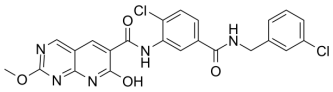
Mirk-IN-1

Cat. No.:	HY-12838
CAS No.:	1386979-55-0
Molecular Formula:	$C_{23}H_{17}Cl_2N_5O_4$
Molecular Weight:	498.32
Target:	DYRK
Pathway:	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 : 2 mg/mL (4.01 mM; Need ultrasonic)

H_2O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.0067 mL	10.0337 mL	20.0674 mL
5 mM	---	---	---
10 mM	---	---	---

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

BIOLOGICAL ACTIVITY

Description

Mirk-IN-1 is a potent inhibitor of Dyrk1B(Mirk kianse) and Dyrk1A with IC50 of 68±48 nM and 22±8 nM respectively.IC50 value: 68±48/22±8 nM (Dyrk1B/Dyrk1A) [1]Target: Dyrk inhibitorMirk-IN-1 had an EC50 of 1.9 ±0.2 mmol/L on SW620 cells. At a much higher concentration of 10 mmol/L in a kinase assay, Mirk-IN-1 inhibited the activities of DYRK1A, ABL, FLT3, and MARK1 by88%, 64%, 56%, and 73%, respectively [1]. Mirk-IN-1 was able to block tumor cells from undergoing reversible arrest in a quiescent G0 state and enable some cells to exit quiescence [2].

CUSTOMER VALIDATION

- Biol Res. 2023 Mar 11;56(1):10.

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REFERENCES

[1]. Ewton DZ, et al. Inactivation of mirk/dyrk1b kinase targets quiescent pancreatic cancer cells. Mol Cancer Ther. 2011 Nov;10(11):2104-14.

[2]. Anderson K, et al. Pyrido[2,3-d]pyrimidines: discovery and preliminary SAR of a novel series of DYRK1B and DYRK1A inhibitors. Bioorg Med Chem Lett. 2013 Dec 15;23(24):6610-5.

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