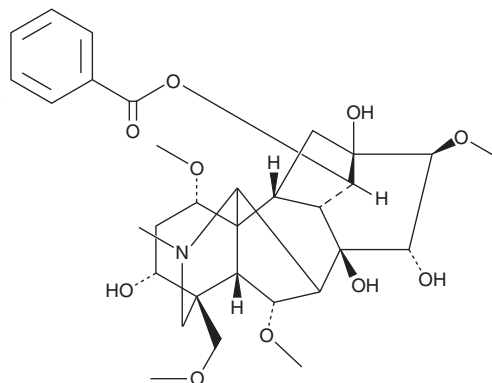


PRODUCT INFORMATION

Benzoylmesaconine

Item No. 33238

CAS Registry No.: 63238-67-5
Formal Name: 1 α ,6 α ,16 β -trimethoxy-4-(methoxymethyl)-20-methyl-aconitane-3 α ,8,13,14 α ,15 α -pentol, 14-benzoate
Synonym: 14-Benzoylmesaconine
MF: C₃₁H₄₃NO₁₀
FW: 589.7
Purity: \geq 98%
UV/Vis.: λ_{max} : 228 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: \geq 4 years
Item Origin: Plant/*Aconitum carmichaelii*



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

Laboratory Procedures

Benzoylmesaconine is supplied as a crystalline solid. A stock solution may be made by dissolving the benzoylmesaconine in the solvent of choice, which should be purged with an inert gas. Benzoylmesaconine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of benzoylmesaconine in these solvents is approximately 30 mg/ml.

Benzoylmesaconine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, benzoylmesaconine should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Benzoylmesaconine has a solubility of approximately 0.16 mg/ml in a 1:5 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Benzoylmesaconine is an alkaloid that has been found in *A. carmichaelii* and has diverse biological activities.¹⁻³ It promotes isolated rat liver mitochondrial energy metabolism ($EC_{50} = 30.95 \mu\text{g/ml}$).¹ Benzoylmesaconine (1 $\mu\text{g/kg}$) increases survival in a mouse model of burn-associated herpes simplex virus type 1 (HSV1) infection from 5 to 90%.² It also increases the latency to tail withdrawal or a struggling response in a tail pressure test in mice ($ED_{50} = 38.9 \text{ mg/kg}$).³

References

1. Zhang, D.-K., Yang, Z.-R., Han, X., *et al.* Microcalorimetric investigation of six alkaloids from *Radix Aconite Lateralis Preparata* (Fuzi) on the metabolic activity of mitochondria isolated from rat liver. *J. Therm. Anal. Calorim.* **130**, 1707-1715 (2017).
2. Kobayashi, M., Kobayashi, H., Mori, K., *et al.* The regulation of burn-associated infections with herpes simplex virus type 1 or *Candida albicans* by a non-toxic aconitine-hydrolysate, benzoylmesaconine. Part 2: Mechanism of the antiviral action. *Immunol. Cell Biol.* **76(3)**, 209-216 (1998).
3. Taki, M., Niitu, K., Omiya, Y., *et al.* 8-O-Cinnamoylneoline, a new alkaloid from the flower buds of *Aconitum carmichaelii* and its toxic and analgesic activities. *Planta Med.* **69(9)**, 800-803 (2003).

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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