

Pinusolide Datasheet

5th Edition (Revised in January, 2017)

[Product Information]

Name: Pinusolide

Catalog No.: CFN98404

Cas No.: 31685-80-0

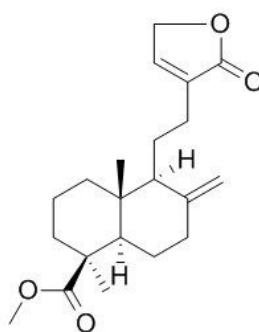
Purity: > 95%

M.F: C₂₁H₃₀O₄

M.W: 346.5

Physical Description: Powder

Synonyms: Methyl(1S,4aR,5S,8aR)-1,4a-dimethyl-6-methylidene-5-[2-(5-oxo-2H-furan-4-yl)ethyl]-3,4,5,7,8,8a-hexahydro-2H-naphthalene-1-carboxylate.



[Intended Use]

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

[Source]

The barks of *Biota orientalis* L.

[Biological Activity or Inhibitors]

Pinusolide is a platelet activating factor (PAF) antagonist, it may prove of therapeutic value in the treatment of hypotension and a molecular design of pinusolide analogues may provide the possibility of a new PAF specific antagonists.^[1]

Pinusolide has antileukemic potential, it not only decreases the proliferation activity of tumor cells at relatively low concentrations but specifically induces apoptosis at 100 microM via the mitochondrial pathway in the Burkitt lymphoma cell line BJAB.^[2]

Pinusolide attenuates blockade of insulin signaling by enhancing IRS-1 tyrosine phosphorylation by the activating the AMPK pathway, indicates the targeting of AMPK represents a new therapeutic strategy for hyperglycemia-induced insulin resistance and type 2 diabetes.^[3]

Pinusolide and 15-methoxypinusolidic acid can protect neuronal cells from staurosporine (STS) -induced apoptosis, probably by preventing the increase in $[Ca^{2+}]_i$ and cellular oxidation caused by STS, and indicate that they could be used to treat neurodegenerative diseases.^[4]

Pinusolide shows potent inhibition of 5-LO dependent LTC₄ generation, which requires both suppression of calcium influx and JNK phosphorylation.^[5]

[Solvent]

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

[HPLC Method]

Not data available.

[Storage]

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

[References]

[1] Kim K A, Moon T C, Lee S W, *et al. Planta Med.* 1999 Feb;65(1):39-42.

[2] Shults E E, Velder J, Schmalz H G, *et al. Bioorg. Med. Chem. Lett.*,2006 Aug15;16(16): 4228-32.

[3] Hwang S L, Jeong Y T, Hye Y J, *et al. Biochem. Biophys. Res. Commun.*,2013, 437(3): 374-9.

[4] Koo K, Lee M S, Jeong E, *et al. Brit. J. Pharmacol.*,2007,150(1):65-71.

[5] Jin Y, Yang H O, Son J K, *et al. Biol. Pharm. Bull.*,2012;35(8):1374-8.

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