Oleuropein

Cat. No.: HY-N0292

CAS No.: 32619-42-4

Molecular Formula: $C_{25}H_{32}O_{13}$

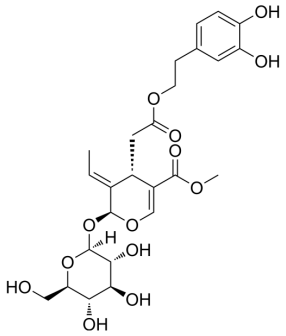
Molecular Weight: 540.51

Target: PPAR; Apoptosis; Cytochrome P450

Pathway: Cell Cycle/DNA Damage; Metabolic Enzyme/Protease; Vitamin D Related/Nuclear Receptor; Apoptosis

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (231.26 mM; Need ultrasonic)

H_2O : ≥ 20 mg/mL (37.00 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.8501 mL	9.2505 mL	18.5010 mL
5 mM	0.3700 mL	1.8501 mL	3.7002 mL
10 mM	0.1850 mL	0.9251 mL	1.8501 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (3.85 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (3.85 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (3.85 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Oleuropein, found in olive leaves and oil, exerts antioxidant, anti-inflammatory and anti-atherogenic effects through direct inhibition of PPARγ transcriptional activity[1]. Oleuropein induces apoptosis in breast cancer cells via the p53-dependent pathway and through the regulation of Bax and Bcl2 genes. Oleuropein also inhibits aromatase[2].

IC_{50} & Target	PPARγ	Aromatase	Apoptosis	Aromatase
In Vitro	Aromatase, a cytochrome P450 enzyme, is an important pharmacological target in breast cancer therapy[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.			

CUSTOMER VALIDATION

- Tissue Cell. October 2022, 101876.

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REFERENCES

[1]. Svobodova M, et al. Oleuropein as an inhibitor of peroxisome proliferator-activated receptor gamma. Genes Nutr. 2014 Jan;9(1):376.

[2]. Gorzynik-Debicka M, et al. Potential Health Benefits of Olive Oil and Plant Polyphenols. Int J Mol Sci. 2018 Feb 28;19(3). pii: E686.

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