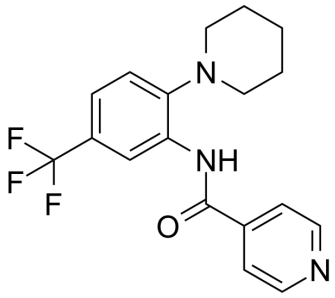
SRPIN340

Cat. No.:	HY-13949
CAS No.:	218156-96-8
Molecular Formula:	$C_{18}H_{18}F_3N_3O$
Molecular Weight:	349.35
Target:	SRPK; Virus Protease
Pathway:	Cell Cycle/DNA Damage; Anti-infection
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 : ≥ 42 mg/mL (120.22 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.8625 mL	14.3123 mL	28.6246 mL
5 mM	0.5725 mL	2.8625 mL	5.7249 mL
10 mM	0.2862 mL	1.4312 mL	2.8625 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (7.16 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

SRPIN340 is an ATP-competitive serine-arginine-rich protein kinase (SRPK) inhibitor, with a K_i of 0.89 μM for SRPK1.

IC_{50} & Target

Ki: 0.89 μM (SRPK1)[1]

In Vitro

SRPIN340 is a serine-arginine-rich protein kinase (SRPK) inhibitor, with a K_i of 0.89 μM for SRPK1. SRPIN340 also inhibits SRPK2, but shows no significant inhibition on other SRPK, such as Clk1 and Clk4. SRPIN340 promotes degradation of SRp75, which is necessary for HIV expression. SRPIN340 suppresses the propagation of Sindbis virus (IC_{50}, 60 μM) as well as severe acute respiratory syndrome virus[1]. SRPIN340 shows inhibitory effect on leukemia cell lines, such as AML HL60, ALL-T Molt4 and Jurkat, with IC_{50}s of 44.7 μM, 92.2 μM and 82.3 μM, respectively[2].

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

PROTOCOL

Cell Assay [2]

Leukemic cells (5×10^4 cells/well) and isolated PBMCs (8×10^4 cells/well) are seeded in 96-well plates. Each well contained 100 µL of complete RPMI medium and 100 µL of SRPIN340 solution at different concentrations. The compound is diluted in RPMI medium with 10% fetal bovine serum and 0.4% DMSO (v/v). After 48 h of culture, MTT (5 mg/mL) is added to the wells (3 h, 37°C). The plates are centrifuged at room temperature for 30 min 500 ×g, followed by the removal of the MTT solution and the addition of 100 µL/well of DMSO to solubilize the formazan. Absorbance is measured at 540 nm in a microplate reader. Each experimental procedure is performed in triplicate[2].

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

CUSTOMER VALIDATION

- Nucleic Acids Res. 2021 Mar 18;49(5):2509-2521.
- Cell Mol Life Sci. 2022 Aug 5;79(8):467.
- Sci Signal. 2022 Oct 25;15(757):eabm0808.
- BMC Cancer. 2022 Oct 27;22(1):1100.
- Biochem Biophys Res Commun. 2019 Feb 26;510(1):97-103.

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REFERENCES

[1]. Fukuhara T, et al. Utilization of host SR protein kinases and RNA-splicing machinery during viral replication. Proc Natl Acad Sci U S A. 2006 Jul 25;103(30):11329-33.

[2]. Siqueira RP, et al. Potential Antileukemia Effect and Structural Analyses of SRPK Inhibition by N-(2-(Piperidin-1-yl)-5-(Trifluoromethyl)Phenyl)Isonicotinamide (SRPIN340). PLoS One. 2015 Aug 5;10(8):e0134882.

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