

PRODUCT INFORMATION

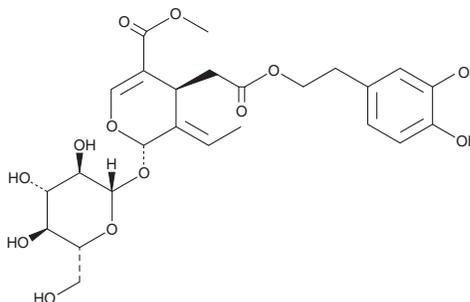


Oleuropein

Item No. 21220

CAS Registry No.: 32619-42-4
Formal Name: (2S,3E,4S)-3-ethylidene-2-(β-D-glucopyranosyloxy)-3,4-dihydro-5-(methoxycarbonyl)-2H-pyran-4-acetic acid, 2-(3,4-dihydroxyphenyl)ethyl ester

MF: C₂₅H₃₂O₁₃
FW: 540.5
Purity: ≥98%
UV/Vis.: λ_{max}: 234, 283 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

Oleuropein is supplied as a crystalline solid. A stock solution may be made by dissolving the oleuropein in the solvent of choice, which should be purged with an inert gas. Oleuropein is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of oleuropein in ethanol and DMSO is approximately 30 mg/ml and approximately 50 mg/ml in DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of oleuropein can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of oleuropein in PBS (pH 7.2) is approximately 0.25 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Oleuropein is a polyphenol that is abundant in olive leaves and fruits. Like many polyphenols, oleuropein exhibits antioxidant and free radical-scavenging activities, resulting in a wide range of cellular and physiological effects.¹ Oleuropein reduces adipogenesis by antagonizing PPARγ and induces autophagy by activating AMPK.² It inhibits proliferation and induces apoptosis in cancer cells but not normal cells.³ Oleuropein also has bone-protecting effects in mice and rats.⁴

References

1. Umeno, A., Horie, M., Murotomi, K., *et al.* Antioxidative and antidiabetic effects of natural polyphenols and isoflavones. *Molecules* **21(6)**, E708 (2016).
2. Rigacci, S. and Stefani, M. Nutraceutical properties of olive oil Polyphenols. An itinerary from cultured cells through animal models to humans. *Int. J. Mol. Sci.* **17(6)**, E843 (2016).
3. Boss, A., Bishop, K.S., Marlow, G., *et al.* Evidence to support the anti-cancer effect of olive leaf extract and future directions. *Nutrients* **8(8)**, E513 (2016).
4. Chin, K.Y. and Ima-Nirwana, S. Olives and bone: A green osteoporosis prevention option. *Int. J. Environ. Res. Public Health* **13(8)**, E755 (2016).

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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