

Bryonolic acid Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Bryonolic acid

Catalog No.: CFN98260

Cas No.: 24480-45-3

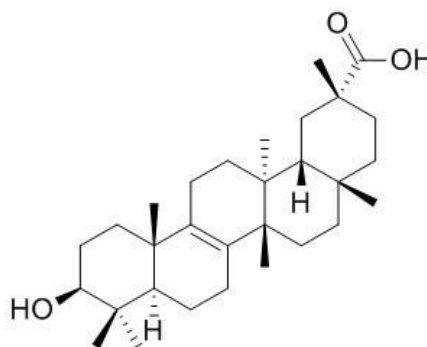
Purity: > 95%

M.F: C₃₀H₄₈O₃

M.W: 456.7

Physical Description: Powder

Synonyms: 3-Hydroxy-8-multifloren-29-oic acid.



[Intended Use]

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

[Source]

The herbs of *Sandoricum indicum*.

[Biological Activity or Inhibitors]

Bryonolic acid(BA), isolated in high yield from transformed hairy root cultures of *Trichosanthes kirilowii* var. *Japonica*, it exhibits cytotoxic activity to various tumor cells in vitro, independent of cell type. ^[1]

Bryonolic acid can induce a marked increase in the expression of a phase 2 response enzyme, heme oxygenase 1 (HO-1), in a dose-dependent manner. ^[2]

Bryonolic acid can protect PC12 cells against NMDA-induced apoptosis by inhibiting Ca²⁺ influx and regulating gene expression in the Ca²⁺-CaMKII-CREB signal pathway, supports that BA may be a promising neuroprotective agent for the treatment of cerebral ischemia disease.^[3]

Bryonolic acid has anti-inflammatory and antioxidant activities, can reduce the inflammatory mediator NO by suppressing the expression of the inflammatory enzyme inducible nitric oxide synthase (iNOS) in LPS-activated RAW 264.7 macrophage cells; can induce the antioxidant protein heme oxygenase-1 (HO-1) in vitro and in vivo in an Nrf2-dependent manner. ^[4]

Bryonolic Acid is an anti-allergic triterpene.^[5]

[Solvent]

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

[HPLC Method]^[6]

Mobile phase: 0.02% TFA in methanol -0.02% TFA in H₂O, gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 205 nm.

[Storage]

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

[References]

- [1] Kondo T, Inoue M, Mizukami H, *et al. Biol. Pharm. Bull.*, 1995, 18(5):726-9.
- [2] Barker E C, Gatbontonschwager T N, Han Y, *et al. J. Nat. Prod.*, 2010, 73(6):1064-8.
- [3] Que J, Ye M, Zhang Y, *et al. Molecules*, 2016, 21(4):418.
- [4] Gatbonton-Schwager T N, Letterio J J, Tochtrop G P. *J. Nat. Prod.*, 2012, 75(4):591-8.
- [5] Tabata M, Tanaka S, Cho H J, *et al. J. Nat. Prod.*, 1993, 56(2):165-74.
- [6] Barker E C, Gatbontonschwager T N, Han Y, *et al. J. Nat. Prod.*, 2010, 73(6):1064-8.

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