Product Data Sheet

Product Name: Rhodojaponin VI
Cat. No.: GC78980

Chemical Properties

Cas. No.	37720-87-9		
Formula	$C_{20}H_{34}O_7$	M.Wt	386.48
Solubility	DMSO: 100 mg/mL (258.75 mM; Need ultrasonic)	Storage	Store at 4°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.		

Caution: Product has not been fully validated for medical applications. For research use only.
Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

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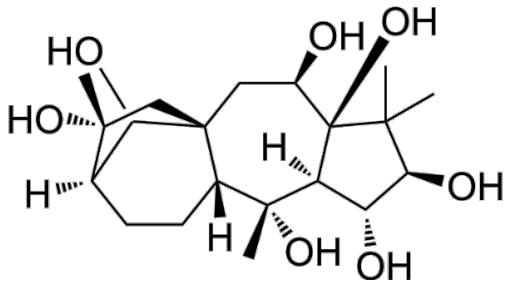
Structure



Background

Rhodojaponin VI is an orally active diterpenoid compound found in hododendron molle G. Don (Ericaceae) (RM). Rhodojaponin VI binds rat N-Ethylmaleimide-sensitive fusion (NSF) with a Kd of 1.03 μM. Rhodojaponin VI blocks the MDM2-Notch1 signalling pathway by reducing MDM2 and Notch1 expression. Rhodojaponin VI indirectly reduces Cav 2.2 current intensity by inhibiting NSF -mediated Cav2.2 trafficking. Rhodojaponin VI alleviates glomerulonephritis progression and podocyte injury in passive heymann nephritis rats. Rhodojaponin VI also has antinociceptive effects. Rhodojaponin VI can be used for the researches of heymann nephritis and pain [1] [2] [3].

In Vivo, Rhodojaponin VI (0.02 mg/kg; p.o.; daily; 4 weeks) ameliorates podocyte injury and reduces proteinuria in male Sprague-Dawley rats with passive Heymann nephritis[1]. Rhodojaponin VI (0.001-0.05 mg/kg; i.p.; single dose) alleviates neuropathic pain in chronic constriction injury rats models[2].

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Rhodojaponin VI (0.04-0.2 mg/kg, i.p.) exhibits potent antinociceptive effects in HOAC-induced writhing test in mice (with a writhe inhibition rate of 88.7%)[3].

In Vitro, Rhodojaponin VI (pre-treated) partially blocks the MDM2-Notch1 signalling pathway in C5b-9-induced human podocyte cells by reducing C5b-9-induced MDM2 and Notch1 expression without altering p53 or Numb levels[1]. Rhodojaponin VI (0.01-100 μM; 20 min) enhances the thermal stability of NSF in rat DRG neuron lysates[2]. Rhodojaponin VI binds NSF directly (Kd = 1.03 ± 0.65 μM) [2]. Rhodojaponin VI (30 μM; 2-30 min) does not change Cav2.2 current intensity extracellularly but decreases it intracellularly in Cav2.2-HEK cells[2]. Rhodojaponin VI (30 μM; overnight) reverses the NSF-mediated increase in surface Cav2.2 expression and Cav2.2 current density in Cav2.2-HEK cells[2].

References:
[1]. Song A, et al. Rhodojaponin VI ameliorates podocyte injury related with MDM2/Notch1 pathway in rat experimental membranous nephropathy. Nephrology (Carlton). 2024;29(9):555-564.
[2]. Chen K, et al. Rhodojaponin VI indirectly targets Cav2.2 channels via N -ethylmaleimide-sensitive fusion protein to alleviate neuropathic pain. Acta Pharm Sin B. 2023;13(3):1326-1336.
[3]. Zheng G, et al. Antinociceptive Grayanane Diterpenoids from the Leaves of Pieris japonica. J Nat Prod. 2019 Dec 27;82(12):3330-3339.

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