

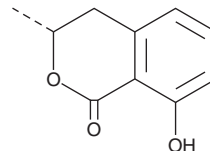
PRODUCT INFORMATION



(R)-(-)-Mellein

Item No. 10311

CAS Registry No.: 480-33-1
Formal Name: 3,4-dihydro-8-hydroxy-3-methyl-1H-2-benzopyran-1-one
Synonym: Ochracin
MF: C₁₀H₁₀O₃
FW: 178.2
Purity: ≥98%
UV/Vis.: λ_{max}: 210, 246, 314 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

(R)-(-)-Mellein is supplied as a crystalline solid. A stock solution may be made by dissolving the (R)-(-)-mellein in the solvent of choice, which should be purged with an inert gas. (R)-(-)-Mellein is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of (R)-(-)-mellein in these solvents is approximately 30 mg/ml.

(R)-(-)-Mellein is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (R)-(-)-mellein should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. "(R)-(-)-Mellein has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

(R)-(-)-Mellein is a dihydroisocoumarin compound produced by *A. ochraceus* Wilhelm.¹ It has a variety of biological activities including antibacterial, antimalarial, antifungal, and anticancer effects.^{2,3} (R)-(-)-Mellein inhibits proliferation of human breast cancer (MCF-7 and MDA-MB-468) and melanoma (SK-MEL-28 and Malme-3M) cell lines with IC₅₀ values greater than 200 μM.²

References

1. Moore, J.H., Davis, N.D., and Diener, U.L. Mellein and 4-hydroxymellein production by *Aspergillus ochraceus* Wilhelm. *Appl. Microbiol.* **23**, 1067-1072 (1972).
2. Higgins, C.A., Delbederi, Z., McGarel, K., et al. Synthesis and *in vitro* and *in vivo* evaluation of a series of dihydroisocoumarin derivatives conjugated with fatty acids, alcohols, and amines as potential anticancer agents. *Bioconjug. Chem.* **20**, 1737-1751 (2009).
3. Rayanil, K., Bunchornmaspan, P., and Tuntiwachwuttikul, P. A new phenolic compound with anticancer activity from the wood of *Millettia leucantha*. *Arch. Pharm. Res.* **34**(6), 881-886 (2011).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/31/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM