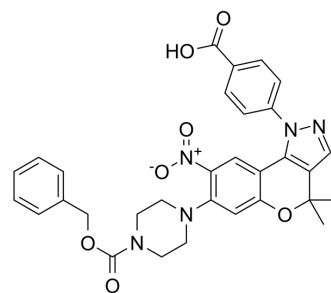


Lin28-let-7a antagonist 1

Cat. No.:	HY-100692		
CAS No.:	2024548-03-4		
Molecular Formula:	C ₃₁ H ₂₉ N ₅ O ₇		
Molecular Weight:	583.59		
Target:	MicroRNA		
Pathway:	Epigenetics		
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 (171.35 mM; Need ultrasonic)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	1.7135 mL	8.5677 mL	17.1353 mL
	5 mM	0.3427 mL	1.7135 mL	3.4271 mL
	10 mM	0.1714 mL	0.8568 mL	1.7135 mL

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

BIOLOGICAL ACTIVITY

Description

Lin28-let-7a antagonist 1 shows a clear antagonistic effect against the Lin28-let-7a interaction with an IC₅₀ of 4.03 μM for Lin28A-let-7a-1 interaction.

IC₅₀ & Target

IC₅₀ 4.03 μM (Lin28A-let-7a-1)^[1].

In Vitro

Lin28-let-7a antagonist 1 (compound 1) shows a clear antagonistic effect against the Lin28A-let-7a-1 interaction with an IC₅₀ of 4.03 μM. Interestingly, Lin28-let-7a antagonist 1 also inhibits the Lin28B-let-7 interaction, with slightly reduced potency. Dicer processing assay reveals that Lin28-let-7a antagonist 1 clearly blocks the formation of the Lin28A-pre-let-7g complex and induces miRNA processing, resulting in the generation of mature let-7g miRNA. When the expression of both Lin28A and Lin28B are knocked-down using siRNA in JAR cells, the Lin28-let-7a antagonist 1-induced increase in cellular let-7 levels is clearly attenuated. Lin28A-let-7a-IN-1 increases mature let-7 levels in PA-1 cells that express high level of Lin28A. On the other hand, let-7 levels are not affected by 1 in MCF7 cells that rarely express Lin28 proteins. Taken together, Lin28-let-7a antagonist 1 specifically induces the increase in the cellular let-7 levels by targeting Lin28^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Mol Cell. 2021 Oct 12;S1097-2765(21)00796-6.
- Oncogenesis. 2022 Jul 2;11(1):37.

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REFERENCES

[1]. Lim D, et al. Discovery of a Small-Molecule Inhibitor of Protein-MicroRNA Interaction Using Binding Assay with a Site-Specifically Labeled Lin28. J Am Chem Soc. 2016 Oct 7.

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

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