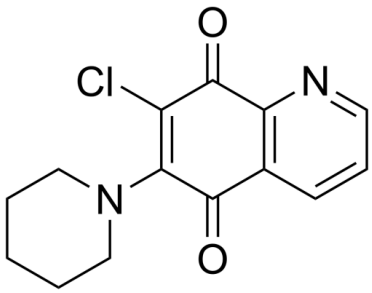
Data Sheet

Product Name:	PT-262
Cat. No.:	CS-0018004
CAS No.:	86811-36-1
Molecular Formula:	$C_{14}H_{13}ClN_2O_2$
Molecular Weight:	276.72
Target:	Apoptosis; CDK; ERK; ROCK
Pathway:	Apoptosis; Cell Cycle/DNA Damage; Cytoskeleton; MAPK/ERK Pathway; Stem Cell/Wnt; TGF-beta/Smad
Solubility:	10 mM in DMSO



BIOLOGICAL ACTIVITY:

PT-262 is a potent **ROCK** inhibitor with an **IC_{50}** value of around 5 μM. PT-262 induces the loss of mitochondrial membrane potential and elevates the caspase-3 activation and **apoptosis**. PT-262 inhibits the **ERK** and **CDC2** phosphorylation via a p53-independent pathway. PT-262 blocks cytoskeleton function and cell migration. PT-262 has anti-cancer activity[1][2]. ***In Vitro:*** PT-262 (5-40 μM; 24 h) induces cytotoxicity and proliferation inhibition in human lung cancer cells[1].

PT-262 (2-20 μM; 4-24 h) induces caspase-3 activation, mitochondrial dysfunction and apoptosis in lung cancer cells[1].

PT-262 (10-20 μM; 24 h) induces the accumulation of G2/M phases in both the p53-wild type and p53-null lung cancer cells, and inhibits the phosphorylation of CDC2 proteins[1].

PT-262 (0-10 μM; 24 h) represses ERK phosphorylation in lung cancer cells[1].

PT-262 (2 μM; 24 h) induces the cytoskeleton alteration and cell elongation in lung carcinoma A549 cells[2].

PT-262 (2-10 μM; 6 h) significantly blocks the cell migration in a concentration-dependent manner[2].

References:

[1]. Tzu-Sheng Hsu, et al. 7-Chloro-6-piperidin-1-yl-quinoline-5,8-dione (PT-262), a novel synthetic compound induces lung carcinoma cell death associated with inhibiting ERK and CDC2 phosphorylation via a p53-independent pathway. Cancer Chemother Pharmacol. 2008 Oct;62(5):799-808.

[2]. Chih-Chien Tsai, et al. 7-Chloro-6-piperidin-1-yl-quinoline-5,8-dione (PT-262), a novel ROCK inhibitor blocks cytoskeleton function and cell migration. Biochem Pharmacol. 2011 Apr 1;81(7):856-65.

CAIndexNames:

5,8-Quinolinedione, 7-chloro-6-(1-piperidinyl)-

SMILES:

O=C(C(N1CCCCC1)=C2Cl)C3=C(N=CC=C3)C2=O

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 610-426-3128 Fax: 888-484-5008 E-mail: sales@ChemScene.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA