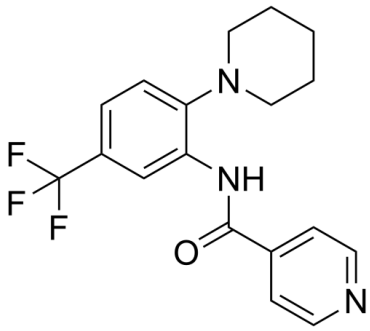
Data Sheet

Product Name:	SRPIN340
Cat. No.:	CS-1681
CAS No.:	218156-96-8
Molecular Formula:	$C_{18}H_{18}F_3N_3O$
Molecular Weight:	349.35
Target:	SRPK; Virus Protease
Pathway:	Anti-infection; Cell Cycle/DNA Damage
Solubility:	DMSO : ≥ 42 mg/mL (120.22 mM)



BIOLOGICAL ACTIVITY:

SRPIN340 is an ATP-competitive serine-arginine-rich protein kinase (**SRPK**) inhibitor, with a **K_i** of 0.89 μM for SRPK1. IC50 & 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].

PROTOCOL (Extracted from published papers and Only for reference)

Cell Assay: SRPIN340 is dissolved in DMSO, and diluted in RPMI medium with 10% fetal bovine serum and 0.4% DMSO (v/v)[2].[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].

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.

CAIndexNames:

4-Pyridinecarboxamide, N-[2-(1-piperidinyl)-5-(trifluoromethyl)phenyl]-

SMILES:

O=C(NC1=CC(C(F)(F)F)=CC=C1N2CCCCC2)C3=CC=NC=C3

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

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