

PRODUCT INFORMATION

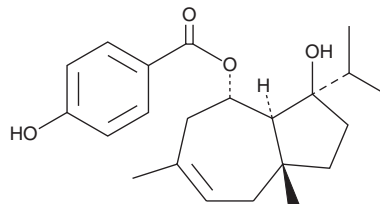


Ferutinin

Item No. 16554

CAS Registry No.: 41743-44-6
Formal Name: 4-hydroxy-benzoic acid,
(3R,3aS,4S,8aR)-1,2,3,3a,4,5,8,8a-
octahydro-3-hydroxy-6,8a-dimethyl-
3-(1-methylethyl)-4-azulenyl ester

MF: C₂₂H₃₀O₄
FW: 358.5
Purity: ≥98%
UV/Vis.: λ_{max}: 260 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Semi-synthetic



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

Laboratory Procedures

Ferutinin is supplied as a solid. A stock solution may be made by dissolving the ferutinin in the solvent of choice, which should be purged with an inert gas. Ferutinin is soluble in DMSO.

Description

Ferutinin is a plant-derived ester of a sesquiterpene alcohol that acts as an agonist for estrogen receptor (ER) α (IC₅₀ = 33.1 nM) and an agonist/antagonist for ERβ (IC₅₀ = 180.5 nM).¹ It also demonstrates ionophoretic properties, increasing calcium permeability of lipid bilayer membranes, mitochondria, thymocytes, sarcoplasmic reticulum, and liposomes at a concentration range of 1-50 μM.²⁻⁴ Ferutinin is cytotoxic to MCF-7 breast and TCC bladder cancer cells as well as human foreskin HFF3 fibroblasts (IC₅₀s = 29, 24, and 36 μg/ml *in vitro* after 72 hours of exposure).³

References

- Ikeda, K., Arao, Y., Otsuka, H., *et al.* Terpenoids found in the Umbelliferae family act as agonists/antagonists for ERα and ERβ: Differential transcription activity between ferutinine-liganded ERα and ERβ. *Biochem. Biophys. Res. Commun.* **291(2)**, 354-360 (2002).
- Abramov, A.Y., Zamaraeva, M.V., Hagelgans, A.I., *et al.* Influence of plant terpenoids on the permeability of mitochondria and lipid bilayers. *Biochim. Biophys. Acta* **1512(1)**, 98-110 (2001).
- Matin, M.M., Nakhaeizadeh, H., Bahrami, A.R., *et al.* Ferutinin, an apoptosis inducing terpenoid from *Ferula ovina*. *Asian Pac. J. Cancer Prev.* **15(5)**, 2123-2128 (2014).
- Zamaraeva, M.V., Charishnikova, O., Saidkhodjaev, A., *et al.* Calcium mobilization by the plant estrogen ferutinin does not induce blood platelet aggregation. *Pharmacol. Rep.* **62(6)**, 1117-1126 (2010).

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.

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