

## LasR-IN-3

## Chemical Properties

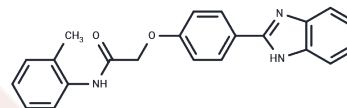
CAS No. : 2810894-92-7

Formula: C<sub>22</sub>H<sub>19</sub>N<sub>3</sub>O<sub>2</sub>

Molecular Weight: 357.41

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	LasR-IN-3 is a potent LasR inhibitor for <i>Pseudomonas aeruginosa</i> . It blocks quorum sensing signaling to significantly reduce bacterial biofilm formation.
Targets(IC50)	Antibacterial
In vitro	LasR-IN-3 (compound 7f), ranging from 4.68 to 150 µg/mL over 24 hours, demonstrates anti- <i>Pseudomonas aeruginosa</i> activity, with Minimum Inhibitory Concentration (MIC) and sub-MIC levels recorded at 56.25 µg/mL and 14.00 µg/mL, respectively. At a concentration of 14.00 µg/mL for either 24 or 48 hours, it effectively inhibits biofilm formation and the production of pyocyanin and rhamnolipids by 71.70%, 68.70%, and 54.00%, respectively. Additionally, LasR-IN-3 is proven safe for normal HDFa cell lines at concentrations of 56.25 µg/mL and 338.0 µg/mL over 24 hours. At 14.00 µg/mL for 24 hours, it also reduces the expression of the <i>lasR</i> and <i>rhIR</i> genes, thereby impeding QS-dependent biofilm formation and virulence factors. RT-PCR results confirm a decrease in <i>lasR</i> and <i>rhIR</i> gene expression by 26% and 16.3%, respectively, at a concentration of 14.00 µg/mL after 24 hours.

## Solubility Information

Solubility	DMSO: 80.00 mg/mL (223.83 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	2.7979 mL	13.9895 mL	27.9791 mL
5 mM	0.5596 mL	2.7979 mL	5.5958 mL
10 mM	0.2798 mL	1.399 mL	2.7979 mL
50 mM	0.056 mL	0.2798 mL	0.5596 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Vetrivel A, Vetrivel P, Dhandapani K, et al. Inhibition of biofilm formation, quorum sensing and virulence factor production in *Pseudomonas aeruginosa* PAO1 by selected LasR inhibitors[J]. *International Microbiology*, 2023, 26 (4): 851-868.

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