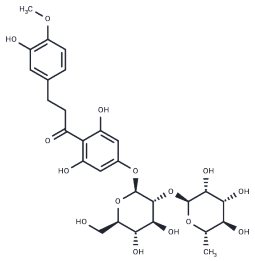
Data Sheet (Cat.No.T2767)

TargetMol

Neohesperidin Dihydrochalcone

Chemical Properties



CAS No. : 20702-77-6

Formula: C28H36O15

Molecular Weight: 612.58

Storage: Keep away from direct sunlight
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	Neohesperidin Dihydrochalcone (Neohesperidin DC) is an artificial sweetener derived from citrus.
Targets(IC50)	Reactive Oxygen Species,ROS
In vivo	Administration of neohesperidin dihydrochalcone significantly reduces the activities of AST and ALT, both key markers of liver damage. It also inhibits the expression of NF-κB, IL-6, IL-1β, and TNF-α proteins, which are elevated in the liver of PQ-treated mice, indicating its potential protective effects on liver inflammation and damage[3]. Furthermore, studies on Wistar Crl:(WI)WU BR rats to assess the embryotoxicity and teratogenicity of neohesperidin dihydrochalcone reveal no adverse effects at dietary levels up to 5%, the highest dose investigated. At this level, rats consumed approximately 3.3 g/kg body weight/day[4], demonstrating the compound's safety at significant dosage levels.
Cell Research	WST-8 dye is used in the cell viability assay. HIT-T15 and HUVEC cells are grown and maintained in Dulbecco's modified Eagle's medium, supplemented with 10% fetal bovine calf serum. 1000 cells in each well are incubated with various concentrations of neohesperidin dihydrochalcone (50, 100, 500 μM, 1 mM) and other compounds. After treating HIT-T15 and HUVEC cells with 500 μM HOCl, WST-8 dye is added to each well, and the absorbance is detected at 420 nm with microplate reader[1].

Solubility Information

Solubility	Ethanol: 100 mg/mL (163.24 mM),Sonication is recommended. DMSO: 50 mg/mL (81.62 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), (< 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 (3.26 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	1.6324 mL	8.1622 mL	16.3244 mL
5 mM	0.3265 mL	1.6324 mL	3.2649 mL
10 mM	0.1632 mL	0.8162 mL	1.6324 mL
50 mM	0.0326 mL	0.1632 mL	0.3265 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

Kroeze JH, Chem Senses, 2000, 25(5), 555-559.
Winnig M, et al. BMC Struct Biol, 2007, 7, 66.
Shi Q, et al. Artificial sweetener neohesperidin dihydrochalcone showed antioxidative, anti-inflammatory and anti-apoptosis effects against paraquat-induced liver injury in mice. Int Immunopharmacol. 2015 Dec;29(2):722-9.
Waalkens-Berendsen DH, et al. Embryotoxicity and teratogenicity study with neohesperidin dihydrochalcone in rats. Regul Toxicol Pharmacol. 2004 Aug;40(1):74-9.