

Polygalasaponin F Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Polygalasaponin F

Catalog No.: CFN90171

Cas No.: 882664-74-6

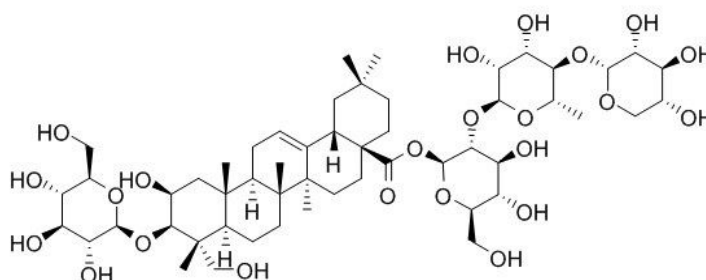
Purity: > 98%

M.F: C₅₃H₈₆O₂₃

M.W: N/A

Physical Description: White powder

Synonyms:



[Intended Use]

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

[Source]

The roots of *Polygala tenuifolia* Willd.

[Biological Activity or Inhibitors]

Polygalasaponin F (PG-F), a triterpenoid saponin isolated from *Polygala japonica*, can induce long-term potentiation in adult rat hippocampus via NMDA receptor activation.^[1]

Polygalasaponin F can increase the viability of rotenone-induced PC12 cells, decrease rotenone-induced apoptosis, restore rotenone-induced mitochondrial dysfunction, and suppress rotenone-induced protein expression; PS-F protects PC12 cells against rotenone-induced apoptosis via ameliorating the mitochondrial dysfunction, thus, PS-F may be a potential bioactive compound for the treatment of Parkinson's disease.^[2]

Polygalasaponin F can inhibit NF- κ B nuclear translocation in a dose-dependent manner, and significantly inhibit the cytotoxicity of conditioned medium prepared by LPS-stimulated BV-2 microglia to neuronal PC12 cells and improve cell viability, it inhibits the secretions of neuroinflammatory cytokines by the regulation of NF- κ B-signaling pathway.^[3]

Polygalasaponin F has protective effects on PC12 cells injured by serum deprivation, oxidative stress or oxygen-glucose deprivation.^[4]

[Solvent]

Pyridine, Methanol, Ethanol, Hot water, etc.

[HPLC Method]^[5]

HPLC-ELSD:

Mobile phase: Acetonitrile- H₂O=25:75 ;

Flow rate: 1.0 ml/min;

Column temperature: 25 °C;

Drift tube temperature: 90 °C;

Flow rate of gas : 1.8L/min.

[Storage]

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

[References]

- [1] Sun F, Sun J D, Nan N, *et al.* *Acta Pharmacol .Sin.*, 2012, 33(4):431-7.
- [2] Wu M M, Yuan Y H, Chen J, *et al.* *J. Asian Nat. Prod. Res.*, 2014, 16(1):59-69.
- [3] Wei W, Yuan Y H, Gao Y N, *et al.* *J. Asian Nat. Prod. Res.*, 2014, 16(8):865-75.
- [4] Shi R L, Hu J F, Chen N H. *International Conference For Physiological Sciences*, 2012.
- [5] Jiao Q Q, Wang W Y, Su J , *et al.* *Journal of Pharmaceutical Practice*, 2010, 28(2): 137-9.

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