

Obacunone Datasheet

5th Edition (Revised in January, 2017)

[Product Information]

Name: Obacunone

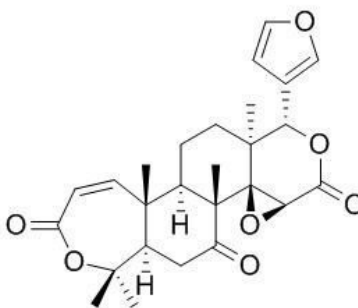
Catalog No.: CFN97233

Cas No.: 751-03-1

Purity: >=98%

M.F: C₂₆H₃₀O₇

M.W: 454.5



Physical Description: Powder

Synonyms: Oxireno(4,4a)-2-benzopyrano(6,5-g)(2)benzoxepin-3,5,9(3aH,4bH,6H)-trione, 1-(3-furanyl)-1,6a,7,11a,11b,12,13,13a-octahydro-4b,7,7,11a,13a-pentamethyl-, (1S,3aS,4aR,4bR,6aR,11aR,11bR,11bR,13aS)-; Obacunoic acid, eta-lactone.

[Intended Use]

1. Reference standards;
2. Pharmacological research;
3. Food research;
4. Synthetic precursor compounds;
5. Intermediates & Fine Chemicals;
6. Others.

[Source]

The barks of *Phellodendron chinense*.

[Biological Activity or Inhibitors]

Dietary administration of the citrus limonoids obacunone and limonin have modifying effects on azoxymethane (AOM)-induced colon tumorigenesis, they can significantly reduce the incidence of colonic adenocarcinoma.^[1]

Obacunone has cytotoxicity of vincristine against L1210 cells by approximately 10-fold.^[2]

Obacunone stimulates muscle hypertrophy and prevents obesity and hyperglycemia, and that these beneficial effects are likely to be mediated through the activation of TGR5 and inhibition of PPAR γ transcriptional activity. ^[3]

Obacunone is a novel activator of Nrf2 by decreasing Nrf2 ubiquitination and increasing its stability, the systemic administration of obacunone can strongly inhibit bleomycin-induced lung fibrosis in mice, obacunone may also provide antioxidant protection for humans against tissue damage caused by oxidative insults.^[4]

Obacunone has anti-cancer and anti-inflammatory properties, it may have the potential to prevent estrogen-responsive breast cancer through inhibition of the aromatase enzyme and inflammatory pathways, as well as activation of apoptosis.^[5]

[Solvent]

Chloroform, Dichloromethane, Ethyl Acetate, DMSO, Acetone, etc.

[HPLC Method]^[6]

Mobile phase: Acetonitrile-0.1% Phosphoric acid H₂O, gradient elution;

Flow rate: 1.0 ml/min;

Column temperature: 30 °C;

The wave length of determination: 210 nm.

[Storage]

2-8°C, Protected from air and light, refrigerate or freeze.

[References]

- [1] Tanaka T, Maeda M, Kohno H, *et al. Carcinogenesis*, 2001, 22(1):193-8.
- [2] Jung H, Sok D E, Kim Y, *et al. Planta Med.*, 2000, 66(1):74-6.
- [3] Horiba T, Katsukawa M, Mita M, *et al. Biochem. Biophys. Res. Commun.*, 2015, 463(4): 846-52.
- [4] Xu S, Chen W, Xie Q, *et al. Protein&Cell*, 2016, 7(9):684-8.
- [5] Kim J, Jayaprakasha G K, Patil B S. *Biochimie*, 2014, 105(10):36-44.
- [6] Zhang Q, Cai L, Zhong G, *et al. China Journal of Chinese Materia Medica*, 2010, 35 (16):2061-4.

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