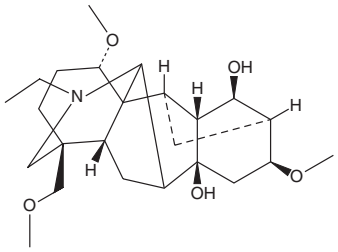
PRODUCT INFORMATION

Talatisamine

Item No. 27721

CAS Registry No.: 20501-56-8
Formal Name: 20-ethyl-1α,16β-dimethoxy-4-(methoxymethyl)-aconitane-8,14α-diol
MF: $C_{24}H_{39}NO_5$
FW: 421.6
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Aconitum tenuifolia*



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

Laboratory Procedures

Talatisamine is supplied as a crystalline solid. A stock solution may be made by dissolving the talatisamine in the solvent of choice, which should be purged with an inert gas. Talatisamine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of talatisamine in these solvents is approximately 10, 2, and 1 mg/ml, respectively.

Description

Talatisamine is a diterpene alkaloid originally isolated from *A. talassicum* and has diverse biological activities.[1-5] It blocks delayed rectifier potassium (I_K) current in rat hippocampal neurons (IC_{50} = 146 µM).[3] Talatisamine reduces increases in I_K current and cytotoxicity in primary rat cortical neurons induced by amyloid-β (1-40) (Aβ40; Item No. 21617).[4] It inhibits barium chloride-induced contractions in isolated rat intenstines (EC_{50} = 200 µM).[2] Talatisamine exhibits feeding deterrent activity against red flour beetle (*T. castaneum*) adults (EC_{50} = 342.8 ppm).[5]

References

1. Konovalova, R.A. and Orekhov, A.P. Aconite alkaloids. I. Alkaloids of aconitum talassicum. *B. Soc. Chim. Fr.* **7**, 95-105 (1940).
2. Dzhakhangirov, F.N., Tursunkhodzhaeva, F.M., Sultankhodzhaev, M.N., *et al.* Spasmolytic activity of diterpenoid alkaloids and their derivatives. Structure-activity relationship. *Chem. Nat. Compd.* **49(4),** 702-706 (2013).
3. Song, M.K., Liu, H., Jiang, H.L., *et al.* Discovery of talatisamine as a novel specific blocker for the delayed rectifier K^+ channels in rat hippocampal neurons. *Neuroscience* **155(2),** 469-475 (2008).
4. Wang, Y., Song, M., Hou, L., *et al.* The newly identified K^+ channel blocker talatisamine attenuates beta-amyloid oligomers induced neurotoxicity in cultured cortical neurons. *Neurosci. Lett.* **518(2),** 122-127 (2012).
5. Liu, Z.L., Cao, J., Zhang, H.M., *et al.* Feeding deterrents from *Aconitum episcopale* roots against the red flour beetle, *Tribolium castaneum*. *J. Agric. Food Chem.* **59(8),** 3701-3706 (2011).

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