



# Emetine

# Data Sheet

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<b>Catalog Number:</b>	MC11116	<b>Product Type:</b>	Small Molecule
<b>Bio-Activity:</b>	Protein synthesis inhibitor; Antiparasitic, antiviral	<b>CAS #:</b>	483-18-1
<b>Research Categories:</b>	Cell death, vesicles, parasites, infectious disease, cancer	<b>Chemical Name:</b>	(2S,3R,11bS)-3-ethyl-1,3,4,6,7,11b-hexahydro-9,10-dimethoxy-2-[(1R)-1,2,3,4-tetrahydro-6,7-dimethoxy-1-isoquinoliny]methyl]-2H-benzo[a]quinolizine, dihydrochloride, hydrate
<b>Solubility:</b>	Soluble in Water (up to 100 mg/ml)	<b>Molecular Formula:</b>	C29H40N2O4 • 2HCl [XH2O]
<b>Purity:</b>	> 98%	<b>Molecular Weight:</b>	553.6
<b>Format:</b>	Powder	<b>Ship Temp:</b>	Ambient
<b>Storage:</b>	-20°C		

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## Application Notes

### Description/Data:

One of the active ingredients of ipecac root extract, used as an emetic [1]. Induces apoptosis in breast cancer cells via inhibition of Wnt/β-catenin signaling [2]. Inhibits Zika and Ebola virus in vitro and in vivo, targeting viral entry and replication by inhibiting viral RNA polymerase and host lysosomal function [3]. Also inhibits SARS-CoV-2 replication in cells (EC50 for viral load reduction is 0.46 □M) [4]. A useful agent for inhibiting protein synthesis in eukaryotic cells by virtue of its inhibition of the ribosome 40S subunit [5].

### References:

- 1) Lee et al. (2008), Ipecacuanha: the South American vomiting root; *J R Coll. Physicians Edinb.*, 38 355
- 2) Sun et al. (2019), Emetine Exhibits Anticancer Activity in Breast Cancer Cells as an Antagonist of Wnt/β-catenin Signaling; *Oncol. Rep.*, 42 1735
- 3) Yang et al. (2018), Changing cancer survival in China during 2003-2015: a pooled analysis of 17 population-based cancer registries; *Cell Discov.*, 4 31
- 4) Choy et al. (2020), Remdesivir, Lopinavir, and Homoharringtonine Inhibit SARS-CoV-2 Replication in Vitro; *Antivir. Res.*, 178 104786

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5) Cuyas et al. (2015), Anti-protozoal and Anti-Bacterial Antibiotics That Inhibit Protein Synthesis Kill Cancer Subtypes Enriched for Stem Cell-Like Properties; Cell Cycle, 14 3527

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