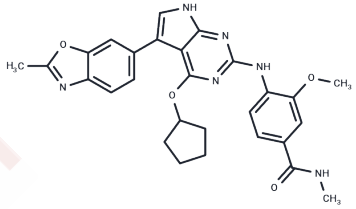
Data Sheet (Cat.No.T4482)

TargetMol

CC-671

Chemical Properties



CAS No. : 1618658-88-0

Formula: C28H28N6O4

Molecular Weight: 512.56

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	CC-671 is a dual inhibitor of TTK protein kinase (IC50: 0.005 μM) and CLK2 (IC50: 0.006 μM).
Targets(IC50)	CDK,Tyrosine Kinases
In vitro	HCT-116 cell lysates treated with CC-671 at 3 μM for 1 h demonstrates that only four kinases show cellular binding of 75% or more including CLK2, CAMKK2, PIP4K22, and JNK [1].
In vivo	CC-671 significantly inhibits tumor growth by 71% at doses of both 10 and 20 mg/kg on an every 3 days (q3d) dosing schedule, with no difference in efficacy between the two doses. However, it induces greater body weight loss at 20 mg/kg compared to 10 mg/kg (17% vs 5%)[1].
Kinase Assay	The kinase selectivity profile of CC-671 is assessed. The screen is conducted with the concentration of CC-671 held constant at 3 μM. The TTK binding affinity is measured using the kinase binding assays. The kinase binding assays are based on the binding and displacement of a proprietary, Alexa Fluor 647-labeled, ATP-competitive kinase inhibitor scaffold[1].
Animal Research	Female SCID mice are inoculated subcutaneously with 5×106 Cal-51 cells. Mice with tumours of approximately 125 mm3 are randomized and treated intravenously at various doses and schedules of CC-671 (n=8 to10/group). Tumours are measured twice a week for the duration of the study. The long and short axes of each a tumour are measured using a digital calliper in millimetres and the tumour volumes are calculated [1].

Solubility Information

Solubility	DMSO: 50 mg/mL (97.55 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 (3.9 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*

In vivo Formulation	*vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.951 mL	9.755 mL	19.5099 mL
5 mM	0.3902 mL	1.951 mL	3.902 mL
10 mM	0.1951 mL	0.9755 mL	1.951 mL
50 mM	0.039 mL	0.1951 mL	0.3902 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

Riggs JR, et al. The Discovery of a Dual TTK Protein Kinase/CDC2-Like Kinase (CLK2) Inhibitor for the Treatmentof Triple Negative Breast Cancer Initiated from a Phenotypic Screen. J Med Chem. 2017 Nov 9;60(21):8989-9002.