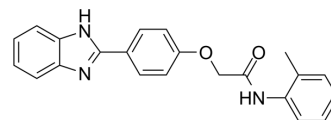


## LasR-IN-3

<b>Cat. No.:</b>	HY-151165
<b>CAS No.:</b>	2810894-92-7
<b>Molecular Formula:</b>	C <sub>22</sub> H <sub>19</sub> N <sub>3</sub> O <sub>2</sub>
<b>Molecular Weight:</b>	357.41
<b>Target:</b>	Bacterial; Antibiotic
<b>Pathway:</b>	Anti-infection
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	LasR-IN-3 is a LasR inhibitor against <i>Pseudomonas aeruginosa</i> . LasR-IN-3 induces LasR structure instability and completely dissociates LasR functioning dimeric form <sup>[1]</sup> .									
<b>IC<sub>50</sub> &amp; Target</b>	LasR <sup>[1]</sup>									
<b>In Vitro</b>	<p>LasR-IN-3 (compound 7f) (4.68-150 µg/mL; 24 h) shows anti-activity against <i>Pseudomonas aeruginosa</i> with MIC and sub-MIC values of 56.25 µg/mL and 14.00 µg/mL<sup>[1]</sup>.</p> <p>LasR-IN-3 (14.00 µg/mL; 24 h, or 48 h) inhibits biofilm formation, pyocyanin, and rhamnolipids production with inhibition rate of 71.70%, 68.70%, 54.00%, respectively<sup>[1]</sup>.</p> <p>LasR-IN-3 (56.25 µg/mL, and 338.0 µg/mL; 24 h) is safe to normal cell line (HDFa)<sup>[1]</sup>.</p> <p>LasR-IN-3 (14.00 µg/mL; 24 h) decreases lasR and rhlR gene expression and inhibits the QS-dependent biofilm formation and virulence factors<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>RT-PCR<sup>[1]</sup></p> <table border="1" data-bbox="341 1333 1510 1564"> <tr> <td>Cell Line:</td> <td><i>Pseudomonas aeruginosa</i></td> </tr> <tr> <td>Concentration:</td> <td>14.00 µg/mL</td> </tr> <tr> <td>Incubation Time:</td> <td>24 hours</td> </tr> <tr> <td>Result:</td> <td>Decreased lasR and rhlR expression by 26% and 16.3%, respectively.</td> </tr> </table>		Cell Line:	<i>Pseudomonas aeruginosa</i>	Concentration:	14.00 µg/mL	Incubation Time:	24 hours	Result:	Decreased lasR and rhlR expression by 26% and 16.3%, respectively.
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Concentration:	14.00 µg/mL									
Incubation Time:	24 hours									
Result:	Decreased lasR and rhlR expression by 26% and 16.3%, respectively.									

### REFERENCES

[1]. Abd El-Aleam RH, et al. Design and synthesis of novel benzimidazole derivatives as potential *Pseudomonas aeruginosa* anti-biofilm agents inhibiting LasR: Evidence from comprehensive molecular dynamics simulation and in vitro investigation. *Eur J Med Chem.* 2022 Aug 5;241:114629.

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

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