Solasodine

Cat. No.: HY-N0068

CAS No.: 126-17-0

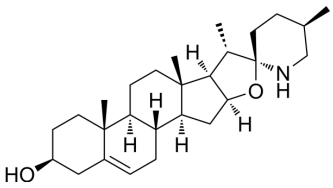
Molecular Formula: $C_{27}H_{43}NO_2$

Molecular Weight: 413.64

Target: MDM-2/p53; E1/E2/E3 Enzyme; Fungal; Apoptosis

Pathway: Apoptosis; Metabolic Enzyme/Protease; Anti-infection

Storage: 4°C, protect from light
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

Ethanol : 20 mg/mL (48.35 mM; Need ultrasonic)
DMSO : 1.96 mg/mL (4.74 mM; ultrasonic and warming and adjust pH to 5 with HCl and heat to 60°C)
H_2O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions	Concentration / Solvent / Mass	1 mg	5 mg	10 mg
	1 mM	2.4176 mL	12.0878 mL	24.1756 mL
	5 mM	0.4835 mL	2.4176 mL	4.8351 mL
	10 mM	0.2418 mL	1.2088 mL	2.4176 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Solasodine (Purapuridine) is a steroidal alkaloid that occurs in plants of the Solanaceae family. Solasodine has neuroprotective, antifungal, hypotensive, anticancer, antiatherosclerotic, antiandrogenic and anti-inflammatory activities[1] [2].

In Vitro

Solasodine (90 μM; 2 days) treatment displays significant sprouting in P19 cells. Solasodine induces strong expression of the different neuronal markers studied, including βIII-tubulin, synaptophysin, MAP2, ChAT, and neuroblast marker doublecortin. Solasodine induces the differentiation of P19 cells, essentially towards the neuronal pathway[1].Solasodine induce apoptosis by inhibiting the p53-MDM2 complex, $p21^{Waf1/Cip1}$, and Bcl-2 proteins[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Solasodine (25-100?mg/kg; intraperitoneal injection; once) treatment significantly delays latency of hind limb tonic extensor (HLTE) phase in the PCT-induced convulsions. And significantly potentiates Thiopental-provoked sleep in a dose-dependent manner. Solasodine has anticonvulsant and CNS depressant activities[2].
Solasodine (375 μM; i.c.v.; for 2 weeks) treatment results a significant increase in bromodeoxyuridine uptake by cells of the ependymal layer, subventricular zone, and cortex that co-localized with doublecortin immunostaining. Solasodine

treatment in rats results in a dramatic increase in expression of the cholesterol- and drug-binding translocator protein in ependymal cells[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Swiss albino mice (18-25 g) treated with Picrotoxin (PCT) or Thiopental[2]
Dosage:	25 mg/kg, 50 mg/kg and 100 mg/kg
Administration:	Intraperitoneal injection; once
Result:	Significantly delayed latency of hind limb tonic extensor (HLTE) phase in the PCT-induced convulsions. And significantly potentiated Thiopental-provoked sleep in a dose-dependent manner.

CUSTOMER VALIDATION

- bioRxiv. 2023 Jun 3.
- Drug Res. 2022 Jun 20.

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REFERENCES

[1]. Lecanu L, et al. The naturally occurring steroid solasodine induces neurogenesis in vitro and in vivo. Neuroscience. 2011 Jun 2;183:251-64.

[2]. Chauhan K, et al. Anticonvulsant activity of solasodine isolated from Solanum sisymbriifolium fruits in rodents. Pharm Biol. 2011 Feb;49(2):194-9.

[3]. Akhtar S, et al. Evaluation and Elucidation Studies of Natural Aglycones for Anticancer Potential using Apoptosis-Related Markers: An In silico Study. Interdiscip Sci. 2018 Jun;10(2):297-310.

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