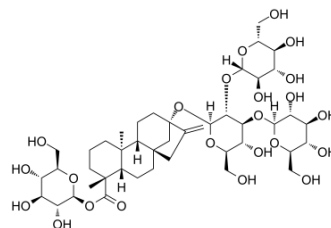


## Rebaudioside A

<b>Cat. No.:</b>	HY-N0466		
<b>CAS No.:</b>	58543-16-1		
<b>Molecular Formula:</b>	C <sub>44</sub> H <sub>70</sub> O <sub>23</sub>		
<b>Molecular Weight:</b>	967.01		
<b>Target:</b>	Glucosidase; Endogenous Metabolite		
<b>Pathway:</b>	Metabolic Enzyme/Protease		
<b>Storage:</b>	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.

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	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

- 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
- 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
- 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 IC<sub>50</sub> of 35.01 μg/ml. can inhibit ATP-sensitive K<sup>+</sup>-channels. Target: α-glucosidase [1] IC<sub>50</sub>: 35.01 ug/mL In vitro: rebaudioside A stimulates 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<sup>+</sup>-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]

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**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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**Caution: Product has not been fully validated for medical applications. For research use only.**

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