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DATASHEET

Emetine dihydrochloride

Product overview

Name	Emetine dihydrochloride
Cat No	HB7389
Biological action	Inhibitor
Purity	>98%
Description	Protein synthesis inhibitor

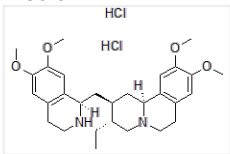
Biological Data

Biological description	Protein synthesis inhibitor with anti-protozoal effects. It binds to the ribosomal E site of Plasmodium falciparum to inhibit malaria. Also shows antiviral effects against various RNA and DNA viruses including Zika and HIV-1). Also identified to inhibit hCoV-OC43, hCoV-NL43, SARS-CoV, MERS-CoV, and MHV-A59 in vitro with EC ₅₀ values reported at low micro-molar range and can effectively inhibit SARS-CoV-2 virus replication.
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Solubility & Handling

Storage instructions	Store at +4 °C
Solubility overview	Soluble in water
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

Chemical Data

Chemical name	(2S,3R,11bS)-2-[[[(1R)-6,7-Dimethoxy-1,2,3,4-tetrahydroisoquinolin-1-yl]methyl]-3-ethyl-9,10-dimethoxy-2,3,4,6,7,11b-hexahydro-1H-pyrido [2,1-a]isoquinoline dihydrochloride hydrate
Molecular Weight	480.64
Chemical structure	
Molecular Formula	C ₂₉ H ₄₀ N ₂ O ₄ ·2HCl
CAS Number	7083-71-8
PubChem identifier	201899
SMILES	CC[C@H]1CN2CCC3=CC(=C(C=C3[C@H]2C[C@@H]1C[C@@H]4C5=CC(=C(C=C5CCN4)OC)OC)OC)OC.O.Cl.Cl
InChi	InChI=1S/C29H40N2O4.2ClH.H2O/c1-6-18-17-31-10-8-20-14-27(33-3)29(35-5)16-23(20)25(31)12-21(18)11-24-22-15-28(34-4)26(32-2)13-19(22)7-9-30-24;;;/h13-16,18,21,24-25,30H,6-12,17H2,1-5H3;2*1H;1H2/t18-,21-,24+,25-;;/m0.../s1
InChiKey	IZTPMTAWOCEKKM-VXMYZLRESA-N
MDL number	MFCD00149309
Appearance	White powder

References

Remdesivir, lopinavir, emetine, and homoharringtonine inhibit SARS-CoV-2 replication in vitro

Choy et al (2020) Antiviral Res. 178

PubMedID [32251767](#)

Structural basis for inhibition of protein synthesis by emetine and cycloheximide based on an analogy between ipecac alkaloids and glutarimide antibiotics

Grollman (1966) Proc Natl Acad Sci USA 56(6)

PubMedID [16591432](#)

The alkaloid emetine as a promising agent for the induction and enhancement of drug-induced apoptosis in leukemia cells

Moeller et al (2007) Oncol Rep. 18(3)

PubMedID [17671728](#)
