

# U0126

## MEK1 and MEK2 Inhibitor

Catalog # tlr1-u0126

For research use only

Version # 10I01-MM

### PRODUCT INFORMATION

#### Content:

- 5 mg U0126

#### Storage and stability:

- U0126 is provided as a solid and shipped at room temperature. Store at -20°C. Solid product is stable 1 year at -20°C.
- Upon resuspension, U0126 should be aliquoted and stored at -20°C. Avoid repeated freeze-thaw cycles. Resuspended product is stable 3 months at -20°C when properly stored.

### SPECIAL HANDLING

U0126 is hygroscopic and photosensitive. Store in a tightly sealed vial and protect from light.

### CHEMICAL PROPERTIES

**CAS number:** 109511-58-2

**Synonym:** 1,4-Diamino-2,3-dicyano-1,4-bis(2-aminophenylthio)-butadiene

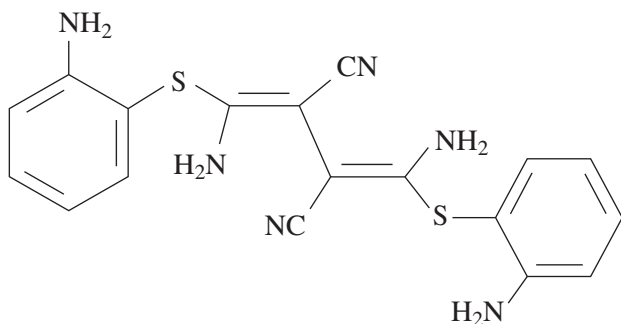
**Formula:** C<sub>18</sub>H<sub>16</sub>N<sub>6</sub>S<sub>2</sub>.

**Molecular weight:** 380.5

**Solubility:** DMSO, 10 mg/ml

**Appearance:** Off-white powder

**Purity:** >99% (HPLC, TLC)



### DESCRIPTION

U0126 is a selective inhibitor of MAP kinase kinases, MEK1 and MEK2<sup>1</sup>. It acts by inhibiting the kinase activity of MEK1/2 thus preventing the activation of MAP kinases p42 and p44 which are encoded by the erk2 and erk1 genes respectively. MAPK p42/p44 are involved in the signaling cascade triggered by LPS and other ligands through stimulation of the TLRs<sup>2,3,4</sup>.

1. Favata MF, *et al.*, 1998. J. Biol. Chem. 273:18623-32. 2. DeFranco AL, *et al.*, 1998. Prog Clin Biol Res. 397:119-36. 3. Rabehi L, *et al.*, 2001. Infect Immun. 69:4590-9. 4. Rhee SH, *et al.*, 2004. J Biol Chem. 279:25179-88.

### METHODS

#### Preparation of sterile stock solution (25 mM)

To obtain a 25 mM stock solution:

1. Add 525 µl DMSO to 5 mg U0126 vial.
2. Vortex until complete solubilization.
3. Aliquote and store at -20°C.
4. Once U0126 is solubilized, dilutions can be prepared by adding sterile water.

**Working concentration:** 10-50 µM

#### MEK kinase inhibition:

- Treat TLR expressing cells, such as monocytes or HEK293 cells transfected with one or several TLR genes, with U0126 and incubate at 37°C with the appropriate TLR ligand for 3 to 24h.

- Monitor MEK kinase inhibition by determining cytokine expression (for example IL-1, IL-8 and TNF-α)<sup>5</sup>.

### RELATED PRODUCTS

Product	Catalog Code
pUNO-hTLR7	puno-htlr7
pUNO-mTLR7	puno-mtlr7
Gardiquimod	tlr1-gdq
pUNO-hTLR9	puno-htlr9a
pUNO-mTLR9	puno-mtlr9
ODN 2006	tlr1-hodnb

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