

## Praeruptorin A Datasheet

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

### [ Product Information ]

**Name:** Praeruptorin A

**Catalog No.:** CFN98139

**Cas No.:** 73069-25-7

**Purity:** >=98%

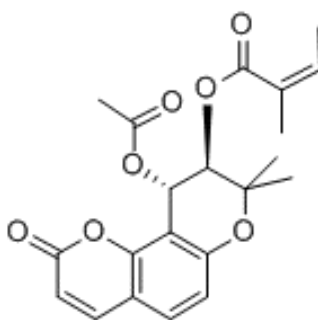
**M.F:** C<sub>21</sub>H<sub>22</sub>O<sub>7</sub>

**M.W:** 386.40

**Physical Description:** Powder

**Synonyms:** (-)-PareruptorinA; (+)-PraeruptorinA;

(9R,10R)-10-(Acetyloxy)-8,8-dimethyl-2-oxo-9,10-dihydro-2H,8H-pyrano[2,3-f]chromen-9-yl (2Z)-2-methylbut-2-enoate.



### [ Intended Use ]

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

### [ Source ]

The roots of *Peucedanum praeruptorum* Dunn.

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

Praeruptorin A (PA) is a pyranocoumarin compound isolated from the dried root of *Peucedanum praeruptorum* Dunn (Umbelliferae), it may exert antiinflammatory effects in vitro in LPS-stimulated RAW 264.7 macrophages through inhibition of NF- $\kappa$ B signal pathway activation.<sup>[1]</sup>

Praeruptorin A and praeruptorin C can significantly up-regulate UGT1A1 expression in HepG2 cells partially via the CAR-mediated pathway.<sup>[2]</sup>

(+)-praeruptorin A exerts distinct relaxant effects on isolated rat aorta rings, which may be mainly attributed to nitric oxide synthesis catalyzed by endothelial nitric oxide synthase. <sup>[3]</sup>

dl-Praeruptorin A has a neuroprotective effect on the injury in the acute phase of transient focal cerebral ischemia in mice, with optimal doses of 5 mg/kg and the optimal therapeutic time point of the same time of reperfusion.<sup>[4]</sup>

dl-Praeruptorin A elicits a novel target in the therapeutic prevention of postischemic cardiomyocyte death, the reason might be associated with modulating the expression of some immediate-early genes including IL-6, Fas, bax, and bcl-2 in ischemia-reperfusion myocardium.<sup>[5]</sup>

Praeruptorin A upregulates expression of nestin in experimental autoimmune myocarditis of rats, it is beneficial to facilitate nestin expression in myocarditis, and suitable in treatment of early myocarditis.<sup>[6]</sup>

Praeruptorin A has anti-osteoclastogenic activity via inhibition of p38/Akt-c-Fos-NFATc1 signaling and PLC  $\gamma$ -independent Ca<sup>2+</sup> oscillation.<sup>[7]</sup>

## **[ Solvent ]**

Pyridine, Methanol, Ethanol, etc.

## **[ HPLC Method ]**<sup>[8]</sup>

Mobile phase: Methanol- H<sub>2</sub>O=75:25 ;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 321 nm.

## **[ Storage ]**

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

## **[ References ]**

- [1] Yu P J , Wei C , Wang G F, *et al. Phytother. Res.*, 2011, 25(4):550–6.
- [2] Zhou X N, Hui-Chang B I, Jin J, *et al. Acta Pharmaceutica Sinica*, 2013, 48(5):794-8.
- [3] Zhao X, Wang X, Yue D, *et al. Chem.Biol. Interact.*, 2010, 186(2):239-46.
- [4] Yang W S, Teng B G, Yang L C, *et al. Chinese Journal of Biochemical Pharmaceutics*, 2010, 31(2):118-21.
- [5] Chang T H, Liu X Y, Zhang X H. *Acta Pharmacologica Sinica*, 2002, 23(9):769-74.
- [6] Lin N, Chang T, Xu H, *et al. Pharmacology & Clinics of Chinese Materia Medica*, 2007, 23(3):21-3.
- [7] Yeon JT, Kim KJ, Choi SW,*et al. Plos One*, 2014, 9(2):e88974.
- [8] Chen Y K, Lu J Q, Luo H B, *et al. Tobacco Science & Technology*, 2007(1):38-42.

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