

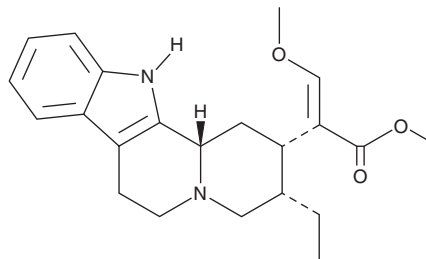
# PRODUCT INFORMATION



## Corynantheidine

Item No. 37859

**CAS Registry No.:** 23407-35-4  
**Formal Name:** (αE,2S,3S,12bS)-3-ethyl-1,2,3,4,6,7,12,12b-octahydro-α-(methoxymethylene)-indolo[2,3-a]quinolizine-2-acetic acid, methyl ester  
**Synonyms:** (-)-Corynantheidine, 9-demethoxy Mitragynine  
**MF:** C<sub>22</sub>H<sub>28</sub>N<sub>2</sub>O<sub>3</sub>  
**FW:** 368.5  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 227 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

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

### Description

Corynantheidine is an alkaloid that has been found in *M. speciosa* (Kratom in Thai) and has antinociceptive activity.<sup>1,2</sup> It is a partial agonist of the μ-opioid receptor that lacks β-arrestin recruitment activity.<sup>1</sup> Corynantheidine selectively binds to μ-opioid receptors over κ- and δ-opioid receptors (K<sub>i</sub>s = 57.1, 385.4, and 172 nM, respectively, for the mouse receptors) and is selective for the μ-opioid receptor (EC<sub>50</sub> = 104.24 nM) over the κ- and δ-opioid receptors, for which it has no activity, in [<sup>35</sup>S]GTPγS assays. It also binds to α<sub>1D</sub>- and α<sub>2A</sub>-adrenergic receptors and NMDA receptors (K<sub>i</sub>s = 41, 74, and 83 nM, respectively, for the human receptors), among others.<sup>1,2</sup> Corynantheidine (10-100 nmol, i.c.v.) increases the latency to tail withdrawal in the tail-flick test in mice.<sup>1</sup>

### References

1. Chakraborty, S., Uprety, R., Daibani, A.E., *et al.* Kratom alkaloids as probes for opioid receptor function: Pharmacological characterization of minor indole and oxindole alkaloids from kratom. *ACS Chem. Neurosci.* **12**(14), 2661-2678 (2021).
2. Obeng, S., Kamble, S.H., Reeves, M.E., *et al.* Investigation of the adrenergic and opioid binding affinities, metabolic stability, plasma protein binding properties, and functional effects of selected indole-based kratom alkaloids. *J. Med. Chem.* **63**(1), 433-439 (2020).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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