

FIT-039

Chemical Properties

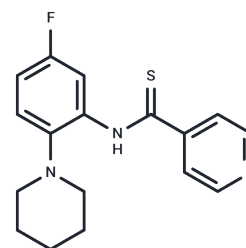
CAS No. : 1113044-49-7

Formula: C17H18FN3S

Molecular Weight: 315.41

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	FIT-039 is a selective and ATP-competitive, orally active inhibitor of CDK9(IC50 : 5.8 µM; CDK9/cyclin T1). FIT-039 inhibits replication of HSV-1 (IC50 of 0.69 µM), HSV-2, human adenovirus, and human CMV. FIT-039 is a promising antiviral agent for inhibiting drug-resistant HSVs and other DNA viruses.
Targets(IC50)	CDK,HSV,DNA/RNA Synthesis,Virus Protease
In vitro	FIT-039 inhibits HPV replication and expression of E6 and E7 viral oncogenes, restoring tumor suppressors p53 and pRb in HPV+ cervical cancer cells. The therapeutic effect of FIT-039 was demonstrated in CIN model of an organotypic raft culture, where FIT-039 suppressed HPV18-induced dysplasia/hyperproliferation with reduction in viral load. FIT-039 also repressed growth of HPV16+, but not HPV- cervical cancer xenografts without any significant adverse effects. Safety and pharmacokinetics of FIT-039 were confirmed for systemic and topical routes[1].
Cell Research	Examined FIT-039 for its effect on HPV gene expression in HPV+ cervical cancer cells. Primary keratinocytes monolayer and organotypic raft culture models were used to evaluate HPV viral replication and cervical intraepithelial neoplasia (CIN) phenotypes. Preclinical pharmacokinetics and toxicity tests for FIT-039 were also conducted. Finally, the anti-HPV effect of FIT-039 was further examined in vivo, using HPV+ cervical cancer xenografts[1]

Solubility Information

Solubility	DMSO: 30 mg/mL (95.11 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 2 mg/mL (6.34 mM),Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.1705 mL	15.8524 mL	31.7048 mL
5 mM	0.6341 mL	3.1705 mL	6.341 mL
10 mM	0.317 mL	1.5852 mL	3.1705 mL
50 mM	0.0634 mL	0.317 mL	0.6341 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

Ajiro M , Sakai H , Onogi H , et al. CDK9 Inhibitor FIT-039 Suppresses Viral Oncogenes E6 and E7 and Has a Therapeutic Effect on HPV-Induced Neoplasia.[J]. 2018.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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