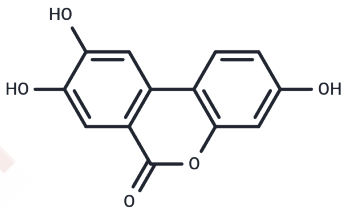
Data Sheet (Cat.No.TN7108)

TargetMol

Urolithin C

Chemical Properties



CAS No. : 165393-06-6

Formula: C13H8O5

Molecular Weight: 244.2

Storage: Keep away from moisture
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	Urolithin C is a gut metabolite of ellagic acid. Urolithin C induces apoptosis in PC12 cells through a mitochondria-mediated pathway.
Targets(IC50)	Apoptosis,Calcium Channel,Reactive Oxygen Species,Endogenous Metabolite,IGF-1R, ROS
In vitro	Urolithin C is a glucose-dependent activator of insulin secretion acting by facilitating L-type Ca2+ channel opening and Ca2+ influx into pancreatic β-cells.Urolithin C enhanced glucose-induced extracellular signal-regulated kinases 1/2 (ERK1/2) activation as shown by higher phosphorylation levels in INS-1 β-cells[2]. Urolithin C stimulates reactive oxygen species (ROS) formation[2].
In vivo	In male Wistar rat, the half-life of the terminal part is 11.3 h and the total clearance (CL/F) is 3.41 L/h/kg. The initial volume of distribution (V1/F) is 0.831 L/kg and the steady-state volume of distribution (Vss/F) is 55.6 L/kg after the intraperitoneal administration of Urolithin C (10 mg/kg)[3].

Solubility Information

Solubility	DMSO: 64.67 mg/mL (264.82 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 mg/mL (8.19 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	4.095 mL	20.475 mL	40.950 mL
5 mM	0.819 mL	4.095 mL	8.190 mL
10 mM	0.4095 mL	2.0475 mL	4.095 mL
50 mM	0.0819 mL	0.4095 mL	0.819 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

Peipei Yin, et al. Urolithin C, a gut metabolite of ellagic acid, induces apoptosis in PC12 cells through a mitochondria-mediated pathway. RSC Advances. Issue 28, 2017.
Yang H, Wu B, Yang Q, et al.Urolithin C suppresses colorectal cancer progression via the AKT/mTOR pathway. Journal of Natural Medicines.2024: 1-14.
Morgane Bayle, et al. Development and Validation of a Liquid Chromatography-Electrospray Ionization-Tandem Mass Spectrometry Method for the Determination of Urolithin C in Rat Plasma and Its Application to a Pharmacokinetic Study. J Pharm Biomed Anal. 2016 Nov 30;131:33-39.
Slimane Toubal, et al. Urolithin C Increases Glucose-Induced ERK Activation Which Contributes to Insulin Secretion. Fundam Clin Pharmacol. 2020 Feb 21.

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