Rebaudioside A

Cat. No.: HY-N0466

CAS No.: 58543-16-1

Molecular Formula: $C_{44}H_{70}O_{23}$

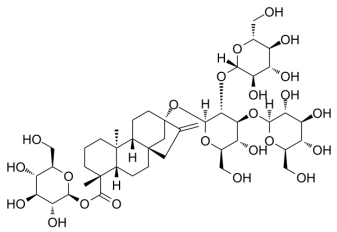
Molecular Weight: 967.01

Target: Glucosidase; Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (103.41 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Mass / Solvent / Concentration	1 mg	5 mg	10 mg
1 mM	1.0341 mL	5.1706 mL	10.3412 mL
5 mM	0.2068 mL	1.0341 mL	2.0682 mL
10 mM	0.1034 mL	0.5171 mL	1.0341 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: ≥ 2.5 mg/mL (2.59 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (2.59 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (2.59 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Rebaudioside A is a steviol glycoside, α-glucosidase inhibitor with IC50 of 35.01 μg/ml.can inhibit ATP-sensitive K+-channels.Target: α-glucosidase [1]IC 50: 35.01 ug/mLIn vitro: rebaudioside A stimulat the insulin secretion from MIN6 cells in a dose- and glucose-dependent manner. In conclusion, the insulinotropic effect of rebaudioside A is mediated via inhibition of ATP-sensitive K+-channels and requires the presence of high glucose. [2]In vivo: in vivo mouse micronucleus test at doses up to 750 mg/kg bw and an unscheduled DNA synthesis test in rats at doses up to 2000 mg/kg bw, rebaudioside A do not cause any genotoxic effects at any of the doses tested.[3]

IC_{50} & Target	Human Endogenous Metabolite

REFERENCES

[1]. Adari BR et al. Synthesis of rebaudioside-A by enzymatic transglycosylation of stevioside present in the leaves of Stevia rebaudiana Bertoni. Food Chem. 2016 Jun 1;200:154-8.

[2]. Abudula R et al. Rebaudioside A directly stimulates insulin secretion from pancreatic beta cells: a glucose-dependent action via inhibition of ATP-sensitive K-channels. Diabetes Obes Metab. 2008 Nov;10(11):1074-85.

[3]. Williams LD et al. Genotoxicity studies on a high-purity rebaudioside A preparation. Food Chem Toxicol. 2009 Aug;47(8):1831-6.

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