

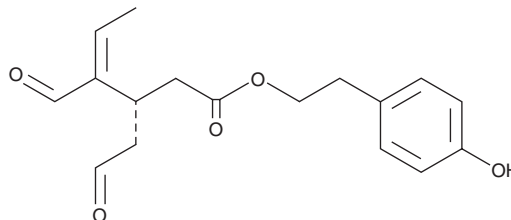
PRODUCT INFORMATION



Oleocanthal

Item No. 17496

CAS Registry No.: 289030-99-5
Formal Name: (3S,4E)- 4-formyl-3-(2-oxoethyl)-4-hexenoic acid, 2-(4-hydroxyphenyl) ethyl ester
Synonym: (-)-Oleocanthal
MF: $C_{17}H_{20}O_5$
FW: 304.3
Purity: $\geq 95\%$
Supplied as: A neat oil
Storage: -20°C
Stability: ≥ 4 years
Item Origin: Plant/*Olea europaea*



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

Laboratory Procedures

Oleocanthal is supplied as a neat oil. A stock solution may be made by dissolving the oleocanthal in the solvent of choice, which should be purged with an inert gas. Oleocanthal is soluble in DMSO and acetonitrile.

Description

Oleocanthal is a secoiridoid polyphenol that has been found in *O. europaea* and has diverse biological activities.¹⁻⁴ It inhibits the proliferation of CWR-R1ca, PC3, PC-3M, and DU145 prostate cancer cells (IC_{50} s = 3.59, 0.64, 1.03, and 5.35 μM , respectively).¹ Oleocanthal inhibits the growth of *L. major* promastigotes and amastigotes *in vitro* (IC_{50} s = 18.7 and 87 $\mu\text{g/ml}$, respectively) and reduces lymph node parasite burden in a mouse model of leishmaniasis when administered at a dose of 5 mg/kg.² Oleocanthal (5 mg/kg) reduces hippocampal amyloid- β ($A\beta$) levels in a TgSwDI transgenic mouse model of Alzheimer's disease.³ Intragastric administration of oleocanthal (5 mg/kg) decreases serum IL-6 and TNF- α levels and reduces lung cell apoptosis in a chicken model of LPS-induced acute lung injury.⁴

References

1. Siddique, A.B., Ebrahim, H.Y., Tajmim, A., *et al.* Oleocanthal attenuates metastatic castration-resistant prostate cancer progression and recurrence by targeting SMYD2. *Cancers (Basel)* **14**(14), 3542 (2022).
2. Karampetsou, K., Koutsoni, O.S., Badounas, F., *et al.* Exploring the immunotherapeutic potential of oleocanthal against murine cutaneous leishmaniasis. *Planta Med.* **88**(9-10), 783-793 (2022).
3. Qosa, H., Batarseh, Y.S., Mohyeldin, M.M., *et al.* Oleocanthal enhances amyloid- β clearance from the brains of TgSwDI mice and *in vitro* across a human blood-brain barrier model. *ACS Chem. Neurosci.* **6**(11), 1849-1859 (2015).
4. Miao, F., Shan, C., Geng, S., *et al.* Oleocanthal alleviated lipopolysaccharide-induced acute lung injury in chickens by inhibiting TLR4/NF- κB pathway activation. *Poult. Sci.* **102**(3), 102458 (2022).

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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