Data Sheet (Cat.No.T3524)

TargetMol

Halofuginone hydrobromide

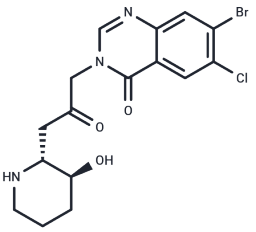
Chemical Properties

CAS No. : 64924-67-0

Formula: C16H17BrClN3O3.HBr

Molecular Weight: 495.59

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.



Biological Description

Description	Halofuginone specifically inhibits collagen type I gene expression and matrix metalloproteinase 2 (MMP-2) gene expression, which may result in the suppression of angiogenesis, tumor stromal cell development, and tumor cell growth. Halofuginone Hydrobromide is the hydrobromide salt of halofuginone, a semisynthetic quinazolinone alkaloid anticoccidial derived from the plant Dichroa febrifuga, with antifibrotic and potential antineoplastic activities. These effects appear to be due to halofuginone-mediated inhibition of the collagen type I and MMP-2 promoters. Collagen type I and MMP-2 play important roles in fibroproliferative diseases.
Targets(IC50)	Calcium Channel,Parasite,DNA/RNA Synthesis,Sodium Channel,TGF-beta/Smad

Solubility Information

Solubility	DMSO: 17 mg/mL (34.3 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (4.04 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0178 mL	10.089 mL	20.178 mL
5 mM	0.4036 mL	2.0178 mL	4.0356 mL
10 mM	0.2018 mL	1.0089 mL	2.0178 mL
50 mM	0.0404 mL	0.2018 mL	0.4036 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Zhou H. et al. ATP-directed capture of bioactive herbal-based medicine on human tRNA synthetase. Nature. 2013 Feb 7;494(7435):121-4.
Kaduk J A, Gates-Rector S, Blanton T N. Crystal structure of halofuginone hydrobromide, C16H18BrClN3O3Br. Powder Diffraction. 2022: 1-8.
Keller TL., et al. Halofuginone and other febrifugine derivatives inhibit prolyl-tRNA synthetase. Nat Chem Biol. 2012 Feb 12;8(3):311-7.
Zhu J, Wei J, Lin Y, et al.Inhibition of IL-17 signaling in macrophages underlies the anti-arthritic effects of halofuginone hydrobromide: Network pharmacology, molecular docking, and experimental validation.BMC Complementary Medicine and Therapies.2024, 24(1): 1-12.