LKT Laboratories, Inc.

Dihydromethysticin

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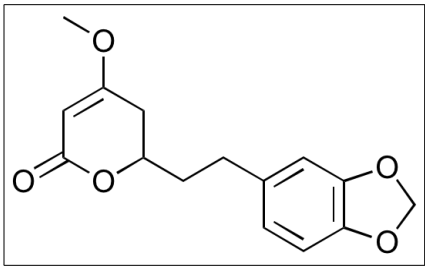
Product Information

Product ID D3227
CAS No. 19902-91-1
Chemical Name

Synonym 2H-Pyran-2-one,6-(2-(1,3-benzodioxol-5-yl)ethyl)-5,6-dihydro-4-methoxy-, (S)-, 7,8-Dihydromethysticin

Formula $C_{15}H_{16}O_5$
Formula Wt. 276.28
Melting Point
Purity ≥98%
Solubility



Bulk quanitites available upon request

Product ID	Size
D3227	1 mg
D3227	5 mg
D3227	10 mg

Store Temp -20˚C
Ship Temp Ambient

Description Dihydromethysticin is a kavalactone originally found in *Piper methysticum* (kava plant) that exhibits antifungal, antiepileptic/anticonvulsant, neuroprotective, anticancer, and chemopreventive activities. This compound displays antimicrobial efficacy against species of *Fusarium*, *Trichoderma*, and *Colletotrichum*. Dihydromethysticin also binds receptor site 2 and inhibits voltage-gated Na+ channels; it inhibits L-type voltage-gated Ca2+ channels as well. In vivo, dihydromethysticin inhibits the formation of NNK-induced tumors and, separately, protects against cerebral ischemia-induced damage.

References

Narayanapillai SC, Balbo S, Leitzman P, et al. Dihydromethysticin (DHM) from kava blocks tobacco carcinogen 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK)-induced lung tumorigenesis and differentially reduces DNA damage in A/J mice. Carcinogenesis. 2014 Jul 22. [Epub ahead of print]. PMID: 25053626.

Xuan TD, Elzaawely AA, Fukuta M, et al. Herbicidal and Fungicidal Activities of Lactones in Kava (Piper methysticum). J Agric Food Chem. 2006 Feb 8;54(3):720-5. PMID: 16448174.

Friese J, Gleitz J. Kavain, dihydrokavain, and dihydromethysticin non-competitively inhibit the specific binding of [3H]-batrachotoxinin-A 20-alpha-benzoate to receptor site 2 of voltage-gated Na+ channels. Planta Med. 1998 Jun;64(5):458-9. PMID: 9690349.

Backhauss C, Krieglstein J. Extract of kava (Piper methysticum) and its methysticin constituents protect brain tissue against ischemic damage in rodents. Eur J Pharmacol. 1992 May 14;215(2-3):265-9. PMID: 1396990.