MIR96-IN-1

Cat. No.: HY-15843

CAS No.: 1311982-88-3

Molecular Formula: $C_{33}H_{48}N_8O_2$

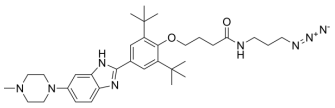
Molecular Weight: 588.79

Target: MicroRNA; Apoptosis

Pathway: Epigenetics; Apoptosis

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 : ≥ 100 mg/mL (169.84 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.6984 mL	8.4920 mL	16.9840 mL
5 mM	0.3397 mL	1.6984 mL	3.3968 mL
10 mM	0.1698 mL	0.8492 mL	1.6984 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: ≥ 2.5 mg/mL (4.25 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (4.25 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

MIR96-IN-1 targets the Drosha site in the miR-96 (miRNA-96, microRNA-96) hairpin precursor, inhibiting its biogenesis, derepressing downstream targets, and triggering apoptosis in breast cancer cells. MIR96-IN-1 binds to RNAs with K_ds of 1.3, 9.4, 3.4, 1.3 and 7.4 μM for RNA1, RNA2, RNA3, RNA4 and RNA5, respectively[1]. MIR96-IN-1 is a click chemistry reagent, it contains an Azide group and can undergo copper-catalyzed azide-alkyne cycloaddition reaction (CuAAc) with molecules containing Alkyne groups. Strain-promoted alkyne-azide cycloaddition (SPAAC) can also occur with molecules containing DBCO or BCN groups.

In Vitro

MIR96-IN-1 (Compound 1) selectively inhibits production of mature miR-96 and triggers apoptosis in breast cancer cells at micromolar concentrations[1].

	MIR96-IN-1 (Compound 3) binds a UU loop in miR-96 and inhibits its biogenesis[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Sai Pradeep Velagapudi,et al. Design of a small molecule against an oncogenic noncoding RNA. Proc Natl Acad Sci U S A. 2016 May 24;113(21):5898-903.

[2]. Christopher L Haga, et al. Small Molecule Inhibition of miR-544 Biogenesis Disrupts Adaptive Responses to Hypoxia by Modulating ATM-mTOR Signaling. ACS Chem Biol. 2015 Oct 16;10(10):2267-76.

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