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Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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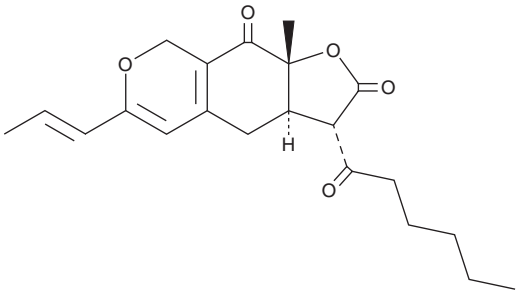
PRODUCT INFORMATION

Monascin

Item No. 39510

CAS Registry No.:	21516-68-7
Formal Name:	(3S,3aR,9aR)-3a,4,8,9a-tetrahydro-9a-methyl-3-(1-oxohexyl)-6-(1E)-1-propen-1-yl-2H-furo[3,2-g][2]benzopyran-2,9(3H)-dione
MF:	$C_{21}H_{26}O_5$
FW:	358.4
Purity:	≥95%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Fungus/*Monascus* sp.



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

Laboratory Procedures

Monascin is supplied as a solid. A stock solution may be made by dissolving the monascin in the solvent of choice, which should be purged with an inert gas. Monascin is soluble in acetonitrile and chloroform.

Description

Monascin is an azaphilonoid pigment that has been found in the fungus *Monascus* and has diverse biological activities.[1-3] It induces peroxisome proliferator-activated receptor α (PPARα) activity in a coactivator assay (IC_{50} = 2,038 nM) and inhibits oleic acid-induced fatty acid uptake, lipogenesis, and fatty acid oxidation in FL83B mouse hepatocytes.[1] *In vivo*, monascin reduces hepatic IL-6, TNF-α, and TGF-β levels, plasma levels of total cholesterol, triglycerides, free fatty acids, and alanine transaminase (ALT), and hepatic macrovesicular steatosis in a mouse model of high-fat diet-induced non-alcoholic steatohepatitis (NASH). Monascin reduces the number of papillomas per mouse and the number of mice with papillomas in a mouse model of two-stage carcinogenesis induced by phorbol 12-myristate 13-acetate (TPA; Item No. 10008014) and UVB or peroxynitrite when administered in the drinking water at a concentration of 0.0025%.[2] It also reduces serum insulin, triglyceride, total cholesterol, and HDL concentrations in a rat model of diabetes induced by streptozotocin (STZ; Item No. 13104).[3]

References

1. Hsu, W.-H., Chen, T.-H., Lee, B.-H., *et al.* Monascin and ankaflavin act as natural AMPK activators with PPARα agonist activity to down-regulate nonalcoholic steatohepatitis in high-fat diet-fed C57BL/6 mice. *Food Chem. Toxicol.* **64**, 94-103 (2014).
2. Akihisa, T., Tokuda, H., Ukiya, M., *et al.* Anti-tumor-initiating effects of monascin, an azaphilonoid pigment from the extract of Monascus pilosus fermented rice (red-mold rice). *Chem. Biodivers.* **2(10)**, 1305-1309 (2005).
3. Shi, Y.-C., Liao, V.H.-C., and Pan, T.-M. Monascin from red mold dioscorea as a novel antidiabetic and antioxidative stress agent in rats and Caenorhabditis elegans. *Free Radic. Biol. Med.* **52(1)**, 109-117 (2012).

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