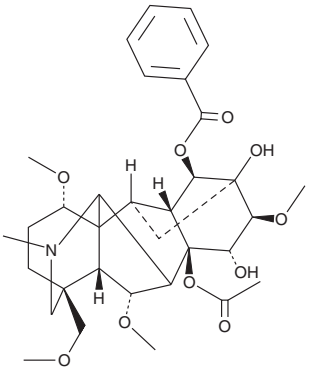
PRODUCT INFORMATION

Hypaconitine

Item No. 29656

CAS Registry No.:	6900-87-4
Formal Name:	(1α,6α,14α,15α,16β)-1,6,16-trimethoxy-4-(methoxymethyl)-20-methyl-aconitane-8,13,14,15-tetrol, 8-acetate 14-benzoate
MF:	$C_{33}H_{45}NO_{10}$
FW:	615.7
Purity:	≥95%
UV/Vis.:	λ_{max}: 231 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Aconitum carmichaelii* Debx



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

Laboratory Procedures

Hypaconitine is supplied as a solid. A stock solution may be made by dissolving the hypaconitine in the solvent of choice, which should be purged with an inert gas. Hypaconitine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of hypaconitine in these solvents is approximately 5, 10, and 15 mg/ml, respectively.

Hypaconitine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, hypaconitine should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Hypaconitine has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Hypaconitine is a diterpene alkaloid that has been found in *Aconitum* and has diverse biological activities.[1,2] It inhibits nerve stimulation-evoked contractions in isolated mouse phrenic nerve-diaphragm muscle preparations (IC_{50} = 118 nM).[1] Hypaconitine (0.025 mg/kg) prevents carrageenan-induced paw edema and reduces acetic acid-induced writhing in mice (ED_{50} = 0.1 mg/kg).[2,3] Hypaconitine is toxic to mice (LD_{50} = 1.9 mg/kg, s.c.).[3]

References

1. Muroi, M., Kimura, I., and Kimura, M. Blocking effects of hypaconitine and aconitine on nerve action potentials in phrenic nerve-diaphragm muscles of mice. *Neuropharmacology* **29(6)**, 567-572 (1990).
2. Nesterova, Y.V., Povetieva, T.N., Suslov, N.I., *et al.* Anti-inflammatory activity of diterpene alkaloids from *Aconitum baikalense*. *Bull. Exp. Biol. Med.* **156(5)**, 665-668 (2014).
3. Murayama, M., Mori, T., Bando, H., *et al.* Studies on the constituents of Aconitum species. IX. The pharmacological properties of pyro-type aconitine alkaloids, components of processed aconite powder 'kako-bushi-matsu': Analgesic, antiinflammatory and acute toxic activities. *J. Ethnopharmacol.* **35(2)**, 159-164 (1991).

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