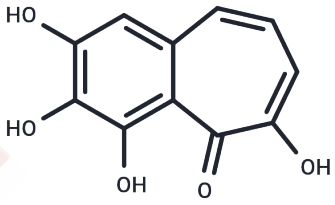
Data Sheet (Cat.No.T16685)

TargetMol

Purpurogallin

Chemical Properties



CAS No. : 569-77-7

Formula: C11H8O5

Molecular Weight: 220.18

Storage: Store at low temperature
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	Purpurogallin, a naturally occurring phenol extracted from Quercus spp. plants, exhibits potent xanthine oxidase inhibitory activity (IC50: 0.2 μM) and also possesses antioxidant and anti-inflammatory effects.
Targets(IC50)	Xanthine Oxidase
In vitro	Purpurogallin (100 μM; 75-120 minutes; BV2 murine microglial cells) exhibits anti-inflammatory properties by suppressing the phosphatidylinositol 3-kinase/Akt and mitogen-activated protein kinase signaling pathways in LPS-stimulated BV2 microglial cells. Purpurogallin (50 or 100 μM; 7 or 25 hours; BV2 murine microglial cells) treatment decreases the production of pro-inflammatory cytokines, including interleukin-1β (IL-1β) and tumor necrosis factor-α (TNF-α) by suppressing their mRNA and protein expression in LPS-stimulated BV2 microglial cells[1].
In vivo	By the dual effect of inhibiting IL-6 and TNF-α mRNA expression and reducing HMGB1 protein and mRNA expression, Purpurogallin (100-400?μg/kg; intraperitoneal injection; for 48 or 72 hours; male Sprague-Dawley rats) exerts its neuroinflammation effect [2].

Solubility Information

Solubility	DMSO: 125 mg/mL (567.72 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: 4 mg/mL (18.17 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	4.5417 mL	22.7087 mL	45.4174 mL
5 mM	0.9083 mL	4.5417 mL	9.0835 mL
10 mM	0.4542 mL	2.2709 mL	4.5417 mL
50 mM	0.0908 mL	0.4542 mL	0.9083 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

Park HY, et al. Purpurogallin exerts anti-inflammatory effects in lipopolysaccharide-stimulated BV2 microglial cells through the inactivation of the NF-κB and MAPK signaling pathways. Int J Mol Med. 2013 Nov;32(5):1171-8.
Chang CZ, et al. Purpurogallin, a natural phenol, attenuates high-mobility group box 1 in subarachnoid hemorrhage induced vasospasm in a rat model. Int J Vasc Med. 2014;2014:254270.
Honda S, et al. Conversion to purpurogallin, a key step in the mechanism of the potent xanthine oxidase inhibitory activity of pyrogallol. Free Radic Biol Med. 2017 May;106:228-235.