemical Properties:

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Storage: Desiccate at +4°C

Solubility & Usage Info:

DMSO to 100 mM

CAUTION - This product has been shown* to isomerise relatively rapidly once in solution, affecting its activity. Therefore, we recommend that, as far as possible, solutions should be made up and used within 24 hours. This product contains 1 molar equivalent of ethanol *Duncia *et al* (1998) MEK inhibitors: the chemistry and biological activity of U0126, its analogs, and cyclization products. *Bioorg.Med.Chem.Lett.* 8 2839.

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:

Kinehara *et al* (2013) Protein kinase C regulates human pluripotent stem cell self-renewal. *PLoS One* 8 e54122. PMID: 23349801.

Namura *et al* (2001) Intravenous administration of MEK inhibitor U0126 affords brain protection against forebrain ischemia and focal cerebral ischemia. *Proc.Natl.Acad.Sci.U.S.A.* 98 11569. PMID: 11504919.

Davies *et al* (2000) Specificity and mechanism of action of some commonly used protein kinase inhibitors. *Biochem.J.* 351 95. PMID: 10998351.

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