

Phlorizin

Catalog No: **tcsc2013**



Available Sizes

Size: 1g

Size: 5g



Specifications

CAS No:

60-81-1

Formula:

$C_{21}H_{24}O_{10}$

Pathway:

Membrane Transporter/Ion Channel;Membrane Transporter/Ion Channel

Target:

Na⁺/K⁺ ATPase;SGLT

Purity / Grade:

>98%

Solubility:

DMSO : ≥ 50 mg/mL (114.57 mM); H₂O : 1 mg/mL (2.29 mM; Need ultrasonic)

Alternative Names:

Floridzin;NSC 2833

Observed Molecular Weight:

436.41

Product Description

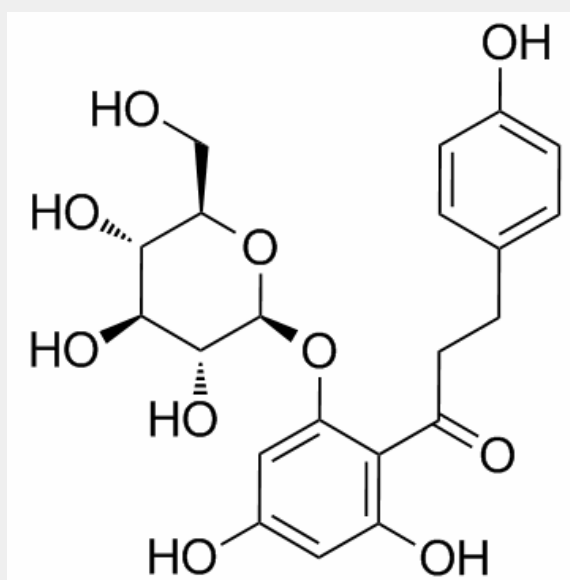
Phlorizin is a non-selective **SGLT** inhibitor with **K_i**s of 300 and 39 nM for **hSGLT1** and **hSGLT2**, respectively. Phlorizin is also a **Na⁺/K⁺-ATPase** inhibitor.

IC50 & Target: Ki: 300 nM (hSGLT1), 39 nM (hSGLT2)^[1]

Na⁺/K⁺-ATPase^[2]

In Vitro: Phlorizin is a non-selective SGLT inhibitor with K_is of 300 and 39 nM for hSGLT1 and hSGLT2, respectively^[1]. Phlorizin is also a Na⁺/K⁺-ATPase inhibitor^[2]. Phlorizin at 2×10⁻⁴ M inhibits Na⁺ and Rb⁺-activated ATPase activities in human red cell membranes by 43 %. At 1 mM and 7 mM RbCl, rubidium uptake is not changed or is slightly inhibited (less than 15 %) by 2×10⁻⁴ M Phlorizin^[2]. Cell viability is not significantly altered by doses of Phlorizin 2 levels. Phlorizin does not suppress IL-6 or TNF-α production, although 100 μM Phlorizin can significantly inhibit TNF-α expression^[3].

In Vivo: Prior to Phlorizin treatment, the blood glucose level in SDT fatty rats is 370±49 mg/dL. Six hours after dosing, the blood glucose level in the Phlorizin treated group decreases to an almost normal level (139±32 mg/dL). Phlorizin-treated SDT fatty rats are heavier than vehicle-treated SDT fatty rats after 12 weeks. Phlorizin treatment significantly decreases glucose excretion and delays insulin decreases. Creatinine clearance decreases significantly with Phlorizin treatment. 23 weeks of Phlorizin treatment prevents the decrease of nerve fibers (23.6±3.2 fibers/mm). Retinal abnormalities are completely prevented with Phlorizin^[4].



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!