

Protodioscin

Chemical Properties

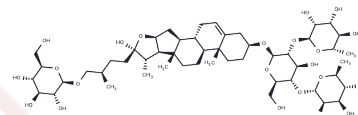
CAS No. : 55056-80-9

Formula: C₅₁H₈₄O₂₂

Molecular Weight: 1049.2

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



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-1 β , IL-6 and TNF- α by inhibiting the activation of nuclear factor- κ B, 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- κ B (in nucleus and cytoplasm) and I κ B α (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: 55 mg/mL (52.42 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble) |
|------------|---|

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.

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.

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