

Chamigrenal

**Chemical Properties**

CAS No.:	19912-84-6
Formula:	C <sub>15</sub> H <sub>22</sub> O
Molecular Weight:	218.34
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).

**Biological Description**

Description	$\beta$ -Chamigrenal has anti-inflammatory activity, it has inhibitory effects on lipopolysaccharide-induced nitric oxide and prostaglandin E2 production in RAW 264.7 macrophages. Chamigrenal shows platelet-activating factor antagonistic activity and the IC(50) value of $1.2 \times 10^{-4}$ M; it also exhibits weak cytotoxicity towards MCF-7 cells (IC50=30.50 $\mu$ M).
Targets(IC <sub>50</sub> )	COX: None EGFR: None NO: None NOS: None PAFR: None PGE: None
In vitro	Much is known about the bioactive properties of lignans from the fruits of Schisandra chinensis. However, very little work has been done to determine the properties of sesquiterpenes in the fruits of S. chinensis. METHODS AND RESULTS: The aim of the present study was to investigate the anti-inflammatory potential of new sesquiterpenes ( $\beta$ -Chamigrenal, $\beta$ -chamigrenic acid, $\alpha$ -ylangenol, and $\alpha$ -ylangeny acetate) isolated from the fruits of S. chinensis and to explore their effect on macrophages stimulated with lipopolysaccharide. Of these four sesquiterpenes, $\beta$ -Chamigrenal most significantly suppressed lipopolysaccharide-induced nitric oxide and prostaglandin E2 production in RAW 264.7 macrophages ( $47.21 \pm 4.54$ % and $51.61 \pm 3.95$ % at 50 $\mu$ M, respectively). Molecularly, the inhibitory activity of $\beta$ -Chamigrenal on nitric oxide production was mediated by suppressing inducible nitric oxide synthase activity but not its expression. In the prostaglandin E2 synthesis pathway, $\beta$ -Chamigrenal prevented the upregulation of inducible microsomal prostaglandin E synthase-1 expression after stimulation with lipopolysaccharide. Conversely, $\beta$ -Chamigrenal had no effect on the expression and enzyme activity of cyclooxygenase-2. In addition, the expression of early growth response factor-1, a key transcription factor of microsomal prostaglandin E synthase-1 expression, was inhibited by $\beta$ -Chamigrenal. CONCLUSIONS: These results may suggest a possible anti-inflammatory activity of $\beta$ -Chamigrenal which has to be proven in in vivo experiments.

**Solubility Information**

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble
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## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.580 mL	22.901 mL	45.802 mL
5 mM	0.916 mL	4.580 mL	9.160 mL
10 mM	0.458 mL	2.290 mL	4.580 mL
50 mM	0.092 mL	0.458 mL	0.916 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

## Reference

1. Inhibitory effects of  $\beta$ -chamigrenal, isolated from the fruits of *Schisandra chinensis*, on lipopolysaccharide-induced nitric oxide and prostaglandin E2 production in RAW 264.7 macrophages. *Planta Med.* 2014 Jun;80(8-9):655-61.
2. Platelet-activating factor antagonistic activity and  $(^{13}\text{C})$  NMR assignment of peregomin and chamigrenal from *Schisandra chinensis*. *Arch Pharm Res.* 1997 Dec;20(6):633-6.

## Inhibitors · Natural Compounds · Compound Libraries

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