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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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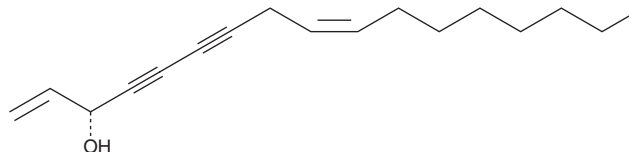
PRODUCT INFORMATION



Falcarinol

Item No. 22407

CAS Registry No.: 21852-80-2
Formal Name: 1,9Z-heptadecadiene-4,6-diyne-3R-ol
MF: C₁₇H₂₄O
FW: 244.4
Purity: ≥70%
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥1 year



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

Laboratory Procedures

Falcarinol is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of falcarinol in these solvents is approximately 30 and 20 mg/ml, respectively.

Falcarinol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of falcarinol should be diluted with the aqueous buffer of choice. Falcarinol has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method.

Description

Falcarinol is a C₁₇-polyacetylene produced by the Apiaceae family that has antimicrobial properties due to its inhibition of fatty acid biosynthesis.^{1,2} Falcarinol binds to the human recombinant cannabinoid (CB) receptors, CB₁ and CB₂, (K_is = 594 and 2,100 nM, respectively) in an [³H]anandamide displacement assay in HEK293 cells.³ It differentially modulates synaptic and extrasynaptic GABA_A receptors in a recombinant HEK293 system.⁴ *In vitro* assays of ATPase activity demonstrate that falcarinol inhibits breast cancer resistance protein ATP-binding cassette sub-family G member 2 (ABCG2; IC₅₀ = 79.3 μM), a drug efflux transporter and mediator of drug resistance.⁵ Falcarinol (6.88 μg/g feed) also inhibits aberrant crypt foci by 26.6% in azoxymethane-induced rats.⁶

References

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3. Leonti, M., Casu, L., Raduner, S., *et al.* Falcarinol is a covalent cannabinoid CB₁ receptor antagonist and induces pro-allergic effects in skin. *Biochem. Pharmacol.* **79**(12), 1815-1826 (2010).
4. Czyzewska, M.M., Chrobok, L., Kania, A., *et al.* Dietary acetylenic oxylipin falcarinol differentially modulates GABA_A receptors. *J. Nat. Prod.* **77**(12), 2671-2677 (2014).
5. Tan, K.W., Killeen, D.P., Li, Y., *et al.* Dietary polyacetylenes of the falcarinol type are inhibitors of breast cancer resistance protein (BCRP/ABCG2). *Eur. J. Pharmacol.* **723**, 346-352 (2014).
6. Kobaek-Larsen, M., El-Houri, R.B., Christensen, L.P., *et al.* Dietary polyacetylenes, falcarinol and falcarindiol, isolated from carrots prevents the formation of neoplastic lesions in the colon of azoxymethane-induced rats. *Food Funct.* **8**(3), 964-974 (2017).

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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