# Data Sheet

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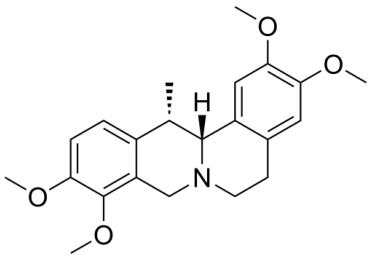
| **Product Name:** | Corydaline |
| **Cat. No.:** | CS-4248 |
| **CAS No.:** | 518-69-4 |
| **Molecular Formula:** | $C_{22}H_{27}NO_4$ |
| **Molecular Weight:** | 369.45 |
| **Target:** | Cholinesterase (ChE); Enterovirus; Opioid Receptor |
| **Pathway:** | Anti-infection; GPCR/G Protein; Neuronal Signaling |
| **Solubility:** | DMSO : 33.33 mg/mL (ultrasonic) |




## BIOLOGICAL ACTIVITY:

Corydaline ((+)-Corydaline), an isoquinoline alkaloid isolated from ***Corydalis yanhusuo***, is an **AChE** inhibitor with an **$IC_{50}$** of 226 μM. Corydaline is a **μ-opioid receptor** (**$K_i$** of 1.23 μM) agonist and inhibits **enterovirus 71 (EV71)** replication (**$IC_{50}$** of 25.23 μM). Corydaline has anti-angiogenic, anti-allergic and gastric-emptying and antinociceptive activities[1][2][3]. IC50 & Target: IC50: 226 μM (AChE)[1]; 25.23 μM (Enterovirus 71)[2]
Ki: 1.23 μM (μ-opioid receptor)[3] ***In Vitro:*** Corydaline (12.5-50 μM; 24 hours) treatment inhibits EV71 replication by suppressing the COX-2 expression and the phosphorylation of JNK MAPK and P38 MAPK but not ERK MAPK in vitro[2].
Corydaline could inhibit the viral RNA synthesis in a dose dependent manner[2]. ***In Vivo:*** Corydaline (10 mg/kg; subcutaneous administration; once) treatment shows antinociceptive effects in mice by significantly inhibiting the writhing behavior[3].

## References:

[1]. Hai-Tao Xiao, et al. Acetylcholinesterase inhibitors from Corydalis yanhusuo. Nat Prod Res. 2011 Sep;25(15):1418-22.

[2]. Hui-Qiang Wang, et al. Corydaline inhibits enterovirus 71 replication by regulating COX-2 expression. J Asian Nat Prod Res. 2017 Nov;19(11):1124-1133.

[3]. Teresa Kaserer, et al. Identification and characterization of plant-derived alkaloids, corydine and corydaline, as novel mu opioid receptor agonists. Sci Rep. 2020 Aug 14;10(1):13804.

## CAIndexNames:

6H-Dibenzo[a,g]quinolizine, 5,8,13,13a-tetrahydro-2,3,9,10-tetramethoxy-13-methyl-, (13S,13aR)-

## SMILES:

C[C@@H](C1=CC=C2OC)[C@]3([H])C4=CC(OC)=C(OC)C=C4CCN3CC1=C2OC

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

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