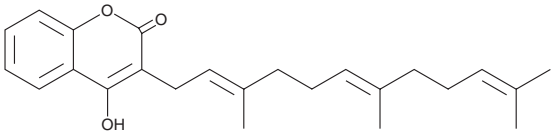
PRODUCT INFORMATION

Ferulenol

Item No. 19568

CAS Registry No.: 6805-34-1
Formal Name: 4-hydroxy-3-[(2E,6E)-3,7,11-trimethyl-2,6,10-dodecatrien-1-yl]-2H-1-benzopyran-2-one
MF: $C_{24}H_{30}O_3$
FW: 366.5
Purity: ≥95%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Special Conditions: Protect from light
Item Origin: Plant/*Ferula communis*



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

Laboratory Procedures

Ferulenol is supplied as a solid. A stock solution may be made by dissolving the ferulenol in the solvent of choice. Ferulenol is soluble in organic solvents such as ethanol, methanol, and DMSO, which should be purged with an inert gas.

Description

Ferulenol is a prenylated 4-hydroxycoumarin first isolated from *F. communis* that demonstrates potent antimycobacterial activity.[1] It does not directly affect blood coagulation but at concentrations less than 100 nM has been shown to impair factor X biosynthesis.[2] Ferulenol has also been shown to stimulate tubulin polymerization *in vitro*, rearranging cellular microtubule networks into short fibers and altering nuclear morphology, which leads to cytotoxicity in various human tumor cell lines.[3] Ferulenol is reported to disrupt oxidative phosphorylation, inhibiting succinate ubiquinone reductase without altering succinate dehydrogenase activity of complex II of the electron chain transport system.[4]

References

1. Mamoci, E., Cavoski, I., Simone, V., *et al*. Chemical composition and *in vitro* activity of plant extracts from *Ferula communis* and *Dittrichia viscosa* against postharvest fungi. *Molecules* **16(3)**, 2609-2625 (2011).
2. Monti, M., Pinotti, M., Appendino, G., *et al*. Characterization of anti-coagulant properties of prenylated coumarin ferulenol. *Biochim. Biophys. Acta*. **1770(10)**, 1437-1440 (2007).
3. Bocca, C., Gabriel, L., Bozzo, F., *et al.* Microtubule-interacting activity and cytotoxicity of the prenylated coumarin ferulenol. *Planta Med*. **68(12)**, 1135-1137 (2002).
4. Lahouel, M., Zini, R., Zellagui, A., *et al*. Ferulenol specifically inhibits succinate ubiquinone reductase at the level of the ubiquinone cycle. *Biochem. Biophys. Res. Commun*. **355(1)**, 252-257 (2007).

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