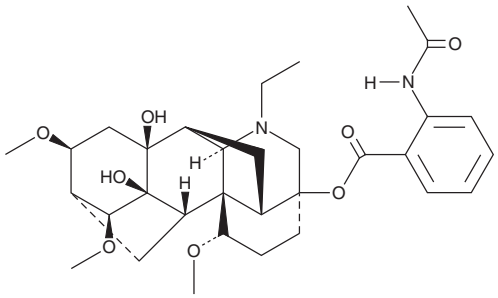
PRODUCT INFORMATION

Lappaconitine

Item No. 28747

CAS Registry No.:	32854-75-4
Formal Name:	20-ethyl-1α,14α,16β-trimethoxy-aconitane-4,8,9-triol 4-[2-(acetylamino)benzoate]
MF:	$C_{32}H_{44}N_2O_8$
FW:	584.7
Purity:	≥90%
UV/Vis.:	λ_{max}: 223, 253, 310 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Aconitum sinomontanum*



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

Laboratory Procedures

Lappaconitine is supplied as a solid. A stock solution may be made by dissolving the lappaconitine in the solvent of choice, which should be purged with an inert gas. Lappaconitine is soluble in the organic solvent chloroform at a concentration of approximately 30 mg/ml.

Description

Lappaconitine is a diterpene alkaloid that has been found in *A. sinomontanum* and has diverse biological activities.[1-3] It is an inhibitor of voltage-gated sodium channel 1.7 ($Na_v1.7$; IC_{50} = 27.67 µM for the human channel).[2] Lappaconitine has antiarrhythmic activity in a rat model of aconitine-induced arrhythmia with an ED_{50} value of 0.05 µg/kg.[3] It increases the mechanical and thermal paw withdrawal thresholds in rats in a model of spinal nerve ligation-induced neuropathic pain (ED_{50}s = 1.1 and 1.6 mg/kg, respectively).[1]

References

1. Sun, M.L., Ao, J.-P., Wang, Y.-R., *et al.* Lappaconitine, a C18-diterpenoid alkaloid, exhibits antihypersensitivity in chronic pain through stimulation of spinal dynorphin A expression. *Psychopharmacology (Berl.)* **235(9)**, 2559-2571 (2018).
2. Li, Y.-F., Zheng, Y.-M., Yu, Y., *et al.* Inhibitory effects of lappaconitine on the neuronal isoforms of voltage-gated sodium channels. *Acta Pharmacol. Sin.* **40(4)**, 451-459 (2019).
3. Dzhakhangirov, F.N., Sultankhodzhaev, M.N., Tashkhodzhaev, B., *et al.* Diterpenoid alkaloids as a new class of antiarrhythmic agents. Structure-activity relationship. *Chem. Nat. Compd.* **33(2)**, 190-202 (1997).

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