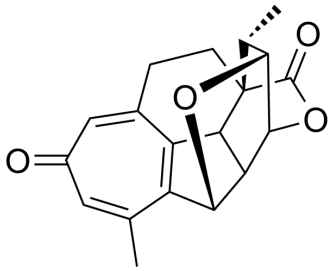
Harringtonolide

Cat. No.:	HY-N10335
CAS No.:	64761-48-4
Molecular Formula:	$C_{19}H_{18}O_4$
Molecular Weight:	310.34
Target:	FAK
Pathway:	Protein Tyrosine Kinase/RTK
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 5 mg/mL (16.11 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.2223 mL	16.1114 mL	32.2227 mL
	5 mM	0.6445 mL	3.2223 mL	6.4445 mL
	10 mM	0.3222 mL	1.6111 mL	3.2223 mL

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

BIOLOGICAL ACTIVITY

Description

Harringtonolide is a potent RACK1 inhibitor (IC_{50}=39.66 μM in A375 cells). Harringtonolide inhibits the epithelial-mesenchymal transition (EMT) process and cell proliferation by affecting the interaction between FAK and RACK1. Harringtonolide has plant growth inhibitory, antiviral, anti-inflammatory, and antiproliferation activities[1].

IC_{50} & Target

IC_{50}: 39.66 μM (RACK1) in A375 cells[1]

In Vitro

Harringtonolide (0-50 μM; 24 hours) exhibits good antiproliferation activity in A375 cells with IC_{50} of 39.66 μM[1].
Harringtonolide (0-20 μM; 1 hour) restrains the proteolysis of RACK1 by Pronase, and protects temperature-dependent degradation of RACK1[1].
Harringtonolide (0-4 μM; 24 hours) suppresses the phosphorylation of FAK dose-dependently and inhibits Src and STAT3, the downstream proteins of FAK[1].
Harringtonolide (0-4 μM; 24 hours) dose-dependently inhibits the RACK1–FAK interaction in A375 cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay

Cell Line:	A375 melanoma cells[1]

Concentration:	0-50 μM
Incubation Time:	24 hours
Result:	Showed good antiproliferation activity with IC_{50} of 39.66 μM.

Western Blot Analysis

Cell Line:	A375 melanoma cells[1]
Concentration:	0, 0.5, 1, 2, 4 μM
Incubation Time:	24 hours
Result:	Suppressed the phosphorylation of FAK dose-dependently and inhibited Src and STAT3, the downstream proteins of FAK.

REFERENCES

[1]. Zhu TY, et al. Photoaffinity Probe Reveals the Potential Target of Harringtonolide for Cancer Cell Migration Inhibition. ACS Med Chem Lett. 2022;13(3):449-456. Published 2022 Feb 2.

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