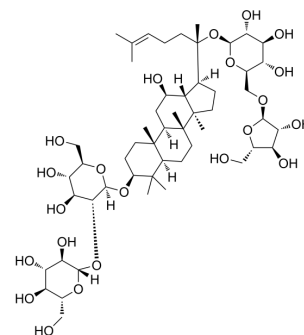


Ginsenoside Rc

Cat. No.:	HY-N0042												
CAS No.:	11021-14-0												
Molecular Formula:	C ₅₃ H ₉₀ O ₂₂												
Molecular Weight:	1079.27												
Target:	GABA Receptor; TNF Receptor; Interleukin Related												
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling; Apoptosis; Immunology/Inflammation												
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 (92.66 mM; Need ultrasonic)
 H₂O : 50 mg/mL (46.33 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	0.9266 mL	4.6328 mL	9.2655 mL
	5 mM	0.1853 mL	0.9266 mL	1.8531 mL
	10 mM	0.0927 mL	0.4633 mL	0.9266 mL

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

In Vivo

1. Add each solvent one by one: PBS
 Solubility: 33.33 mg/mL (30.88 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Ginsenoside Rc, one of major Ginsenosides from Panax ginseng, enhances GABA receptor_A (GABA_A)-mediated ion channel currents (I_{GABA}). Ginsenoside Rc inhibits the expression of TNF-α and IL-1β.

IC₅₀ & Target

IL-1β

In Vitro

Ginsenoside Rc, one of major Ginsenosides from Panax ginseng, enhances γ-aminobutyric acid (GABA) receptor_A (GABA_A)-mediated ion channel currents. Ginsenoside Rc enhances GABA-mediated ion currents in oocytes expressing the GABA_A receptor^[1]. Ginsenoside Rc significantly inhibits the expression of macrophage-derived cytokines, such as TNF-α and IL-1β. Ginsenoside Rc also markedly suppresses the activation of TANK-binding kinase 1/IκB kinase ε/interferon regulatory factor-3 and p38/ATF-2 signaling in activated RAW264.7 macrophages, human synovial cells, and HEK293 cells. Ginsenoside Rc exerts

its anti-inflammatory actions by suppressing TANK-binding kinase 1/I κ B kinase ϵ /interferon regulatory factor-3 and p38/ATF-2 signaling. Ginsenoside Rc suppresses the nuclear translocation of phospho-ATF-2 and phospho-FRA-1, whereas the translocation of p65 at its peak time points (30 and 60 min) is not decreased by Ginsenoside Rc treatment. Ginsenoside Rc regulates the expression of the proinflammatory cytokine TNF- α , which is produced by macrophages, by suppressing AP-1 activation^[2].

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

PROTOCOL

Kinase Assay ^[2]

To evaluate the effects of Ginsenoside Rc on kinase activity, immunoprecipitated TBK1, IKK ϵ , and p38 are incubated in reaction buffer in the presence or absence of Ginsenoside Rc. The reactions are initiated by the addition of Mg-ATP. After a 30 min incubation at 30°C, the reactions are stopped by the addition of sample buffer and the samples are boiled. Kinase activity is assessed by immunoblotting with antibodies against the phospho-forms of IKK ϵ , IRF-3, and ATF-2^[2].

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

REFERENCES

[1]. Lee BH, et al. Effects of Ginsenoside Metabolites on GABAA Receptor-Mediated Ion Currents. J Ginseng Res. 2012 Jan;36(1):55-60.

[2]. Yu T, et al. Ginsenoside Rc from Panax ginseng exerts anti-inflammatory activity by targeting TANK-bindingkinase 1/interferon regulatory factor-3 and p38/ATF-2. J Ginseng Res. 2017 Apr;41(2):127-133.

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

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