Kinsenoside

Cat. No.: HY-N2292

CAS No.: 151870-74-5

Molecular Formula: $C_{10}H_{16}O_8$

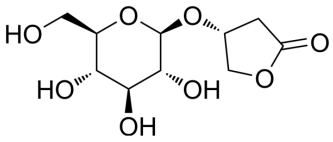
Molecular Weight: 264

Target: Keap1-Nrf2; Apoptosis

Pathway: NF-κB; Apoptosis

Storage: 4°C, protect from light

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



SOLVENT & SOLUBILITY

In Vitro

H_2O : ≥ 100 mg/mL (378.79 mM)

DMSO : 50 mg/mL (189.39 mM; Need ultrasonic)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.7879 mL	18.9394 mL	37.8788 mL
	5 mM	0.7576 mL	3.7879 mL	7.5758 mL
	10 mM	0.3788 mL	1.8939 mL	3.7879 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (9.47 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (9.47 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Kinsenoside is the main active ingredient of the genus plant, and has various biological activities. Kinsenoside and Nrf2 depend on the protection of nuclear cells (NPCs), which significantly reduces their ability to survive. Kinsenoside Active NPC Medium AKT-ERK1/2-Nrf2 Signal passage, Prevent physical decline, aging, harmonious physical function impairment. Kinsenoside can improve the puncture guide model for intermediate vertebral wall discharge (IDD).

In Vitro

Kinsenoside (5-50 μg/mL; 24 h) suppresses NPC apoptosis and senescence under THBP (100 μM)-induced oxidative stresss in nucleus pulposus cells (NPCs), by dose-dependently inhibiting the protein levels of C-caspase3 and p16[1].

Kinsenoside activates the AKT-ERK1/2-Nrf2 signaling pathway through the phosphorylation of AKT and ERK1/2 in nucleus pulposus cells (NPCs)[1].

	Kinsenoside (10-50 μM; 30 min) inhibits LPS (1 μg/mL)-induced the production of inflammatory mediators such as nitric oxide, TNF-α, IL-1β, monocyte chemoattractant protein 1, and macrophage migration inhibitory factor[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Kinsenoside (10 mg/kg; ip; every 3 days for 4 weeks) promotes the expression of Nrf2 and ameliorates intervertebral disc degeneration (IDD) induced by Pentobarbital (50 mg/kg) in vivo in rat model[1]. Kinsenoside (100 mg/kg, 300 mg/kg; ip; 1 h before LPS induction) inhibits LPS (40 mg/kg; ip)-induced inflammatory model in mice[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Wang Y, et al. Kinsenoside ameliorates intervertebral disc degeneration through the activation of AKT-ERK1/2-Nrf2 signaling pathway. Aging (Albany NY). 2019 Sep 23;11(18):7961-7977.

[2]. Qi CX, et al. Kinsenoside: A Promising Bioactive Compound from Anoectochilus Species. Curr Med Sci. 2018 Feb;38(1):11-18.

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