

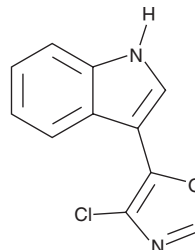
PRODUCT INFORMATION



Streptochlorin

Item No. 27605

CAS Registry No.: 120191-51-7
Formal Name: 3-(4-chloro-5-oxazolyl)-1H-indole
Synonym: SF 2583A
MF: C₁₁H₇ClN₂O
FW: 218.6
Purity: ≥98%
UV/Vis.: λ_{max}: 222, 272, 288 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Bacterium/*Streptomyces roseolilacinus*



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Streptochlorin is supplied as a solid. A stock solution may be made by dissolving the streptochlorin in the solvent of choice, which should be purged with an inert gas. Streptochlorin is soluble in DMSO and methanol.

Description

Streptochlorin is a bacterial metabolite originally isolated from *Streptomyces* sp. SF2583 that has diverse biological activities, including antiangiogenic, antiproliferative, and anti-allergic properties.¹⁻⁴ It inhibits TNF-α-induced NF-κB transcriptional activity and decreases proliferation of human umbilical vein endothelial cells (HUVECs) when used at concentrations ranging from 5 to 20 μM.² Streptochlorin (12 μg/ml) decreases viability of, as well as induces apoptosis and increases the production of reactive oxygen species (ROS) in, Hep3B human hepatocellular carcinoma cells.³ It does not induce cytotoxicity in RBL-2H3 mast cells at concentrations up to 100 μM.⁴ Streptochlorin prevents degranulation in antigen-stimulated mast cells, as well as inhibits Syk kinase and the Src family kinases LYN and Fyn and reduces the secretion of TNF-α and IL-4 induced by dinitrophenyl-human serum album (DNP-HSA) in RBL-2H3 mast cells. It also decreases swelling and reduces scratching behavior in a mouse model of allergic dermatitis induced by dinitrofluorobenzene (DNFB).

References

1. Hiroomi, W., Shoichi, A., Junko, Y., *et al.* A new antibiotic SF2583A, 4-chloro-5-(3'-indolyl)oxazole, produced by *Streptomyces*. *Meiji Seika Kenkyu Nenpo* **27**, 55-62 (1988).
2. Choi, I.-K., Shin, H.J., Lee, H.-S., *et al.* Streptochlorin, a marine natural product, inhibits NF-κB activation and suppresses angiogenesis *in vitro*. *J. Microbiol. Biotechnol.* **17(8)**, 1338-13343 (2007).
3. Shin, D.Y., Shin, H.J., Kim, G.-Y., *et al.* Streptochlorin isolated from *Streptomyces* sp. Induces apoptosis in human hepatocarcinoma cells through a reactive oxygen species-mediated mitochondrial pathway. *J. Microbiol. Biotechnol.* **18(11)**, 1862-1868 (2008).
4. Lee, S.-H., Shin, H.J., Kim, D.-Y., *et al.* Streptochlorin suppresses allergic dermatitis and mast cell activation via regulation of Lyn/Fyn and Syk signaling pathways in cellular and mouse models. *PLoS One* **8(9)**, e74194 (2013).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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