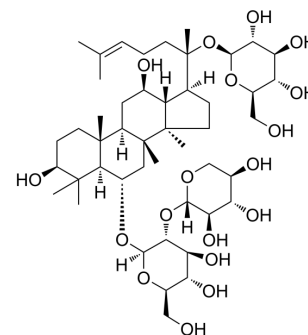


Notoginsenoside R1

Cat. No.:	HY-N0615												
CAS No.:	80418-24-2												
Molecular Formula:	C ₄₇ H ₈₀ O ₁₈												
Molecular Weight:	933.13												
Target:	Amyloid-β; Apoptosis												
Pathway:	Neuronal Signaling; Apoptosis												
Storage:	<table border="0"> <tr> <td>Powder</td> <td>-20°C</td> <td>3 years</td> </tr> <tr> <td></td> <td>4°C</td> <td>2 years</td> </tr> <tr> <td>In solvent</td> <td>-80°C</td> <td>2 years</td> </tr> <tr> <td></td> <td>-20°C</td> <td>1 year</td> </tr> </table>	Powder	-20°C	3 years		4°C	2 years	In solvent	-80°C	2 years		-20°C	1 year
Powder	-20°C	3 years											
	4°C	2 years											
In solvent	-80°C	2 years											
	-20°C	1 year											



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (107.17 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	1.0717 mL	5.3583 mL	10.7166 mL
		5 mM	0.2143 mL	1.0717 mL	2.1433 mL
10 mM		0.1072 mL	0.5358 mL	1.0717 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (2.68 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (2.68 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (2.68 mM); Clear solution 				

BIOLOGICAL ACTIVITY

Description	Notoginsenoside R1 (Sanchinoside R1), a saponin, is isolated from <i>P. notoginseng</i> . Notoginsenoside R1 exhibits anti-oxidation, anti-inflammatory, anti-angiogenic, and anti-apoptosis activities. Notoginsenoside R1 provides cardioprotection against ischemia/reperfusion (I/R) injury. Notoginsenoside R1 also provides neuroprotection in H ₂ O ₂ -induced oxidative damage in PC12 cells ^{[1][2][3]} .
In Vitro	Notoginsenoside R1 (2.5-80 μM; 24 h) inhibits the hypoxia-reoxygenation (H/R)-induced cell death, intracellular ROS accumulation, and mitochondrial membrane depolarization in H9c2 cardiomyocytes ^[1] .

?Notoginsenoside R1 (5-20 μ M; 24 h) inhibits the H/R-induced H9c2 cardiomyocytes apoptosis in a concentration-dependent manner^[1].
?Notoginsenoside R1 (1-100 μ M; 24 h) dose-dependently protects PC12 cells and primary neurons from A β -induced cell death and apoptosis^[2].
?Notoginsenoside R1 (10 μ M; 24 h) inhibits A β ₂₅₋₃₅-induced ROS production, mitochondrial damage and MAPK activation in PC12 cells^[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Notoginsenoside R1 (5 mg/kg/h; infused via the right jugular vein) increases red blood cell velocity, reduces the number of adherent leukocytes and inhibits mast cell degranulation and cytokine elevation in rats^[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male Sprague-Dawley (SD) rats (200-250 g) ^[3]
Dosage:	5 mg/kg/h
Administration:	Infused 20 min before LPS infusion via the right jugular vein
Result:	Ameliorated the LPS-induced reduction in the mesenteric venular shear rate to some extent. Attenuated the LPS-induced adhesion of leukocytes to the venular wall. Inhibited mast cell degranulation and cytokine elevation.

CUSTOMER VALIDATION

- Front Cell Neurosci. 2020 Sep 4;14:280.

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REFERENCES

- [1]. Yu Y, et, al. Cardioprotective effects of Notoginsenoside R1 against ischemia/reperfusion injuries by regulating oxidative stress- and endoplasmic reticulum stress-related signaling pathways. Sci Rep. 2016 Feb 18;6:21730.
- [2]. Ma B, et, al. Notoginsenoside R1 attenuates amyloid- β -induced damage in neurons by inhibiting reactive oxygen species and modulating MAPK activation. Int Immunopharmacol. 2014 Sep;22(1):151-9.
- [3]. Sun K, et, al. Protective effects of ginsenoside Rb1, ginsenoside Rg1, and notoginsenoside R1 on lipopolysaccharide-induced microcirculatory disturbance in rat mesentery. Life Sci. 2007 Jul 19;81(6):509-18.

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

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