LKT Laboratories, Inc.

Sterigmatocystin

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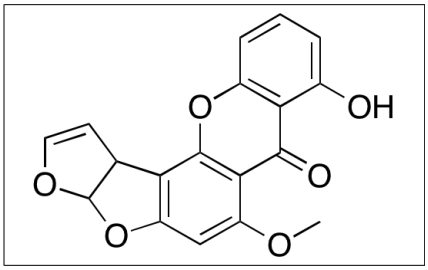
Product Information

Product ID S7717
CAS No. 10048-13-2
Chemical Name

Synonym

Formula $C_{18}H_{12}O_6$
Formula Wt. 324.28
Melting Point 240-246°C
Purity ≥98%
Solubility DMSO, Methanol, Ethanol, Acetone.



Pricing and Availability

Bulk quanitites available upon request

Product ID	Size	List Price
S7717	1 mg	$64.70
S7717	5 mg	$243.70
S7717	10 mg	$439.40

Store Temp 4°C
Ship Temp Ambient

Description Sterigmatocystin is a mutagenic and carcinogenic mycotoxin initially produced by species of *Aspergillus*. Sterigmatocystin is a precursor of aflatoxin B1. In vitro, this compound activates ATM, p53, and Chk2 and damages DNA, inducing G2 phase cell cycle arrest; this mechanism may also involve PI3K/Akt/mTOR signaling. In vivo, chronic administration of sterigmatocystin decreases levels of glutathione, ascorbic acid, and α-tocopherol and increases levels of ROS, increasing lipid peroxidation.

References

Zhang D, Cui Y, Shen H, 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. PMID: 23705030.

Xing X, Wang J, Xing LX, et al. Involvement of MAPK and PI3K signaling pathway in sterigmatocystin-induced G2 phase arrest in human gastric epithelium cells. Mol Nutr Food Res. 2011 May;55(5):749-60. PMID: 21287681.

Delgado-Virgen F, Guzman-de-Peña D. Mechanism of Sterigmatocystin Biosynthesis Regulation by pH in Aspergillus nidulans. Braz J Microbiol. 2009 Oct;40(4):933-42. PMID: 24031444.

Sivakumar V, Thanislass J, Niranjali S, et al. Lipid peroxidation as a possible secondary mechanism of sterigmatocystin toxicity. Hum Exp Toxicol. 2001 Aug;20(8):398-403. PMID: 11727790.