

Ampelopsin Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Ampelopsin

Catalog No.: CFN98326

Cas No.: 27200-12-0

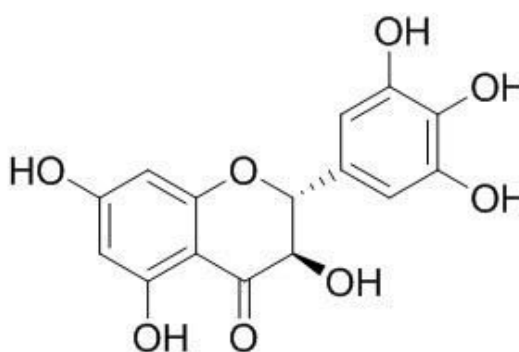
Purity: > 98%

M.F: C₁₅H₁₂O₈

M.W: 320.3

Physical Description: Powder

Synonyms: (2R,3R)-3,5,7-trihydroxy-2-(3,4,5-trihydroxyphenyl)-3,4-dihydro-2H-1-benzopyran-4-one.



[Intended Use]

1. Reference standards;
2. Pharmacological research;
3. Food research;
4. Cosmetic research;
5. Synthetic precursor compounds;
6. Care and daily chemicals;
7. Intermediates & Fine Chemicals;
8. Ingredient in supplements, beverages;
9. Aromatics;
10. Others.

[Source]

The herb of *Myrica rubra* (Lour.) Zucc.

[Biological Activity or Inhibitors]

Ampelopsin (AMP), a plant flavonoid, has potent anti-inflammatory properties in vitro and in vivo, the anti-inflammatory effect of ampelopsin is due to inhibiting the interconnected ROS/Akt/IKK/NF- κ B signaling pathways.^[1]

Ampelopsin has hepatoprotective activity, it acts to prevent the oxidative stress in vivo that may have been due to active oxygen species formed by a macrophage by the action of GaIN.^[2]

Ampelopsin can inhibit Bel-7402 proliferation through inducing cell apoptosis, the mechanism might be that ampelopsin could directly or indirectly enhance the level of anti-apoptosis protein Bcl-2 and decrease the level of apoptosis protein Bax.^[3]

Ampelopsin, a major antifungal constituent from *Salix sachalinensis*, and its methyl ethers.^[4]

Ampelopsin is a potent antioxidant, it increases cellular antioxidant defense through activation of the ERK and Akt signaling pathways, which induces heme oxygenase-1(HO-1) expression and thereby protects PC12 cells from H60O60-induced apoptosis. ^[5]

Ampelopsin sodium exhibits antitumor effects against bladder carcinoma in orthotopic xenograft models.^[6]

Ampelopsin suppresses breast carcinogenesis by inhibiting the mammalian target of rapamycin (mTOR) signalling pathway, it is a bioactive natural chemopreventive agent against breast carcinogenesis and is an effective mTOR inhibitor that may be developed as a useful chemotherapeutic agent in the treatment of breast cancer. ^[7]

Ampelopsin has reversal effect on multidrug resistance in K562/ADR cells, it can increase the cytotoxicity and the intracellular accumulation of chemotherapeutic drugs in multidrug resistance(MDR) associated tumor cells through inhibiting the efflux of drugs by

P-gp.AMP may be a promising MDR modulator.^[8]

Ampelopsin has anti-invasive and anti-metastatic effects on melanoma.^[9]

[Solvent]

Chloroform, Dichloromethane, DMSO, Acetone, etc.

[HPLC Method]^[10]

Mobile phase:Acetonitrile-2% Acetic acid H₂O=10:90;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 290 nm.

[Storage]

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

[References]

- [1] Qi S, Xin Y, Guo Y, *et al. Int. Immunopharmacol.*, 2012, 12(1):278-87.
- [2] Murakami T, Miyakoshi M, Araho D, *et al. Biofactors*, 2004, 21(1-4):175–8.
- [3] Zhang Q, Liu D Y. *Chinese Pharmacological Bulletin*, 2009, 25(11):1502-6.
- [4] Matsumoto T, Tahara S. *Journal of the Agricultural Chemical Society of Japan*, 2001, 75(6):659-67.
- [5] Kou X, Shen K, An Y, *et al. Phytother. Res.*, 2012, 26(7):988-94.
- [6] Zhang B, Dong S, Cen X, *et al. Anti-cancer drugs*, 2012, 23(6):590-6.
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- [9] Zheng H Q, Liu D Y. *Chinese Journal of Cancer*, 2003, 22(4):363-7.
- [10] Luo M, Liu D Y. *Chinese Journal of Hospital Pharmacy*, 2003, 23(8):471-3.

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