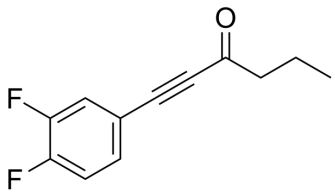
RhlR antagonist 1

Cat. No.:	HY-131337
CAS No.:	2614320-29-3
Molecular Formula:	$C_{12}H_{10}F_2O$
Molecular Weight:	208.2
Target:	Bacterial
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	RhlR antagonist 1 is a potent RhlR antagonist with an IC_{50} of 26 μM. RhlR antagonist 1 displays selective RhlR antagonism over LasR and PqsR, strong inhibition of biofilm formation in static and dynamic settings, and reduces production of virulence factors such as rhamnolipid and pyocyanin in P. aeruginosa. RhlR antagonist 1 can be utilized for developing QS-modulating molecules in the control of P. aeruginosa infections[1]. RhlR antagonist 1 is a click chemistry reagent, it contains an Alkyne group and can undergo copper-catalyzed azide-alkyne cycloaddition (CuAAc) with molecules containing Azide groups.
In Vitro	RhlR antagonist 1 (compound 30) (10 μM) inhibits P. aeruginosa biofilm formation by 74% and decreases the amount of carbohydrate and protein by 39 and 72%, respectively. RhlR antagonist 1 reduces significantly rhamnolipid production by P. aeruginosa at 10 and 100 μM concentrations. RhlR antagonist 1 (0-10 μM; 24 hours) down-regulates rhlA expression of biofilm cells. RhlR antagonist 1 could inhibit P. aeruginosa biofilm formation and virulence factor production by down-regulating the rhlA expression of PP. aeruginosa[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Larvae injected with P. aeruginosa started to die in initial incubation time and 70% of them died at the end of the 20-day incubation period. The survival rate of RhlR antagonist 1 (0-10 μM)-treated larvae is greatly improved, with approximately 80% larvae surviving at the end of the incubation period. In addition, larvae injected with rhlR mutants of P. aeruginosa shows a 90% survival rate after 20 days[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Nam S, et al. Discovery and characterization of pure RhlR antagonists against Pseudomonas aeruginosa infections [published online ahead of print, 2020 Jul 22]. J Med Chem. 2020;10.1021/acs.jmedchem.0c00630.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA