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## Product Data Sheet

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Product Name: Girinimbine

Cat. No.: GC62988

### Chemical Properties

Cas. No. 23095-44-5

Formula  $C_{18}H_{17}NO$  M.Wt 263.33

Solubility DMSO:20mg/ml Storage Store at 2-8°C, protect from light

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

### Background

Girinimbine (Girinimbin) is a carbazole alkaloid with a variety of biological effects. Girinimbine can induce apoptosis, and has antitrypanosomal, antiplatelet activity, antibacterial activity, anti-inflammatory, antioxidant and antitumor activities[1][2][3].

Girinimbine (1-400  $\mu$ M; 24-72 h) decreases the viability of HepG2 cells in 24, 48 and 72 h with IC50 values of 61  $\mu$ M, 56  $\mu$ M, and 40  $\mu$ M respectively. Girinimbine (10-100  $\mu$ M; 24-48 h) increase of LDH leakage in both concentration- and time-dependent manner in HepG2 cells[1]. Girinimbine (56  $\mu$ M; 24-48 h) treatment results in DNA fragmentation and elevates levels of caspase-3 in HepG2 cells[1]. HepG2 cells[1]. Girinimbine (56  $\mu$ M; 12-48 h) treatment also displays a time-dependent accumulation of the Sub-G0/G1 peak (hypodiploid) and caused G0/G1-phase arrest[1]. Girinimbine shows a potent antitrypanosomal activity with an IC50 value of 10.16  $\mu$ g/mL[3].

Girinimbine (10-100 mg/kg; orally gavage; once) pretreatment helps limit total leukocyte migration, and reduced pro-inflammatory cytokine (IL-1 $\beta$ , TNF- $\alpha$ ) levels in the peritoneal fluid[2]. In vivo in zebrafish embryos, Girinimbine (20  $\mu$ g/mL; 24 hours) shows significant distribution of apoptotic cells in embryos[2].

[1]. Suvitha Syam, et al. The growth suppressing effects of girinimbine on HepG2 involve

**Caution: Product has not been fully validated for medical applications. For research use only.**

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induction of apoptosis and cell cycle arrest. *Molecules*. 2011 Aug 23;16(8):7155-70.  
[2]. Venos Iman, et al. Anticancer and anti-inflammatory activities of girinimbine isolated from *Murraya koenigii*. *Drug Des Devel Ther*. 2016 Dec 28;11:103-121.  
[3]. H O Dyary, et al. Antitrypanosomal and cytotoxic activities of botanical extracts from *Murraya koenigii* (L.) and *Alpinia mutica* Roxb. *Trop Biomed*. 2019 Mar 1;36(1):94-102.

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