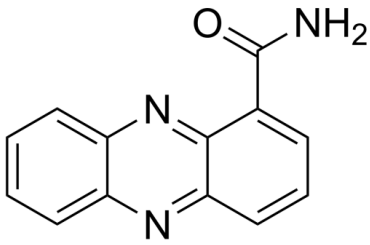
Data Sheet

Product Name:	Oxychlororaphine
Cat. No.:	CS-W022931
CAS No.:	550-89-0
Molecular Formula:	$C_{13}H_9N_3O$
Molecular Weight:	223.23
Target:	Apoptosis; Bcl-2 Family; Caspase; Fungal; MDM-2/p53; PARP
Pathway:	Anti-infection; Apoptosis; Cell Cycle/DNA Damage; Epigenetics
Solubility:	DMSO : 10 mg/mL (ultrasonic;warming;heat to 60°C)



BIOLOGICAL ACTIVITY:

Oxychloroaphine could be isolated from the bacterium ***Pantoea*** agglomerans naturally present in soil. Oxychloroaphine has broad-spectrum antifungal activity. Oxychloroaphine has cytotoxicity in a dose-dependent manner and induces **apoptosis**. Oxychloroaphine can be used in research of cancer[1][2]. ***In Vitro:***Oxychloroaphine (1-256 μM; 24 h) has cytotoxicity with IC_{50} values for A549, HeLa, and SW480 cancer cell lines between 32 and 40 μM[2].

Oxychloroaphine (1-150 μM; A549, HeLa, and SW480 cancer cell lines) causes cell membrane damage, leading to increase apoptosis and leakage of lactate dehydrogenase, and increases production of cytochrome c protein[2].

Oxychloroaphine (32 μM; A549 and SW480 cells) induces cycle arrest at G1 phase and induction of sub-G phase[2].

Oxychloroaphine (48 h; A549 cells) induces downregulation of antiapoptotic Bcl-2 protein and the activation of proapoptotic protein caspase-3 led to the cleavage of PARP[2].

References:

[1]. Li S, et, al. Comparative metabolomics and transcriptomics analyses provide insights into the high-yield mechanism of phenazines biosynthesis in Pseudomonas chlororaphis GP72. J Appl Microbiol. 2022 Nov;133(5):2790-2801.

[2]. Ali HM, et, al. Isolation of Bioactive Phenazine-1-Carboxamide from the Soil Bacterium Pantoea agglomerans and Study of Its Anticancer Potency on Different Cancer Cell Lines. J AOAC Int. 2016 Sep;99(5):1233-9.

CAIndexNames:

1-Phenazinecarboxamide

SMILES:

O=C(C1=CC=CC2=NC3=CC=CC=C3N=C21)N

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