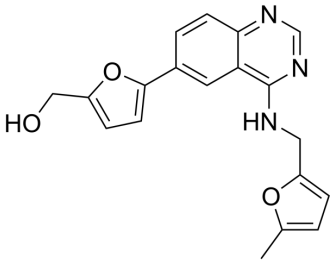
ML167

Cat. No.:	HY-15951
CAS No.:	1285702-20-6
Molecular Formula:	$C_{19}H_{17}N_3O_3$
Molecular Weight:	335.36
Target:	CDK; DYRK
Pathway:	Cell Cycle/DNA Damage; Protein Tyrosine Kinase/RTK
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 : 16.67 mg/mL (49.71 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.9819 mL	14.9094 mL	29.8187 mL
	5 mM	0.5964 mL	2.9819 mL	5.9637 mL
	10 mM	0.2982 mL	1.4909 mL	2.9819 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: ≥ 1.67 mg/mL (4.98 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.67 mg/mL (4.98 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

ML167 is a highly selective Cdc2-like kinase 4 (Clk4) inhibitor with IC_{50} of 136 nM, >10-fold selectivity for closely related kinases Clk1, Clk2, Clk3 and Dyrk1A/1B[1].

IC_{50} & Target

CLK4 136 nM (IC_{50})	CLK1 1522 nM (IC_{50})	CLK2 1648 nM (IC_{50})	DYRK1B 4420 nM (IC_{50})
CDK3 >10000 nM (IC_{50})	DYRK1A >10000 nM (IC_{50})		

In Vitro

ML167 has cell permeability in Caco-2 cells. ML167 contains a furan ring which liable to in vivo metabolism.

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

REFERENCES

[1]. Rosenthal AS, et al. An inhibitor of the Cdc2-like kinase 4 (Clk4).

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