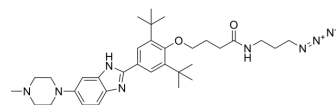


## MIR96-IN-1

Cat. No.:	HY-15843
CAS No.:	1311982-88-3
Molecular Formula:	C <sub>33</sub> H <sub>48</sub> N <sub>8</sub> O <sub>2</sub>
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.

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	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

- 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
- 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<sub>d</sub>s of 1.3, 9.4, 3.4, 1.3 and 7.4 μM for RNA1, RNA2, RNA3, RNA4 and RNA5, respectively<sup>[1]</sup>. 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<sup>[1]</sup>.

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MIR96-IN-1 (Compound 3) binds a UU loop in miR-96 and inhibits its biogenesis<sup>[2]</sup>.

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

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

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