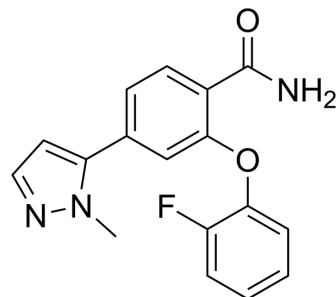


## RBPJ Inhibitor-1

Cat. No.:	HY-137471		
CAS No.:	2682114-39-0		
Molecular Formula:	C <sub>17</sub> H <sub>14</sub> FN <sub>3</sub> O <sub>2</sub>		
Molecular Weight:	311.31		
Target:	Notch		
Pathway:	Neuronal Signaling; Stem Cell/Wnt		
Storage:	Powder	-20°C	3 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

In Vitro	DMSO : 250 mg/mL (803.06 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
			1 mM	3.2122 mL	16.0612 mL	32.1223 mL
			5 mM	0.6424 mL	3.2122 mL	6.4245 mL
			10 mM	0.3212 mL	1.6061 mL	3.2122 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: ≥ 2.08 mg/mL (6.68 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (6.68 mM); Clear solution					
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (6.68 mM); Clear solution					

### BIOLOGICAL ACTIVITY

Description	RBPJ Inhibitor-1 (RIN1), the first RBPJ inhibitor, blocks the functional interaction of RBPJ with SHARP. RBPJ Inhibitor-1 (RIN1) inhibits NOTCH-dependent tumor cell proliferation <sup>[1]</sup> .
In Vitro	RIN1 inhibits the proliferation of hematologic cancer cell lines and promoted skeletal muscle differentiation from C2C12 myoblasts <sup>[1]</sup> . RIN1 (0.6 μM, corresponding to 3 × IC <sub>50</sub> ) decreases the number of MHC+ cells and increased the number of nuclei per cell, indicating that it induces the formation of multinucleated myofibers <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### Cell Viability Assay<sup>[1]</sup>

Cell Line:	AD-293 cells were transfected with RBPJ-VP16myc.
Concentration:	2 $\mu$ M.
Incubation Time:	17 hours.
Result:	Inhibited Hes1-Luciferase activity with an IC <sub>50</sub> of 0.18 $\mu$ M and E <sub>max</sub> of 82%. Inhibited NOTCH3 ICD with similar potency and efficacy (0.19 $\mu$ M and E <sub>max</sub> =88%).

#### Cell Proliferation Assay<sup>[1]</sup>

Cell Line:	T-cell acute lymphoblastic leukemia (T-ALL) patients (Jurkat and KOPT-K1) and in the mantle cell lymphoma (MCL) line REC-1.
Concentration:	0.1-10 $\mu$ M.
Incubation Time:	96 h.
Result:	Inhibited NOTCH-dependent tumor cell proliferation. Was active in both the cancer cell anti-proliferation and myoblast differentiation assays.

## CUSTOMER VALIDATION

- Cell Death Dis. 2022 Apr 2;13(4):295.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

[1]. Cecilia Hurtado, et al. Disruption of NOTCH signaling by a small molecule inhibitor of the transcription factor RBPJ. Sci Rep. 2019 Jul 25;9(1):10811.

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

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