

PRODUCT INFORMATION



Herbicidin A

Item No. 23485

CAS Registry No.: 55353-31-6
Formal Name: (7R)-1-(6-amino-9H-purin-9-yl)-6,10-anhydro-1,5-dideoxy-2-O-methyl-D-arabino- α -L-ido-7-undeculo-7,3-pyranose-1,4-furanuronic acid, 8-[(2E)-2-(hydroxymethyl)-2-butenate], methyl ester

MF: C₂₃H₂₉N₅O₁₁

FW: 551.5

Purity: $\geq 95\%$

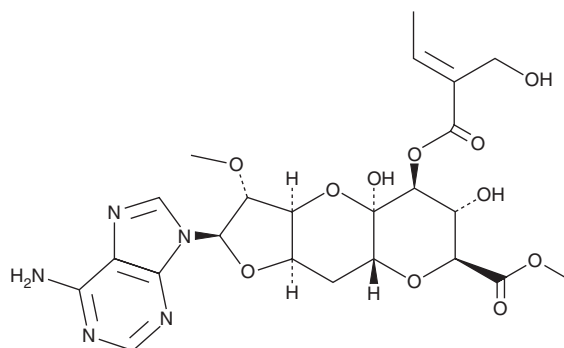
UV/Vis.: λ_{max} : 260 nm

Supplied as: A solid

Storage: -20°C

Stability: ≥ 4 years

Item Origin: Bacterium/*Streptomyces* sp. MST-94754



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

Laboratory Procedures

Herbicidin A is supplied as a solid. A stock solution may be made by dissolving the herbicidin A in the solvent of choice, which should be purged with an inert gas. Herbicidin A is soluble in ethanol, methanol, DMSO, and dimethyl formamide.

Description

Herbicidin A is an adenine nucleoside antibiotic originally isolated from *S. saganonensis* that exhibits herbicidal activity, particularly against dicotyledonous plants.^{1,2} It prevents rice seed germination (MIC = 6.25 $\mu\text{g/ml}$) and completely protects young rice plants from *X. oryzae*-induced leaf blight when applied at 100 ppm.¹ In HEK293 cells, herbicidin A inhibits TNF- α -induced NF- κ B activity and induces cytotoxicity (IC₅₀s = 1.8 and 2.7 μM , respectively).³

References

1. Arai, M., Haneishi, T., Kitahara, N., *et al.* Herbicidins A and B, two new antibiotics with herbicidal activity. I. Producing organism and biological activities. *J. Antibiot. (Tokyo)* **29(9)**, 863-869 (1976).
2. Yoshikawa, H., Takiguchi, Y., and Terao, M. Terminal steps in the biosynthesis of herbicidins, nucleoside antibiotics. *J. Antibiot. (Tokyo)* **36(1)**, 30-35 (1983).
3. Chai, X., Youn, U.J., Sun, D., *et al.* Herbicidin congeners, undecose nucleosides from an organic extract of *Streptomyces* sp. L-9-10. *J. Nat. Prod.* **77(2)**, 227-233 (2014).

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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