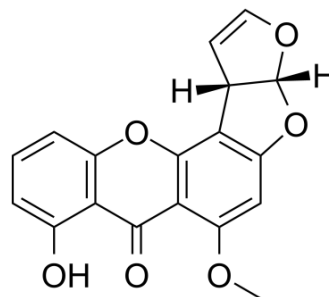


Sterigmatocystine

Cat. No.:	HY-N6725
CAS No.:	10048-13-2
Molecular Formula:	C ₁₈ H ₁₂ O ₆
Molecular Weight:	324.28
Target:	DNA/RNA Synthesis; Apoptosis
Pathway:	Cell Cycle/DNA Damage; Apoptosis
Storage:	Please store the product under the recommended conditions in the COA.



BIOLOGICAL ACTIVITY

Description	Sterigmatocystine is a precursor of aflatoxins and a mycotoxin produced by common mold strains from <i>Aspergillus versicolor</i> ^{[1][2]} . Sterigmatocystine, a inhibitor of G1 Phase and DNA synthesis, is used to inhibit p21 activity. Sterigmatocystine has teratogenic, and carcinogenic effects in animals ^[3] .
In Vitro	Sterigmatocystine-induced DNA damage activates the ATM/53-dependent signaling pathway, which contributes to the induction of G2 arrest in GES-1 cells ^[4] .
In Vivo	Sterigmatocystine (ip; 3 mg/kg once daily for 14 days) inhibits p21 ^{WAF1/CIP1} ^[3] .

REFERENCES

- [1]. Kusunoki M, et al. Long-term administration of the fungus toxin, sterigmatocystin, induces intestinal metaplasia and increases the proliferative activity of PCNA, p53, and MDM2 in the gastric mucosa of aged Mongolian gerbils. *Environ Health Prev Med.* 2011 Jul;16(4):224-31.
- [2]. Schroeder HW, et al. Production of sterigmatocystin by some species of the genus *Aspergillus* and its toxicity to chicken embryos. *Appl Microbiol.* 1975 Oct;30(4):589-91.
- [3]. Tong YF, et al. Cyclin-Dependent Kinase Inhibitor p21^{WAF1/CIP1} Facilitates the Development of Cardiac Hypertroph. *Cell Physiol Biochem.* 2017;42(4):1645-1656.
- [4]. Zhang D, et al. Sterigmatocystin-induced DNA damage triggers G2 arrest via an ATM/p53-related pathway in human gastric epithelium GES-1 cells in vitro. *PLoS One.* 2013 May 21;8(5):e65044.

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

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