

Xanthotoxin Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Xanthotoxin

Catalog No.: CFN98372

Cas No.: 298-81-7

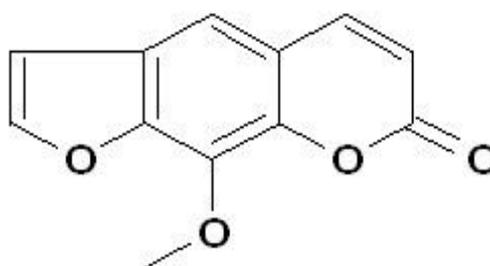
Purity: > 98%

M.F: C₁₂H₈O₄

M.W: 216.2

Physical Description: Powder

Synonyms: 9-Methoxy-7-furo[3,2-g][1]benzopyranone.



[Intended Use]

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

[Source]

The roots of *Heracleum repula*.

[Biological Activity or Inhibitors]

Xanthotoxin is a phytoalexin of *Pastinaca sativa* root, it has effects on growth and

detoxification in caterpillars.^[1,2]

Xanthotoxin has tritrophic effects on the Polyembryonic Parasitoid *Copidosoma sosares* (Hymenoptera: Encyrtidae), the tritrophic effects of xanthotoxin are likely to be due to the effects of xanthotoxin after direct contact in the hemolymph rather than to the effects of compromised host quality.^[3]

Xanthotoxin has anticonvulsant activities, it can protect the animals against maximal electroshock-induced seizures.^[4]

Xanthotoxin increases succinate dehydrogenase production in mitochondria and also in the cytoplasm, indicating changes in membrane permeability. ^[5]

Xanthotoxin (methoxsalen) has mutagenic effect in the green alga *Chlamydomonas reinhardtii*, it can causes an increase of the mutation frequency in the green alga *Chlamydomonas reinhardtii*.^[6]

Xanthotoxin prevents bone loss in ovariectomized mice through the inhibition of RANKL-induced osteoclastogenesis, it may be considered to be a new therapeutic candidate for treating osteoporosis.^[7]

[Solvent]

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

[HPLC Method]^[8]

Mobile phase: Acetonitrile : H₂O= 14:86 ;

Flow rate: 1.0 ml/min;

Column temperature: 30 °C;

The wave length of determination: 270 nm.

[Storage]

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

[References]

- [1] Johnson C, Brannon D R, Kuć J. *Phytochemistry*, 1973, 12(12):2961–2.
- [2] Green E S, Zangerl A R, Berenbaum M R. *J. Chem. Ecol.*, 2001, 27(9):1763-73.
- [3] Lampert E C, Zangerl A R, Berenbaum M R, *et al.* *J. Chem. Ecol.*, 2008, 34(6):783-90.
- [4] Jarogniew J. Łuszczki, Andres-Mach M, Gleńsk M, *et al.* *Pharmacological Reports Pr*, 2010, 62(6):1231-6.
- [5] Ewa Kupidłowska, Katarzyna Dobrzyńska, Eugeniusz Parys, *et al.* *J. Chem.Eco.*, 1994,20(10):2471-80.
- [6] Schimmer O. *Plant Sci. Lett.*, 1975, 5(2):83-8.
- [7] Dou C, Chen Y, Ding N, *et al.* *Osteoporosis Int.*, 2016,27(7):2335-44.
- [8] Zhu Y J, Li Y , Wei J J, *et al.* *Chinese Journal of Pharmaceutical Analysis*, 2013(1): 116-9.

[Contact]

Address:

S5-3 Building, No. 111, Dongfeng Rd.,
Wuhan Economic and Technological Development Zone,
Wuhan, Hubei 430056,
China

Email: info@chemfaces.com

Tel: +86-27-84237783

Fax: +86-27-84254680

Web: www.chemfaces.com

Tech Support: service@chemfaces.com