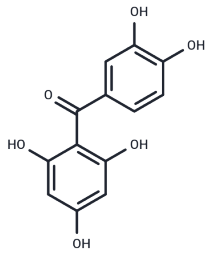
Data Sheet (Cat.No.T20578)

TargetMol

Maclurin

Chemical Properties



CAS No. : 519-34-6

Formula: C13H10O6

Molecular Weight: 262.21

Storage: Keep away from direct sunlight,Store under nitrogen
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	Maclurin (NSC-83240) is a phenolic component of mulberry twigs, exerts anti-metastatic effects. Maclurin effectively protects against OH-induced damages to DNA and MSCs and can be used in studies about the prevention of many diseases or MSCs transplantation.
Targets(IC50)	Free radical scavengers,Reactive Oxygen Species
In vitro	Maclurin effectively protects against mesenchymal stem cells (MSCs) oxidative damage induced by hydroxyl radical (OH) at 62.1-310.5 μM. Maclurin efficiently protects DNA from OH-induced damage at 114.6-382.2 μM, and scavenge OH, DPPH, ABTS(+), and bind Cu(2+) with IC50s of 122.87, 10.15, 0.97, and 133.95 μM[1].

Solubility Information

Solubility	DMSO: 250 mg/mL (953.43 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: 1 mg/mL (3.81 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	3.8137 mL	19.0687 mL	38.1374 mL
5 mM	0.7627 mL	3.8137 mL	7.6275 mL
10 mM	0.3814 mL	1.9069 mL	3.8137 mL
50 mM	0.0763 mL	0.3814 mL	0.7627 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

Li X, et al. Maclurin protects against hydroxyl radical-induced damages to mesenchymal stem cells: antioxidant evaluation and mechanistic insight. Chem Biol Interact. 2014 Aug 5;219:221-8.
Ku MJ, et al. Maclurin suppresses migration and invasion of human non-small-cell lung cancer cells via anti-oxidative activity and inhibition of the Src/FAK-ERK-β-catenin pathway. Mol Cell Biochem. 2015 Apr;402(1-2):243-52.
Lee YJ, Lee SY. Maclurin exerts anti-cancer effects in human osteosarcoma cells via prooxidative activity and modulations of PARP, p38, and ERK signaling. IUBMB Life. 2021 Aug;73(8):1060-1072.
Kim J, et al. Protective Effects of Maclurin against Benzo[a]pyrene via Aryl Hydrocarbon Receptor and Nuclear Factor Erythroid 2-Related Factor 2 Targeting. Antioxidants (Basel). 2021 Jul 26;10(8):1189.