

Nootkatone Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Nootkatone

Catalog No.: CFN98699

Cas No.: 4674-50-4

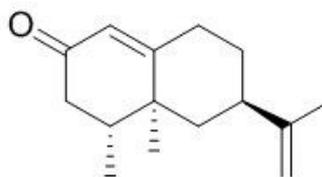
Purity: >95%

M.F: C₁₅H₂₂O

M.W: 218.33

Physical Description: Oil

Synonyms: 4,4a,5,6,7,8-hexahydro-4,4a-dimethyl-6-(1-methylethenyl)-2(3h)-naphthaleno n; (+)-5,6-dimethyl-8-isopropenylbicyclo[4.4.0]dec-1-en-3-one.



[Intended Use]

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

[Source]

The rhizoma of *Bupleurum longibrachiatum* Turcz.

[Biological Activity or Inhibitors]

Nootkatone, a sesquiterpene ketone, isolated from vetiver oil is a strong repellent and toxicant to Formosan subterranean termites, the lowest effective concentration tested is 10 micrograms/g substrate. [1]

Plant-derived acaricides nootkatone and carvacrol can suppress *Ixodes scapularis* Say and *Amblyomma americanum* (L.) (Acari: Ixodidae). [2]

(+)-Nootkatone has potent inhibitory effect on collagen-, thrombin-, and AA-induced platelet aggregation, it also has a significant inhibitory effect on rat platelet aggregation *ex vivo*, suggests that (+)-nootkatone may be of therapeutic benefit for the prevention of platelet-associated cardiovascular diseases. [3]

Nootkatone, a naturally occurring AMPK activator, can stimulate energy metabolism and prevents diet-induced obesity by activating AMPK, indicates that long-term intake of nootkatone is beneficial toward preventing obesity and improving physical performance and that these effects are due, at least in part, to enhanced energy metabolism through AMPK activation in skeletal muscle and liver. [4]

Nootkatone has antiproliferative activity. [5]

[Solvent]

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

[HPLC Method] [6]

Mobile phase: Acetonitrile-H₂O, gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 240 nm.

[Storage]

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

[References]

- [1] Zhu B C R, Henderson G, Feng C, *et al. J.Chem.Ecol.*, 2001, 27(3):523-31.
- [2] Dolan M C, Jordan R A, Schulze T L, *et al. J. Econ. Entomol.*, 2009, 102(6):2316-24.
- [3] Seo E J, Lee D U, Kwak J H, *et al. J. Ethnopharmacol.* 2011, 135(1):48-54.
- [4] Murase T, Misawa K, Haramizu S, *et al. Am.J.Physiol. Endoc. M.*, 2010, 299(2):266-75.
- [5] Gliszczyńska A, Łysek A, Janeczko T, *et al. Bioorg. Med. Chem.*, 2011, 19(7):2464-9.
- [6] Li Y H, Lai W Y, Huang S S, *et al.Chinese Journal of Pharmaceutical Analysis*, 2013,11(4):808-11.

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