

## Visnagin Datasheet

4<sup>th</sup> Edition (Revised in July, 2016)

### [ Product Information ]

**Name:** Visnagin

**Catalog No.:** CFN97314

**Cas No.:** 82-57-5

**Purity:** > 98%

**M.F:** C<sub>13</sub>H<sub>10</sub>O<sub>4</sub>

**M.W:** 230.22

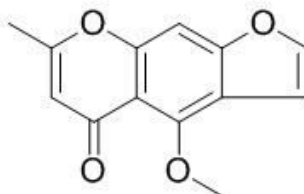
**Physical Description:** Yellow powder

**Synonyms:** 4-Methoxy-7-methyl-5H-furo(3,2-g)(1)-benzopyran-5-one;

5-Methoxy-2-methylfuranochromone; BRN 0234955; Desmethoxykhellin; NSC 100593;

Visnagidin; Visnagine; 5H-Furo(3,2-g)(1)benzopyran-5-one, 4-methoxy-7-methyl-;

4-Methoxy-7-methyl-5H-furo[3,2-g]chromen-5-one.



### [ Intended Use ]

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

### [ Source ]

The herbs of *Ammi visnaga*.

## **[ Biological Activity or Inhibitors ]**

Visnagin and khellin can prevent renal epithelial cell damage caused by oxalate (Ox) and calcium oxalate monohydrate (COM) and can therefore play a potential role in the prevention of stone formation associated with hyperoxaluria.<sup>[1]</sup>

Visnagin can relax aortae previously contracted by noradrenaline, and weakly inhibit the hydrolytic activity of the cyclic nucleotide phosphodiesterase (PDE) isozymes (PDE5, PDE4, PDE3, cyclic GMP activated PDE2 and PDE1).<sup>[2]</sup>

Visnagin has acute hypotensive effect, the main mechanism is the vasorelaxant response induced by this drug in resistance arteries. <sup>[3]</sup>

Visnagin has anti-inflammatory effect in lipopolysaccharide-stimulated BV-2 microglial cells, the main mechanism may result from the inhibition of transcription factors, such as AP-1 and NF- $\kappa$ B.<sup>[4]</sup>

Visnagin protects against doxorubicin-induced cardiomyopathy through modulation of mitochondrial malate dehydrogenase.<sup>[5]</sup>

Visnagin has neuroprotective effects on kainic acid-induced neuronal cell death in the mice hippocampus, the neuroprotective effects are associated with its anti-inflammatory effects.<sup>[6]</sup>

## **[ Solvent ]**

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

## **[ HPLC Method ]<sup>[7]</sup>**

Mobile phase: H<sub>2</sub>O- Methanol-Acetonitrile =49:49:2 ;

Flow rate: 1.5 ml/min ;

Column temperature: 30 °C ;

The wave length of determination: 250 nm.

## **[ Storage ]**

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

## **[ References ]**

- [1] Vanachayangkul P. *Phytomedicine*, 2010, 17(9):653-8.
- [2] Duarte J, Lugnier C, Torres A I, *et al. Gen. Pharmacol. Vas.*, 1999, 32(1):71-4.
- [3] Duarte J, Torres A I, Zarzuelo A. *Planta Med.*, 2000, 66(1):35-9.
- [4] Lee J K, Jung J S, Park S H, *et al. Arch. Pharm.Res.*, 2010, 33(11):1843-50.
- [5] Liu Y, Asnani A, Zou L, *et al. Sci. Transl. Med.*, 2014, 6(266):170-170.
- [6] Kwon M S, Lee J K, Park S H, *et al. Korean J. Physiol. Pha.*, 2010, 14(5):257-63.
- [7] El - Domiaty, Maher M. *J. Pharm. Sci.-UK*, 1992, 81(5):475-8.

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