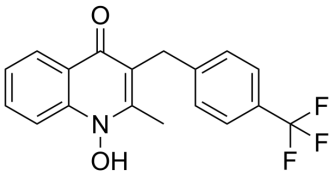
Mtb-cyt-bd oxidase-IN-7

Cat. No.:	HY-151956
Molecular Formula:	$C_{18}H_{14}F_3NO_2$
Molecular Weight:	333.3
Target:	Bacterial
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Mtb-cyt-bd oxidase-IN-7 is a cytochrome bd terminal oxidase (Cyt-bd) inhibitor with a K_d value of 4.17 μM. Mtb-cyt-bd oxidase-IN-7 shows anti-tuberculosis activities[1].
In Vitro	Mtb-cyt-bd oxidase-IN-7 (compound 8d) is a 1-hydroxy-2-methylquinolin-4(1H)-one derivative. Mtb-cyt-bd oxidase-IN-7 inhibits the growth of the cytochrome bcc-aa3 oxidase (Cyt-bcc) knock-out strain (ΔqcrCAB, Cyt-bd$^+$) with a MIC value of 6.25 μM. The combination of Mtb-cyt-bd oxidase-IN-7 with the Cyt-bcc inhibitor Q203 completely inhibited oxygen consumption of the wild-type strain and the inverted-membrane vesicles expressing M. tuberculosis Cyt-bd (ΔcydAB::MtbCydAB$^+$)[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Yang Zhou, et al. Discovery of 1-hydroxy-2-methylquinolin-4(1H)-one derivatives as new cytochrome bd oxidase inhibitors for tuberculosis therapy. Eur J Med Chem. 2023 Jan 5;245(Pt 1):114896.

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