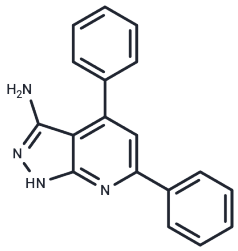
Data Sheet (Cat.No.T73582)

TargetMol

EB1

Chemical Properties



CAS No. :	42951-68-8
Formula:	C18H14N4
Molecular Weight:	286.33
Storage:	Store at low temperature Powder: -20°C for 3 years | In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.

Biological Description

Description	EB1 is a potent and selective MNK kinase inhibitor with inhibitory effects on MNK1 and MNK2 with IC50 values of 0.69 μM and 9.4 μM, respectively.EB1 inhibits the growth of cancer cells, promotes apoptosis, and inhibits the phosphorylation of eIF4E.
Targets(IC50)	Apoptosis,MNK,PERK
In vitro	EB1, in a dose-dependent manner (1.3-40 μM; 24 hours), inhibits the phosphorylation of eIF4E[1]. At doses of 2.5-40 μM (72 hours), EB1 exhibits dose-dependent cytotoxicity against tumor cells and induces apoptosis[1]. When directly acting on MNK kinase at concentrations of 5 μM, 10 μM, and 20 μM (24 hours), EB1 does not interfere with the activation of upstream signals such as p38 activation (p-p38) and the phosphorylation of its downstream effector HSP27[1]. Compound 14 (EB1) inhibits cancer cells HepG2 and MCF-7 with IC50 values of 0.74 μM and 5.18 μM, respectively[2].

Solubility Information

Solubility	DMSO: 50 mg/mL (174.62 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.4925 mL	17.4624 mL	34.9247 mL
5 mM	0.6985 mL	3.4925 mL	6.9849 mL
10 mM	0.3492 mL	1.7462 mL	3.4925 mL
50 mM	0.0698 mL	0.3492 mL	0.6985 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Aboukhatwa SM, et al. Nicotinonitrile-derived apoptotic inducers: Design, synthesis, X-ray crystal structure and Pim kinase inhibition. Bioorg Chem. 2022 Dec;129:106126.
Bou-Petit E, et al. Overcoming Paradoxical Kinase Priming by a Novel MNK1 Inhibitor. J Med Chem. 2022 Apr 28;65 (8):6070-6087.