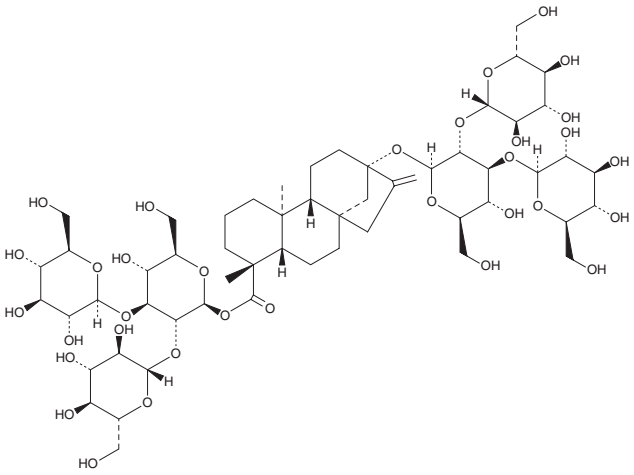
PRODUCT INFORMATION

Rebaudioside M

Item No. 35239



CAS Registry No.:	1220616-44-3
Formal Name:	(4α)-13-[(O-β-D-glucopyranosyl-(1→2)-O-[β-D-glucopyranosyl-(1→3)]-β-D-glucopyranosyl)oxy]-kaur-16-en-18-oic acid, O-β-D-glucopyranosyl-(1→2)-O-[β-D-glucopyranosyl-(1→3)]-β-D-glucopyranosyl ester
Synonyms:	Reb M, Rebaudioside X
MF:	$C_{56}H_{90}O_{33}$
FW:	1,291.3
Purity:	≥95%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Stevia rebaudiana*

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Rebaudioside M is supplied as a solid. A stock solution may be made by dissolving the rebaudioside M in the solvent of choice, which should be purged with an inert gas. Rebaudioside M is soluble in methanol.

Description

Rebaudioside M is a natural non-caloric sweetener and an agonist of the class 1 sweet taste receptor (TAS1R) heterodimer formed by TAS1R2 and TAS1R3.[1] It is one of the minor steviol glycosides isolated from *S. rebaudiana* leaves.[2] Rebaudioside M increases intracellular calcium levels in HEK293 cells expressing human TAS1R2 and TAS1R3 (EC_{50} = 29.54 µM) and has a relative sweetness potency 200-350 times that of sucrose.[1,2] Rebaudioside M is metabolized by gut microbiota to steviol, a compound whose safety is widely studied.[3-5]

References

1. Choi, Y., Manthey, J.A., Park, T.H., *et al.* Correlation between in vitro binding activity of sweeteners to cloned human sweet taste receptor and sensory evaluation. *Food Sci. Biotechnol.* **30(5)**, 675-682 (2021).
2. Prakash, I., Markosyan, A., and Bunders, C. Development of next generation Stevia sweetener: Rebaudioside M. *Foods* **3(1)**, 162-175 (2014).
3. Purkayastha, S., Markosyan, A., Prakash, I., *et al.* Steviol glycosides in purified stevia leaf extract sharing the same metabolic fate. *Regul. Toxicol. Pharmacol.* **77**, 125-133 (2016).
4. Roberts, A. and Renwick, A.G. Comparative toxicokinetics and metabolism of rebaudioside A, stevioside, and steviol in rats. *Food Chem. Toxicol.* **46(Suppl 7)**, S31-S39 (2008).

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