Poloxime

Cat. No.: HY-77195

CAS No.: 17302-61-3

Molecular Formula: $C_{10}H_{13}NO_2$

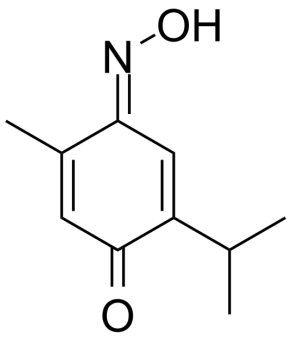
Molecular Weight: 179.22

Target: Polo-like Kinase (PLK)

Pathway: Cell Cycle/DNA Damage

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (557.97 mM)

H_2O : < 0.1 mg/mL (insoluble)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1 mg	5 mg	10 mg
1 mM	5.5797 mL	27.8987 mL	55.7973 mL
5 mM	1.1159 mL	5.5797 mL	11.1595 mL
10 mM	0.5580 mL	2.7899 mL	5.5797 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (13.95 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (13.95 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (13.95 mM); Clear solution

BIOLOGICAL ACTIVITY

Description Poloxime, a hydrolysis product of poloxin, is a non-ATP-competitive Plk1 inhibitor, with moderate Plk1 inhibitory activity.

IC_{50} & Target PLK1

In Vitro Poloxime (100 μM) inhibits phosphopeptide binding to polo-box domain (PBD) of polo-like kinase 1 (Plk1)[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Liu M, et al. Identification of indole-3-carboxylic acids as non-ATP-competitive Polo-like kinase 1 (Plk1) inhibitors. Bioorg Med Chem Lett. 2015 Feb 1;25(3):431-4.

[2]. Yin Z, et al. Thymoquinone blocks pSer/pThr recognition by Plk1 Polo-box domain as a phosphate mimic. ACS Chem Biol. 2013 Feb 15;8(2):303-8.

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