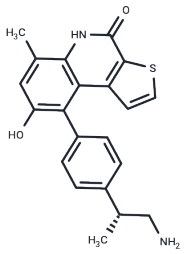
Data Sheet (Cat.No.T4134L)

TargetMol

OTS514

Chemical Properties



CAS No. : 1338540-63-8

Formula: C21H20N2O2S

Molecular Weight: 364.46

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	OTS514 (OTS514 Hydrochloride) is a potent TOPK inhibitor. OTS514 exhibits a growth-suppressive effect on small cell lung cancer. OTS514 effectively suppressed the growth of SCLC cell lines (IC50: 0.4 ~ 42.6 nM). Treatment with OTS514 suppressed forkhead box protein M1 (FOXM1) activity. OTS514 treatment reduced CD90-positive SCLC cells and showed a higher cytotoxic effect against lung sphere-derived CSC-like SCLC cells.
Targets(IC50)	Apoptosis,TOPK

Solubility Information

Solubility	DMSO: 90 mg/mL (246.94 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: 3.3 mg/mL (9.05 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	2.7438 mL	13.7189 mL	27.4379 mL
5 mM	0.5488 mL	2.7438 mL	5.4876 mL
10 mM	0.2744 mL	1.3719 mL	2.7438 mL
50 mM	0.0549 mL	0.2744 mL	0.5488 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

Ikeda Y, Park JH, Miyamoto T, Takamatsu N, Kato T, Iwasa A, Okabe S, Imai Y, Fujiwara K, Nakamura Y, Hasegawa K. T-LAK Cell-Originated Protein Kinase (TOPK) as a Prognostic Factor and a Potential Therapeutic Target in Ovarian Cancer. Clin Cancer Res. 2016 Dec 15;22(24):6110-6117. PubMed PMID: 27334838.
TOPK Activation Exerts Protective Effects on Cisplatin-induced Acute Kidney Injury
Park JH, Inoue H, Kato T, Zewde M, Miyamoto T, Matsuo Y, Salgia R, Nakamura Y. TOPK (T-LAK cell-originated protein kinase) inhibitor exhibits growth suppressive effect on small cell lung cancer. Cancer Sci. 2017 Jan 11. doi: 10.1111/cas.13160. [Epub ahead of print] PubMed PMID: 28075524.
Kato T, Inoue H, Imoto S, Tamada Y, Miyamoto T, Matsuo Y, Nakamura Y, Park JH. Oncogenic roles of TOPK and MELK, and effective growth suppression by small molecular inhibitors in kidney cancer cells. Oncotarget. 2016 Apr 5;7(14):17652-64. doi: 10.18632/oncotarget.7755. PubMed PMID: 26933922; PubMed Central PMCID: PMC4951240.
Alachkar H, Mutonga M, Malnassy G, Park JH, Fulton N, Woods A, Meng L, Kline J, Raca G, Odenike O, Takamatsu N, Miyamoto T, Matsuo Y, Stock W, Nakamura Y. T-LAK cell-originated protein kinase presents a novel therapeutic target in FLT3-ITD mutated acute myeloid leukemia. Oncotarget. 2015 Oct 20;6(32):33410-25. doi: 10.18632/oncotarget.5418. PubMed PMID: 26450903; PubMed Central PMCID: PMC4741775.