

PRODUCT INFORMATION



Gymnemic Acid I

Item No. 28495

CAS Registry No.: 122168-40-5

Formal Name: (3 β ,4 α ,16 β ,21 β ,22 α)-28-(acetyloxy)-16,22,23-trihydroxy-21-[[[(2E)-2-methyl-1-oxo-2-buten-1-yl]oxy]olean-12-en-3-yl- β -D-glucopyranosiduronic acid
Synonym: (+)-Gymnemic Acid I

MF: C₄₃H₆₆O₁₄

FW: 807.0

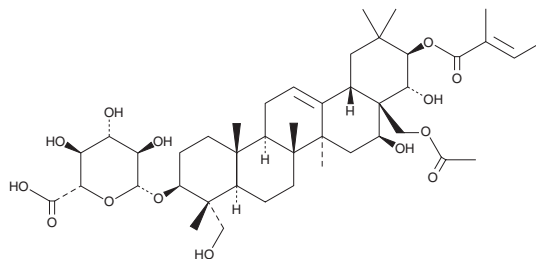
Purity: $\geq 95\%$

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥ 4 years

Item Origin: Plant/*Gymnema sylvestre* (Retz.) Schult.



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

Laboratory Procedures

Gymnemic acid I is supplied as a crystalline solid. A stock solution may be made by dissolving the gymnemic acid I in the solvent of choice, which should be purged with an inert gas. Gymnemic acid I is soluble in DMSO.

Description

Gymnemic acid I is a triterpene glycoside that has been found in *G. sylvestre* and has antihyperglycemic activities.^{1,2} It inhibits glucose-induced phosphorylation of serine 70 on S6 kinase (S6K1) and serine 2448 on mTOR, caspase-3 activity, and apoptosis, as well as increases autophagy in MIN-6 pancreatic β -cells when used at a concentration of 5 $\mu\text{g/ml}$.¹ Gymnemic acid I has been used as a reference compound to compare the potency of plant-derived sweet taste inhibitors.²

References

1. Wu, Y., Hu, Y., Yuan, Y., *et al.* Gymnemic acid I triggers mechanistic target of rapamycin-mediated β cells cytoprotection through the promotion of autophagy under high glucose stress. *J. Cell. Physiol.* **234**(6), 9370-9377 (2019).
2. Kinghorn, A.D., Chin, Y.-W., Pan, L., *et al.* Natural Products as Sweeteners and Sweetness Modifiers. *Comprehensive Natural Products II*, Mander, L. Liu, H.-W., 1st edition, Elsevier Science (2010).

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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