

Pristimerin Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Pristimerin

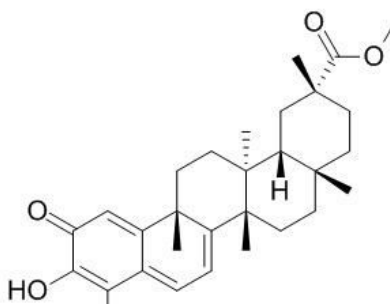
Catalog No.: CFN90169

Cas No.: 1258-84-0

Purity: >=98%

M.F: C₃₀H₄₀O₄

M.W: 464.64



Physical Description: Powder

Synonyms: 3-Hydroxy-2-oxo-24-nor-D:A-friedoolean-1(10),3,5,7-tetraen-29-oic acid methyl ester; (9β,13α,14β,20α)-3-Hydroxy-9,13-dimethyl-2-oxo-24,25,26-trinoroleana-1(10),3,5,7-tetraen-29-oic acid methyl ester.

[Intended Use]

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

[Source]

The herb of *Tripterygium wilfordii* Hook.f.

[Biological Activity or Inhibitors]

Pristimerin, a quinonemethide triterpenoid derived from *Celastraceae* and *Hippocrateaceae*, has recently been found to suppress tumor promotion, metastasis and angiogenesis; it has anti-inflammatory potentials in a cell culture system, it suppresses not only the generation of nitric oxide (NO) and prostaglandin E₂, but also the expression of inducible NO synthase and cyclooxygenase-2 induced by lipopolysaccharide (LPS) in murine macrophage RAW264.7 cells; the underlying mechanism of the anti-inflammatory action of pristimerin is correlated with down-regulation of nuclear factor- κ B and the mitogen-activated protein kinase signal pathway.^[1]

Pristimerin enhances recombinant adeno-associated virus vector-mediated transgene expression in human cell lines in vitro and murine hepatocytes in vivo.^[2]

Pristimerin induces apoptosis in imatinib-resistant chronic myelogenous leukemia cells harboring T315I mutation by blocking NF- κ B signaling and depleting Bcr-Abl. ^[3]

Pristimerin has been shown to be cytotoxic to several cancer cell lines, it has antiproliferative activity by inhibiting DNA synthesis and triggering apoptosis against human HL-60 cells.^[4]

Pristimerin effectively inhibits both arthritic inflammation and cartilage and bone damage in the joints.^[5]

Pristimerin exhibits inhibitory effects against diverse phytopathogenic fungi, it shows good preventive effect (96.7% at 100 microg ml⁽⁻¹⁾) and curative effect (66.5% at 100 microg ml⁽⁻¹⁾) against wheat powdery mildew in vivo.^[6]

[Solvent]

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

[HPLC Method]^[7]

Mobile phase: Methanol- 1% Aqueous trifluoroacetic acid=20:80 ;

Flow rate: 1.0 ml/min;

Column temperature: 33 °C;

The wave length of determination: 430 nm.

[Storage]

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

[References]

- [1] Kim H J, Park G M, Kim J K. *Arch. Pharm. Res.*, 2013, 36(4):495-500.
- [2] Li-na, Wang, Yuan, *et al. J. Int. Med.*, 2014, 12(1):20-34.
- [3] Lu Z Z, Jin Y L, Chun C, *et al. Mol. Cancer*, 2010, 9(10):1-17.
- [4] Costa P M D, Ferreira P M P, Bolzani V D S, *et al. Toxicol. in Vitro*, 2008, 22(4):854-63.
- [5] Li T, Nanjundaiah S M, Venkatesha S H, *et al. Clin Immun.*, 2014, 155(2):220-30.
- [6] Luo D Q, Wang H, Tian X, *et al. Pest Manag. Sci.*, 2005, 61(1):85-90.
- [7] Nossack A C, Celeghini R M D S, Lanças F M, *et al. J. Brazil. Chem. Soc.*, 2004, 7, 28.

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