

PRODUCT INFORMATION



Montbretin A

Item No. 30651

CAS Registry No.: 115712-92-0

Formal Name: 2-[4-[[4-O-(6-deoxy- α -L-mannopyranosyl)- β -D-xylopyranosyl]oxy]-3,5-dihydroxyphenyl]-3-[[O- β -D-glucopyranosyl-(1 $\rightarrow$ 2)-O-6-O-[(2E)-3-(3,4-dihydroxyphenyl)-1-oxo-2-propen-1-yl]- β -D-glucopyranosyl-(1 $\rightarrow$ 2)-6-deoxy- α -L-mannopyranosyl]oxy]-5,7-dihydroxy-4H-1-benzopyran-4-one

Synonym: MbA

MF: C₅₃H₆₄O₃₃

FW: 1,229.1

Purity: $\geq$ 98%

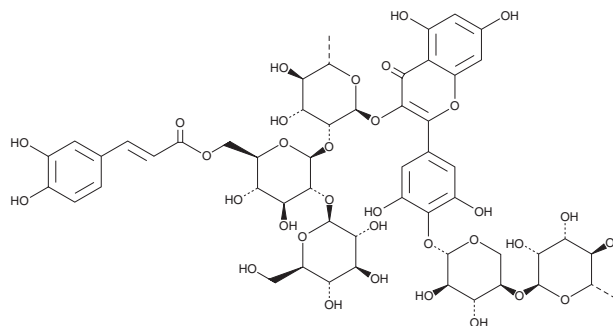
UV/Vis.: λ_{max} : 267, 329 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: $\geq$ 4 years

Item Origin: Plant/*Crocasmia* 'Lucifer'



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

Laboratory Procedures

Montbretin A is supplied as a crystalline solid. A stock solution may be made by dissolving the montbretin A in the solvent of choice, which should be purged with an inert gas. Montbretin A is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of montbretin A in these solvents is approximately 2 and 1 mg/ml, respectively.

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 montbretin A can be prepared by directly dissolving crystalline solid in aqueous buffers. The solubility of montbretin A in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Montbretin A is an acylated flavonol glycoside that has been found in *C. crocosmiiflora* and has antidiabetic activity.¹⁻³ It inhibits human pancreatic α -amylase and *B. fibrisolvens* amylase B (K_i s = 8.1 and 1,600 nM, respectively).³ Montbretin A reduces blood glucose levels in Zucker diabetic fatty rats when administered at a dose of 7.4 mg/kg per day.⁴

References

1. Asada, Y., Hirayama, Y., and Furuya. *Phytochemistry* **27**(5), 1497-1501 (1988).
2. Irmisch, S., Jo, S., Roach, C.R., et al. *Plant Cell* **30**(8), 1864-1886 (2018).
3. Williams, L.K., Zhang, X., Caner, S., et al. *Nat. Chem. Biol.* **11**(9), 691-696 (2015).
4. Yuen, V.G., Coleman, J., Withers, S.G., et al. *Mol. Cell Biochem.* **411**(1-2), 373-381 (2016).

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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