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DATASHEET

Emetine dihydrochloride

Product overview

Emetine dihydrochloride Name

Cat No HB7389 **Biological action** Inhibitor >98% **Purity**

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 EC50 values reported at low micro-molar range and can effectively inhibit SARS-CoV-2 virus replication.

Solubility & Handling

Solubility overview Soluble in water Storage instructions Store at +4°C

Storage of solutions Prepare and use solutions on the same day if possible. Store solutions at -20 °C for up to one month if

storage is required. Equilibrate to RT and ensure the solution is precipitate free before use.

Shipping Conditions Stable for ambient temperature shipping. Follow storage instructions on receipt. **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

SMILES

Molecular Formula C29H40N2O4.2HCI **CAS Number** 7083-71-8 **PubChem identifier** 201899

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.CI.CI

InChi InChI=1S/C29H40N2O4.2CIH.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,6-12,17H2,1-5H

3;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