

PRODUCT INFORMATION

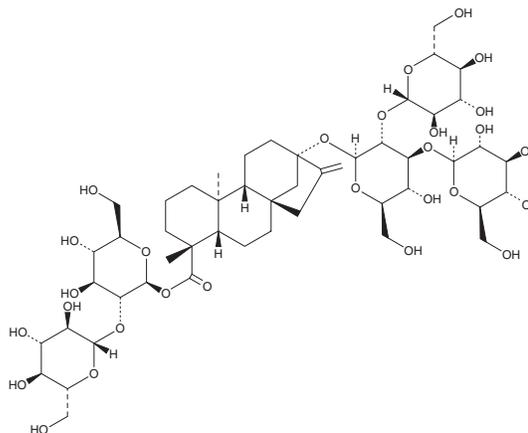


Rebaudioside D

Item No. 27880

CAS Registry No.: 63279-13-0
Formal Name: (4 α)-13-[[O- β -D-glucopyranosyl-(1 \rightarrow 2)-O- β -D-glucopyranosyl-(1 \rightarrow 3)]- β -D-glucopyranosyl]oxy]-kaur-16-en-18-oic acid, 2-O- β -D-glucopyranosyl- β -D-glucopyranosyl ester

Synonym: Reb D
MF: C₅₀H₈₀O₂₈
FW: 1,129.2
Purity: \geq 95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: \geq 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 D is supplied as a crystalline solid. A stock solution may be made by dissolving the rebaudioside D in the solvent of choice, which should be purged with an inert gas. Rebaudioside D is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of rebaudioside D in these solvents is approximately 1 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of rebaudioside D can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of rebaudioside D in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Rebaudioside D is a natural non-caloric sweetener.^{1,2} It is a steviol glycoside that has been found in *S. rebaudiana* leaves. Rebaudioside D, similarly to rebaudioside A (Item No. 11894) and rebaudioside C (Item No. 11895), is metabolized by gut microbiota to steviol (Item No. 10011344), a compound whose safety is widely studied.^{3,4}

References

1. Chen, L., Sun, P., Zhou, F., *et al.* Synthesis of rebaudioside D, using glycosyltransferase UGTSL2 and *in situ* UDP-glucose regeneration. *Food Chem.* **259**, 286-291 (2018).
2. Prakash, I., Campbell, M., and Chaturvedula, V.S.P. Catalytic hydrogenation of the sweet principles of *Stevia rebaudiana*, Rebaudioside B, Rebaudioside C, and Rebaudioside D and sensory evaluation of their reduced derivatives. *Int. J. Mol. Sci.* **13(11)**, 15126-15136 (2012).
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. Brusick, D.J. A critical review of the genetic toxicity of steviol and steviol glycosides. *Food Chem. Toxicol.* **46(Suppl 7)**, S83-S91 (2008).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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