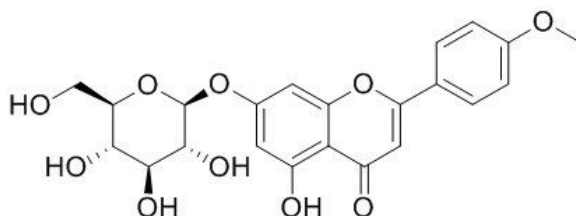


Tilianin Datasheet

4th Edition (Revised in July, 2016)**[Product Information]****Name:** Tilianin**Catalog No.:** CFN92764**Cas No.:** 4291-60-5**Purity:** > 98%**M.F:** C₂₂H₂₂O₁₀**M.W:** 446.1**Physical Description:** Powder

Synonyms: 5-Hydroxy-2-(4-methoxyphenyl)-7-[[[(2S,3R,4S,5S,6R)-3,4,5-trihydroxy-6-(hydroxymethyl)-2-oxanyl]oxy]-1-benzopyran-4-one; Moldavoside; Acacetin 7-glucoside.

**[Intended Use]**

1. Reference standards;
2. Pharmacological research;
3. Food and cosmetic research;
4. Synthetic precursor compounds;
5. Others.

[Source]

The leaves of *Tilia japonica*.

[Biological Activity or Inhibitors]

Tilianin, isolated from *Agastache mexicana*, is not toxic for rodents, it has antihypertensive effect (ED₅₀=53.51 mg/kg, LD₅₀=6624 mg/kg) in a dose-dependent manner.^[1]

Tilianin has anti-inflammatory activity, has inhibitory effects on the expression of inducible nitric oxide(NO) synthase in low density lipoprotein receptor deficiency mice, it inhibits iNOS expression and production of NO.^[2]

Tilianin has anti-atherogenic activity in hyperlipidemic mice, it ameliorates atherosclerosis by inhibiting the production of the NF-kappaB-dependent pro-inflammatory cytokines, TNF-alpha and IL-1beta, via the inhibition of IkappaB kinase activity.^[3]

Tilianin has antidiabetic and antihyperlipidemic effects, short-term tilianin treatment may exert its antidiabetic and antihyperlipidemic effect by modulating a pro-inflammatory profile, and increasing adiponectin expression. ^[4]

Tilianin has cardioprotective effects, pretreatment with tilianin exerts potent cardioprotective effects in rats with myocardial ischemia/reperfusion injury(MI/RI), the antiMI/RI effects comprises relieving calcium overload, correction of energy metabolism, improvement of endothelial function and inhibiting cell apoptosis.^[5]

Tilianin can inhibit the proliferation and migration of vascular smooth muscle cells(VSMCs) induced by TNF- α , which may be one of pharmacological mechanisms of tilianin in treatment for atherosclerosis.^[6]

Tilianin suppresses MUC5AC expression via inhibiting MEK/ERK MAPKs signaling pathway in NCI-H292 human lung mucoepidermoid cells.^[7]

[Solvent]

Pyridine, Methanol, Ethanol, DMSO, etc.

[HPLC Method]^[8]

Mobile phase: Acetonitrile- 0. 5% Methane acid=25:75;

Flow rate: 1.0 ml/min;

Column temperature: 30 °C;

The wave length of determination: 324 nm.

[**Storage**]

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

[**References**]

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- [5] Guo X, Cao W, Yao J, *et al. Mol. Med. Rep.*, 2015, 11(3):2227-33.
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- [8] Yan H, He J H, Mao Y, *et al. Chinese Journal of Ethnomedicine & Ethnopharmacy*, 2013, 22(17):23-4.

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