

Vanillyl alcohol Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Vanillyl alcohol

Catalog No.: CFN93211

Cas No.: 498-00-0

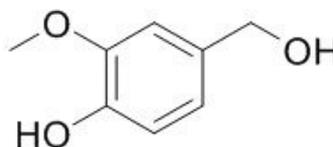
Purity: >=98%

M.F: C₈H₁₀O₃

M.W: 154.17

Physical Description: Powder

Synonyms: 4-hydroxy-3-methoxy-benzenemethano;4-Hydroxy-3-methoxybenzyl.



[Intended Use]

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

[Source]

The herbs of *Gastrodia elata* Bl.

[Biological Activity or Inhibitors]

Vanillyl alcohol (VA) is a component of *Gastrodia elata* Bl. (GE), which is a traditional

Chinese herb widely used to treat convulsive disorders or dizziness, VA has both anticonvulsive and suppressive effects on seizures and lipid peroxidation induced by ferric chloride in rats, VA also has free radical scavenging activities, which may be responsible for its anticonvulsive properties; suggest that the anticonvulsive effect of GE may be attributable, at least in part, to its VA component.^[1]

Vanillyl alcohol displays a significant inhibition in the chick chorioallantoic membrane (CAM) angiogenesis, VA is also shown to contain anti-inflammatory activity using acetic acid-induced permeability and carrageenan-induced air pouch models in mice; anti-nociceptive activity of vanillyl alcohol is also assessed using acetic acid-induced writhing test in mice; taken together, vanillyl alcohol possesses anti-angiogenic, anti-inflammatory, and anti-nociceptive activities.^[2]

Vanillyl alcohol can effectively inhibit the cytotoxicity and improved cell viability in 1-methyl-4-phenylpyridinium (MPP⁺)-induced MN9D dopaminergic cells, VA also can attenuate the elevation of reactive oxygen species (ROS) levels, decrease in the Bax/Bcl-2 ratio and poly (ADP-ribose) polymerase proteolysis; indicates that VA protects dopaminergic MN9D cells against MPP⁺-induced apoptosis by relieving oxidative stress and modulating the apoptotic process and is therefore a potential candidate for treatment of neurodegenerative diseases such as Parkinson's disease. ^[3]

[Solvent]

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

[HPLC Method]^[4]

Mobile phase: 0.1% Formic acid in water- 0.1% Formic acid in methanol, gradient elution ;

Flow rate: 0.7 ml/min;

Column temperature: 40 °C;

The wave length of determination: 270 nm.

[Storage]

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

[References]

- [1] Hsieh C L, Chang C H, Chiang S Y, *et al. Life Sci.*, 2000, 67(10):1185-95.
- [2] Jung H J, Song Y S, Lim C J, *et al. Arch. Pharm. Res.*, 2008, 31(31):1275-9.
- [3] Kim I S, Choi D K, Jung H J. *Molecules*, 2011, 16(7):5349-61.
- [4] Shi O E, Yuan H M, Tan S N, *et al. J. Sep. Sci.*, 2007, 30(13):2130-7.

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