

Product Data Sheet

Product Name: Ricinine
Cat. No.: GC49485

Chemical Properties

Cas. No. 524-40-3

SMILES N#CC1=C(C=CN(C)C1=O)OC

Formula C₈H₈N₂O₂

M.Wt 164.2

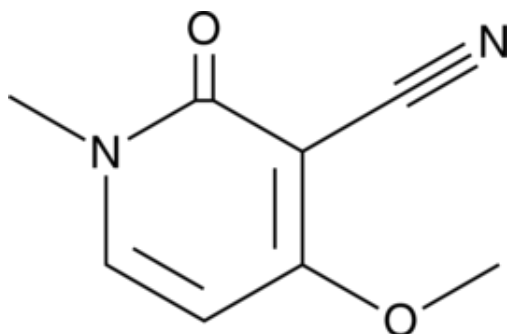
Solubility DMSO: slightly soluble, Methanol: slightly soluble

Storage Store at -20°C, protect from light

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Ricinine is a piperidine alkaloid that has been found in *R. communis* and has diverse biological activities.^{1,2,3,4} It is an inhibitor of acetylcholinesterase (AChE; IC₅₀ = 54.5 µg/ml).² It scavenges ABTS radicals and chelates iron (IC₅₀s = 102.65 and 104.32 µg/ml, respectively). Ricinine is toxic to adult *A. gambiae* when used at a concentration of 0.04 mg/ml in a feeding assay.³ It is also toxic to mice with an intraperitoneal LD₅₀ value of 340 mg/kg but an oral LD₅₀ value of 3,000 mg/kg.¹ It has been used as a biomarker of ricin poisoning.⁴

1. Franke, H., Scholl, R., and Aigner, A. Ricin and Ricinus communis in pharmacology and toxicology-

Caution: Product has not been fully validated for medical applications. For research use only.

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from ancient use and "Papyrus Ebers" to modern perspectives and "poisonous plant of the year 2018" Naunyn Schmiedeberg's Arch. Pharmacol. 392(10):1181-1208 (2019). 2. Khan, B.R., Ghous, T., Rasheed, A., et al. Evaluation of anti-acetylcholinesterase activity and antioxidant potential of ricinine (a central nervous system stimulant) isolated from *Ricinus communis* L.J. Chem. Soc. Pak. 38(2):326-332 (2016). 3. Wachira, S.W., Omar, S., Jacob, J.W., et al. Toxicity of six plant extracts and two pyridone alkaloids from *Ricinus communis* against the malaria vector *Anopheles gambiae* Parasit. Vectors 7:312 (2014). 4. Johnson, R.C., Lemire, S.W., Woolfitt, A.R., et al. Quantification of ricinine in rat and human urine: A biomarker for ricin exposure J. Anal. Toxicol. 29(3):149-155 (2005).

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