

HDAC-IN-76

Chemical Properties

CAS No. :

Formula: C₂₇H₂₆N₄O₄

Molecular Weight: 470.52

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	HDAC-IN-76 (compound 6i), a histone deacetylase (HDAC) inhibitor, demonstrates robust antimalarial activity, particularly against the asexual blood stages of Plasmodium. The compound exhibits potent efficacy with IC ₅₀ values of 30 nM and 98 nM against Pf3D7 (chloroquine drug-susceptible strain) and PfDd2 (chloroquine drug-resistant strain), respectively. Moreover, HDAC-IN-76 shows selective inhibition towards parasites, displaying IC ₅₀ values of 7 nM and 9 nM against human HDAC1 and HDAC6, respectively, and effectively inhibits PfHDAC1.
Targets(IC ₅₀)	HDAC
In vitro	HDAC-IN-76 exhibits low cytotoxicity in HEK293 cells. At a concentration of 1 μM, HDAC-IN-76 effectively inhibits PfHDAC1 with an inhibition rate of 70.2%. It shows minimal activity against liver-stage parasites (IC ₅₀ PbEEF [Plasmodium berghei exo-erythrocytic form]=0.25 μM), displays good microsomal stability (t _{1/2} > 60 min) and has low toxicity in HEK293 cells (IC ₅₀ =136 μM, selectivity index SI=544). Additionally, HDAC-IN-76 readily penetrates HepG2 cells and inhibits HDAC activity.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1253 mL	10.6265 mL	21.2531 mL
5 mM	0.4251 mL	2.1253 mL	4.2506 mL
10 mM	0.2125 mL	1.0627 mL	2.1253 mL
50 mM	0.0425 mL	0.2125 mL	0.4251 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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