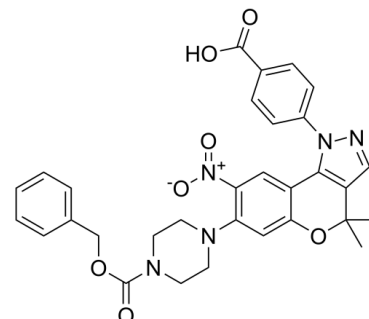


## Data Sheet

<b>Product Name:</b>	Lin28-let-7a antagonist 1
<b>Cat. No.:</b>	CS-0019978
<b>CAS No.:</b>	2024548-03-4
<b>Molecular Formula:</b>	C <sub>31</sub> H <sub>29</sub> N <sub>5</sub> O <sub>7</sub>
<b>Molecular Weight:</b>	583.59
<b>Target:</b>	MicroRNA
<b>Pathway:</b>	Epigenetics
<b>Solubility:</b>	DMSO : 100 mg/mL (171.35 mM; Need ultrasonic)



### BIOLOGICAL ACTIVITY:

Lin28-let-7a antagonist 1 shows a clear antagonistic effect against the **Lin28-let-7a interaction** with an **IC<sub>50</sub>** of 4.03 μM for Lin28A-let-7a-1 interaction. IC<sub>50</sub> & Target: IC<sub>50</sub>: 4.03 μM (Lin28A-let-7a-1)<sup>[1]</sup>. **In Vitro:** Lin28-let-7a antagonist 1 (compound 1) shows a clear antagonistic effect against the Lin28A-let-7a-1 interaction with an IC<sub>50</sub> 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<sup>[1]</sup>.

### 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.

### CAIndexNames:

1-Piperazinecarboxylic acid, 4-[1-(4-carboxyphenyl)-1,4-dihydro-4,4-dimethyl-8-nitro[1]benzopyrano[4,3-c]pyrazol-7-yl]-, 1-(phenylmethyl) ester

### SMILES:

O=C(O)C(C=C1)=CC=C1N2N=CC3=C2C4=CC([N+](=O)[O-])=C(N5CCN(C(OCC6=CC=CC=C6)=O)CC5)C=C4OC3(C)C

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

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