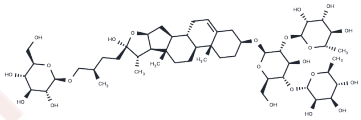
Data Sheet (Cat.No.T2321)

TargetMol

Protodioscin

Chemical Properties



CAS No. : 55056-80-9

Formula: C51H84O22

Molecular Weight: 1049.20

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Protodioscin (Furostanol I) is a major steroidal saponin in dioscoreae rhizome, with anti-hyperlipidemia, anti-cancer properties.
Targets(IC50)	Androgen Receptor,Endogenous Metabolite
In vivo	Protodioscin (5 and 10 mg/kg) significantly improves glucose intolerance and reduced the levels of serum UA, BUN, Cr, TC and TG. Protodioscin significantly reduces renal concentrations of IL-1β, IL-6 and TNF-α by inhibiting the activation of nuclear factor-κB, c-Jun N-terminal kinase, p38 mitogen-activated protein kinase and extracellular signal-regulated kinase[1]. Protodioscin ameliorates the death rate, inhibits the increase in neurological deficit scores and infarct volume, and reduces the apoptotic nerve cells induced by MCAO in rats. Protodioscin attenuates the change of relevant apoptins, suppresses the release of pro-inflammatory cytokines in serum and reverses the protein expression of NF-κB (in nucleus and cytoplasm) and IκBα (in cytoplasm) induced by MCAO in rats[2]. Protodioscin (0.5mg/kg, i.p.) increases the coagulation time by appr50% as compared to that of high-fat diet control rats. Protodioscin possesses a promising effect in lowering the blood levels of both lipoproteins, especially LDL, thus resulting in a high ratio of HDL/LDL[3].

Solubility Information

Solubility	DMSO: 125.00 mg/mL (119.14 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2.00 mg/mL (1.91 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.9531 mL	4.7655 mL	9.5311 mL
5 mM	0.1906 mL	0.9531 mL	1.9062 mL
10 mM	0.0953 mL	0.4766 mL	0.9531 mL
50 mM	0.0191 mL	0.0953 mL	0.1906 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Shen J, et al. Protodioscin ameliorates fructose-induced renal injury via inhibition of the mitogen activated protein kinase pathway. Phytomedicine. 2016 Nov 15;23(12):1504-1510.
Zhang X, et al. Potential neuroprotection of protodioscin against cerebral ischemia-reperfusion injury in rats through intervening inflammation and apoptosis. Steroids. 2016 Sep;113:52-63.
Wang T, et al. Antihyperlipidemic effect of protodioscin, an active ingredient isolated from the rhizomes of Dioscorea nipponica. Planta Med. 2010 Oct;76(15):1642-6.