Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Phloretin

Catalog No: tcsc1477

Available Sizes

Size: 250mg

Size: 500mg

Specifications

CAS No:
60-82-2

Formula:
$C_{15}H_{14}O_5$

Pathway:
Membrane Transporter/Ion Channel

Target:
SGLT

Purity / Grade:
>98%

Solubility:
DMSO : 50 mg/mL (182.30 mM; Need ultrasonic); H2O :

Alternative Names:
NSC 407292;RJC 02792

Observed Molecular Weight:
274.27

Product Description

Phloretin(NSC 407292; RJC 02792) is a dihydrochalcone, a type of natural phenols. Phloretin inhibits the active transport of glucose into cells by SGLT1 and SGLT2.

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IC50 Value: 49 +/- 12 microM [4]

Target: SGLT1/2

in vitro: Phlorizin blocks glucose transport across the renal tubule at concentrations in renal blood and tissue in the range of 10-5 to 10-7 M [1]. PT significantly enhanced glycerol release and inhibited the adipogenesis-related transcription factors. PT also promoted phosphorylation of AMP-activated protein kinase and increased activity of adipose triglyceride lipase and hormone-sensitive lipase in 3T3-L1 cells [2]. Phloretin induced obvious cytotoxicity against BEL-7402 cells with IC50 of 89.23 microg/mL. The growth curve demonstrated decreased growth of the cells as phloretin concentration increased [3]. D-glucose-transport activity was observed with a Km for D-glucose of 3.4 +/- 0.2 mM (mean +/- S.E.M.) and was inhibited by cytochalasin B (IC50= 0.44 +/- 0.03 microM), HgCl2 (IC50)= 3.5 +/- 0.5 microM), phloretin (IC50= 49 +/- 12 microM) and phloridzin (IC50= 355 +/- 67 microM) [4].

in vivo: The effect of phloridzin orally doses 5, 10, 20 and 40 mg/kg body weight on diabetes was tested in a streptozotocin-induced rat model of diabetes type 1. From beneficial effect of this compound is significant reduction of blood glucose levels and improve dyslipidemia in diabetic rats [5].