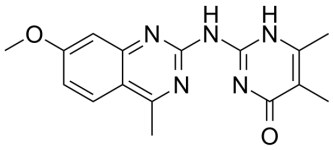
Madrasin

Cat. No.:	HY-100236
CAS No.:	374913-63-0
Molecular Formula:	$C_{16}H_{17}N_5O_2$
Molecular Weight:	311.34
Target:	Others
Pathway:	Others
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

Ethanol : 5 mg/mL (16.06 mM; ultrasonic and warming and heat to 60°C)
DMSO : 2 mg/mL (6.42 mM; Need ultrasonic)
H_2O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.2119 mL	16.0596 mL	32.1192 mL
	5 mM	0.6424 mL	3.2119 mL	6.4238 mL
	10 mM	0.3212 mL	1.6060 mL	3.2119 mL

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

In Vivo

1. Add each solvent one by one: 10% EtOH >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 0.5 mg/mL (1.61 mM); Clear solution
2. Add each solvent one by one: 10% EtOH >> 90% corn oil
   Solubility: ≥ 0.5 mg/mL (1.61 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Madrasin (DDD00107587) is a splicing inhibitor that prevents formation of both splicing intermediates and products in vitro and interferes with one or more early steps in the pathway of spliceosome assembly. Madrasin also can inhibit pre-mRNA splicing in vitro and modify splicing of endogenous pre-mRNA in cells[1].

IC_{50} & Target

pre-mRNA splicing[1]

In Vitro

Madrasin (10-30 μM; 4-24 hours; HeLa cells) treatment inhibits the splicing of each of the RIOK3, BRD2, and Hsp40, MCL1, CCNA2, AURKA and p27 pre-mRNAs in both HeLa and HEK293 cells[1].

Madrasin (10-30 μM; 4-24 hours; HeLa and HEK293 cells) treatment shows a dose- and time-dependent inhibitory effect on cell cycle progression[1].

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

RT-PCR[1]

Cell Line:	HeLa cells
Concentration:	10 μM, 20 μM, or 30 μM
Incubation Time:	4 hours, 8 hours, or 24 hours
Result:	Increased in inhibition of pre-mRNA splicing.

Cell Cycle Analysis[1]

Cell Line:	HeLa and HEK293 cells
Concentration:	10 μM, 20 μM, or 30 μM
Incubation Time:	4 hours, 8 hours, or 24 hours
Result:	In the presence of 10 μM 8 hours after treatment, the proportion of cells in G2, M, and S phases increased, with a concomitant decrease in the number of G1 phase cells. This effect increased over time, with >40% of cells in G2 and M phase and >50% in S phase 24 hours.

CUSTOMER VALIDATION

- Nucleic Acids Res. 2023 Jul 3;gkad548.
- Nucleic Acids Res. 2019 Sep 5;47(15):8239-8254.
- Theranostics. 2022 Jul 11;12(12):5451-5469.
- J Mol Med (Berl). 2019 Aug;97(8):1183-1193.

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REFERENCES

[1]. Andrea Pawellek et al. Identification of Small Molecule Inhibitors of Pre-mRNA Splicing. J Biol Chem, 2014 Dec 12, 289(50): 34683-34698.

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