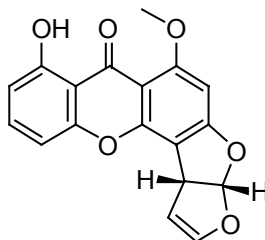


Sterigmatocystin

Code: **BIA-S1213**

Pack sizes: **1 mg, 5 mg**



Synonyms :

Specifications

CAS #	: 10048-13-2
Molecular Formula	: C₁₈H₁₂O₆
Molecular Weight	: 324.3
Source	: <i>Aspergillus versicolor</i> MST-FP2032
Appearance	: Pale yellow solid
Purity	: > 95%
Long Term Storage	: - 20°C
Solubility	: Soluble in DMF or DMSO. Sparingly soluble in methanol and ethanol with only limited water solubility

Application Notes

Sterigmatocystin is a xanthone isolated by a number of groups in the 1950s as a mycotoxin produced by several species of *Aspergillus* associated with food and grain contamination. Sterigmatocystin is structurally related to the aflatoxins and while it is considered to be mutagenic, teratogenic and carcinogenic, it is less widespread and potent than the aflatoxins. Sterigmatocystin in the presence of microsomes covalently binds to DNA. It uncouples oxidative phosphorylation but, unlike the aflatoxins, does not induce mitochondrial swelling or hinder Ca²⁺-induced swelling of mitochondria. More recently, sterigmatocystin has been shown to be an inhibitor of acyl-CoA:cholesterol acyltransferase (ACAT) with selectivity for the ACAT2 isoenzyme.

References

1. Studies in the biochemistry of micro-organisms. 99. Metabolic products of *Aspergillus versicolor* (Vuillemin) Tiraboschi. Birkinshaw J.H. & Hammady I.M.M., Biochem. J. 1957, 65, 162.
2. Sterigmatocystin-DNA interactions: Identification of a major adduct formed after metabolic activation in vitro. Essigmann J.M., Proc. Nat. Acad. Sci. USA 1979, 76, 179.
3. Inhibitory effect of sterigmatocystin and 5,6-dimethoxysterigmatocystin on ATP synthesis in mitochondria. Kawai K. et al., Appl. Environ. Microbiol. 1984, 48, 1001.
4. Selective inhibition of acyl-CoA:cholesterol acyltransferase 2 isozyme by flavasperone and sterigmatocystin from *Aspergillus* species. Sakai K.J., Antibiot. 2008, 61, 568.