

Rhein Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Rhein

Catalog No.: CFN99157

Cas No.: 478-43-3

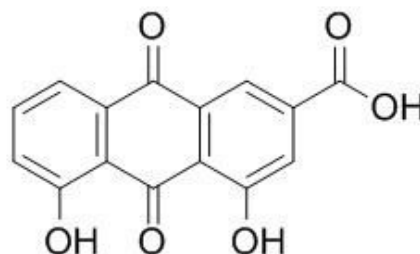
Purity: > 98%

M.F: C₁₅H₈O₆

M.W: 284.21

Physical Description: Yellow cryst.

Synonyms: 4,5-Dihydroxy-9,10-dioxo-2-anthracenecarboxylic acid.



[Intended Use]

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

[Source]

The root of *Rheum palmatum* L.

[Biological Activity or Inhibitors]

Rhein, an anthraquinone compound isolated from rhubarb, has been proved effective in treatment of experimental diabetic nephropathy (DN), one of the mechanism is the Inhibition of the hexosamine pathway. ^[1]

Rhein can effectively inhibit the IL-1-activated pathway and the of NF-kappaB and factors in chondrocytes cultured in hypoxia, and can reduce the procatabolic effect of the cytokine, by reducing the synthesis, and enhance the synthesis of matrix components, such as type II and aggrecan. ^[2]

Rhein has been shown to induce apoptosis in several cancer cell lines, and induces apoptosis in A-549 cells via a Ca²⁺ -dependent mitochondrial pathway. ^[3]

Rhein has protective effect on liver injury and can inhibit liver fibrosis induced by CCl₄/ethanol in rats, the mechanisms possibly contribute to its action of antioxidant and anti-inflammatory activity, also associated with its effect of inhibiting TGF-β1 and suppressing the activation of hepatic stellate cells. ^[4]

[Solvent]

Pyridine, DMSO, etc.

[HPLC Method]^[5]

Mobile phase: Methanol-0.05% Phosphoric acid solution=92:8 ;

Flow rate: 1.0 ml/min;

Column temperature: 30 °C;

The wave length of determination: 254 nm.

[Storage]

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

[References]

- [1] Zheng J M, Zhu J M, Li L S, *et al. Brit. J. Pharmacol.*, 2008, 153(7):1456-64.
- [2] Durocher F, Labrie Y, Soucy P, *et al. Inflammation*, 2003, 27(4):233-46.
- [3] Hsia T C, Yang J S, Chen G W, *et al. Anticancer Res.*, 2009, 29(1):309-18.
- [4] Guo M Z, Li X S, Xu H R, *et al. Acta Pharmacol. Sin.*, 2002, 23(8):739-44.
- [5] Cui Y Q, Dong Z M, Men J Y, *et al. Central South Pharmacy*, 2009, 7(1):20-3.

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