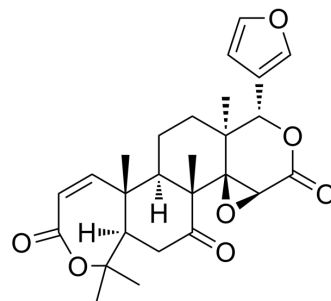


Obacunone

| | |
|---------------------------|--|
| Cat. No.: | HY-N0428 |
| CAS No.: | 751-03-1 |
| Molecular Formula: | C ₂₆ H ₃₀ O ₇ |
| Molecular Weight: | 454.51 |
| Target: | Apoptosis |
| Pathway: | Apoptosis |
| Storage: | 4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light) |



SOLVENT & SOLUBILITY

| | | | | | |
|---|--|--------------------------|-----------|------------|------------|
| In Vitro | DMSO : 100 mg/mL (220.02 mM; Need ultrasonic) | | | | |
| | | Solvent Concentration | Mass | | |
| | Preparing Stock Solutions | | 1 mg | 5 mg | 10 mg |
| | | 1 mM | 2.2002 mL | 11.0009 mL | 22.0017 mL |
| | | 5 mM | 0.4400 mL | 2.2002 mL | 4.4003 mL |
| | 10 mM | 0.2200 mL | 1.1001 mL | 2.2002 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: ≥ 2.5 mg/mL (5.50 mM); Clear solution | | | | |
| | 2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (5.50 mM); Clear solution | | | | |
| | 3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (5.50 mM); Clear solution | | | | |

BIOLOGICAL ACTIVITY

| | |
|--------------------|--|
| Description | Obacunone is a highly oxidized triterpenoid limonoid isolated from citrus plants. Obacunone exerts its anticancer effects by inducing apoptosis. Obacunone also protects retinal pigment epithelial (RPE) cells from ultraviolet (UV) radiation (UVR)-induced oxidative damage ^{[1][2][3]} . |
| In Vitro | Obacunone (1-50 μM; 48 h) effectively inhibits UVR-induced cytotoxicity ^[2] . Obacunone (25 μM; 1 h+12 h) improves UVR-induced oxidative damage in ARPE-19 cells and inhibits reactive oxygen species accumulation, mitochondrial depolarization, lipid peroxidation, and single-stranded DNA accumulation in human ARPE-19 cells ^[2] . Obacunone (25 μM; 1 h+12 h) slows UVR-induced apoptosis in human ARPE-19 cells and murine RPE cells ^[2] . |

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Obacunone (10 mg/kg; ip; single dose) inhibits Bleomycin (HY-108345)-induced lung inflammation and fibrosis in B6 mice^[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- ACS Omega. 2024 Feb 28;9(10):11870-11882.

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REFERENCES

- [1]. Chidambara Murthy KN, et al. Obacunone and obacunone glucoside inhibit human colon cancer (SW480) cells by the induction of apoptosis. Food Chem Toxicol. 2011 Jul;49(7):1616-25.
- [2]. Huang DR, et al. Obacunone protects retinal pigment epithelium cells from ultra-violet radiation-induced oxidative injury. Aging (Albany NY). 2021 Feb 1;13(8):11010-11025.
- [3]. Xu S, et al. Obacunone activates the Nrf2-dependent antioxidant responses. Protein Cell. 2016 Sep;7(9):684-8.
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Caution: Product has not been fully validated for medical applications. For research use only.

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