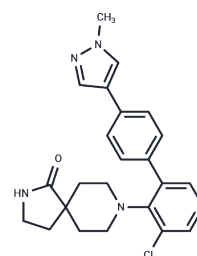


CCT251545

Chemical Properties

CAS No. :	1661839-45-7
Formula:	C ₂₃ H ₂₄ ClN ₅ O
Molecular Weight:	421.92
Storage:	Store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



Biological Description

Description	CCT251545 is an potent and oral-bioavailable WNT signaling inhibitor(IC ₅₀ of 5 nM in 7dF3 cells).
Targets(IC ₅₀)	Wnt/beta-catenin
In vitro	CCT251545, a small-molecule inhibitor of the WNT pathway discovered through cell-based screening, is a potent and selective chemical probe for the human Mediator complex-associated protein kinases CDK8 and CDK19 with >100-fold selectivity over 291 other kinases. X-ray crystallography demonstrates a type I binding mode involving insertion of the CDK8 C terminus into the ligand binding site. In contrast to type II inhibitors of CDK8 and CDK19, CCT251545 displays potent cell-based activity. We show that CCT251545 and close analogs alter WNT pathway-regulated gene expression and other on-target effects of modulating CDK8 and CDK19, including expression of genes regulated by STAT1. Consistent with this, we find that phosphorylation of STAT1(SER727) is a biomarker of CDK8 kinase activity in vitro and in vivo[1].
In vivo	In vivo, CCT251545 with WNT-dependent tumors activity[1].

Solubility Information

Solubility	DMSO: 1 mg/mL (2.37 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: 1 mg/mL (2.37 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	2.3701 mL	11.8506 mL	23.7012 mL
5 mM	0.474 mL	2.3701 mL	4.7402 mL
10 mM	0.237 mL	1.1851 mL	2.3701 mL
50 mM	0.0474 mL	0.237 mL	0.474 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

Dale T, et al. A selective chemical probe for exploring the role of CDK8 and CDK19 in human disease. *Nat Chem Biol.* 2015 Dec;11(12):973-980.

Wang C, Wang T, He Q, et al. Inhibition of the canonical Wnt/ β -catenin pathway interferes with macropinocytosis to suppress pseudorabies virus proliferation. *Veterinary Microbiology.* 2025: 110373.

Mallinger A, et al. Discovery of potent, orally bioavailable, small-molecule inhibitors of WNT signaling from a cell-based pathway screen. *J Med Chem.* 2015 Feb 26;58(4):1717-35.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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