Majoranaquinone

Cat. No.: HY-N12320

CAS No.: 1596355-59-7

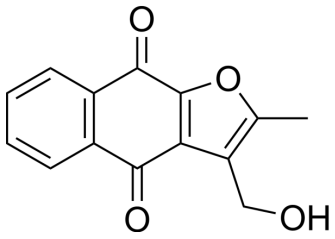
Molecular Formula: $C_{14}H_{10}O_4$

Molecular Weight: 242.23

Target: Antibiotic

Pathway: Anti-infection

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Majoranaquinone exhibits a high antibacterial effect against 4 Staphylococcus, 1 Moraxella, and 1 Enterococcus strains. Majoranaquinone shows substantial efflux pump inhibitory activity in Escherichia coliATCC 25922 strain. Majoranaquinone is found to be an effective biofilm formation inhibitor on E.coli, ATCC 25922 and E. coli K-12 AG100 bacteria[1].

In Vitro

Majoranaquinone (compound 1) (0.195-100 mM 20 h) exhibits a high antibacterial effect against 4 Staphylococcus, 1 Moraxella, and 1 Enterococcus, strains[1].

Majoranaquinone (62.5-1000 μM, 48 h) shows substantial efflux pump inhibitory activity in Escherichia coli ATCC 25922 strain [1].

Majoranaquinone (62.5-1000 μM; 48 h) is an effective biofilm formation inhibitor in E.coli, ATCC 25922 and E. coli K-12 AG100 bacteria[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	S. aureus ATCC 25923, S. aureus MRSA ATCC 43300, S. aureus ATCC 29213, M. catarrhalis ATCC 25238, E. faecalis ATCC 29212, B. subtilis ATCC 6633
Concentration:	0.195-100 mM
Incubation Time:	20 hours
Result:	Had MIC values of 125 μM against S. aureus ATCC 25923 and 12.5 μM against S. aureus MRSA ATCC 43300, 250 μM against S. aureus ATCC 29213 and 250 μM against M. catarrhalis ATCC 25238, 1 mM against E. faecalis ATCC 29212, and 7.8 μM against B. subtilis ATCC 6633.

REFERENCES

[1]. Tasneem Sultan Abu Ghazal, et al. Furanonaphthoquinones, Diterpenes, and Flavonoids from Sweet Marjoram and Investigation of Antimicrobial, Bacterial Efflux, and Biofilm Formation Inhibitory Activities. ACS Omega. 2023 Sep 14;8(38):34816-34825.

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

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