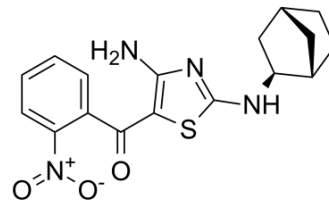


MC180295

Cat. No.:	HY-119940
CAS No.:	2237942-08-2
Molecular Formula:	C ₁₇ H ₁₈ N ₄ O ₃ S
Molecular Weight:	358.41
Target:	CDK
Pathway:	Cell Cycle/DNA Damage
Storage:	4°C, stored under nitrogen
	* In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (279.01 mM; Need ultrasonic)

Concentration	Solvent	Mass	1 mg	5 mg	10 mg
			1 mM	2.7901 mL	13.9505 mL
5 mM			0.5580 mL	2.7901 mL	5.5802 mL
10 mM			0.2790 mL	1.3951 mL	2.7901 mL

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

BIOLOGICAL ACTIVITY

Description

MC180295 ((rel)-MC180295) is a potent and selective CDK9-Cyclin T1 inhibitor, with an IC₅₀ of 5 nM, at least 22-fold more selective for CDK9 over other CDKs. MC180295 also inhibits GSK-3α and GSK-3β. MC180295 ((rel)-MC180295) has potent anti-tumor effect^[1].

IC₅₀ & Target

CDK9- Cyclin T1 5 nM (IC ₅₀)	CDK4-Cyclin D 112 nM (IC ₅₀)	CDK1-Cyclin B 138 nM (IC ₅₀)	cdk5-p35 159 nM (IC ₅₀)
cdk5-p25 186 nM (IC ₅₀)	cdk2-cyclin A 233 nM (IC ₅₀)	cdk2-cyclin E 367 nM (IC ₅₀)	CDK3-Cyclin E 399 nM (IC ₅₀)
CDK7-CycH/MAT1 555 nM (IC ₅₀)	cdk6-cyclin D3 712 nM (IC ₅₀)		

In Vitro

MC180295 is a potent and selective CDK9-Cyclin T1 inhibitor, with an IC₅₀ of 5 nM, at least 22-fold more selective for CDK9 over other CDKs, such as CDK1-Cyclin B (IC₅₀, 138 nM), CDK2-Cyclin A (IC₅₀, 233 nM), CDK2-Cyclin E (IC₅₀, 367 nM), CDK3-Cyclin E (IC₅₀, 399 nM), CDK4-Cyclin D (IC₅₀, 112 nM), CDK5-P35 (IC₅₀, 159 nM), CDK5-P25 (IC₅₀, 186 nM), CDK6-Cyclin D3 (IC₅₀, 712 nM), and CDK7-CycH/MAT1 (IC₅₀, 555 nM). MC180295 also inhibits GSK-3α and GSK-3β^[1].

MC180295 (500 nM) reactivates epigenetically silenced genes by targeting CDK9 without affecting DNA methylation^[1].
MC180295 (0.1 μM) inhibits the proliferation in cancer cells^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

MC180295 (20 mg/kg, i.p., qod) inhibits significant anti-tumor activity in mice bearing SW48 cells, shows no inhibitory activity against human T cell growth in vivo^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Zhang H, et al. Targeting CDK9 Reactivates Epigenetically Silenced Genes in Cancer. Cell. 2018 Nov 15;175(5):1244-1258.e26.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA