Isoacteoside

Cat. No.: HY-N0022

CAS No.: 61303-13-7

Molecular Formula: $C_{29}H_{36}O_{15}$

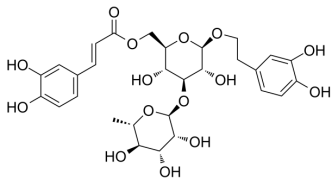
Molecular Weight: 624.59

Target: Others

Pathway: Others

Storage: 4°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (400.26 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.6011 mL	8.0053 mL	16.0105 mL
	5 mM	0.3202 mL	1.6011 mL	3.2021 mL
	10 mM	0.1601 mL	0.8005 mL	1.6011 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (3.33 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (3.33 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (3.33 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Isoacteoside is a natural compound which exhibit significant inhibition of advanced glycation end product formation with IC50 values of 4.6-25.7 μM, compared with those of aminoguanidine (IC50=1,056 μM) and quercetin (IC50=28.4 μM) as positive controls.IC50 value:Target:In the rat lens aldose reductase assay, acteoside, isoacteoside, and poliumoside exhibited greater inhibitory effects on rat lens aldose reductase with IC50 values of 0.83, 0.83, and 0.85 μM, respectively, than those of the positive controls, 3,3-tetramethyleneglutaric acid (IC50=4.03 μM) and quercetin (IC50=7.2 μM).

CUSTOMER VALIDATION

- Appl Biol Chem. 23 May 2022.
- Patent. US20210177023A1.
- Patent. US20210085739A1.

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REFERENCES

[1]. Yu SY, et al. Caffeoylated phenylpropanoid glycosides from Brandisia hancei inhibit advanced glycation end product formation and aldose reductase in vitro and vessel dilation in larval zebrafish in vivo. Planta Med. 2013 Dec;79(18):1705-9.

[2]. Gao H, Cui Y, Kang N, et al. Isoacteoside, a dihydroxyphenylethyl glycoside, exhibits anti-inflammatory effects through blocking toll-like receptor 4 dimerization. Br J Pharmacol. 2017;174(17):2880-2896.

[3]. Yang X, Guo F, Peng Q, Liu Y, Yang B. Suppression of in vitro and in vivo human ovarian cancer growth by isoacteoside is mediated via sub-G1 cell cycle arrest, ROS generation, and modulation of AKT/PI3K/m-TOR signalling pathway. J BUON. 2019;24(1):285-290

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA