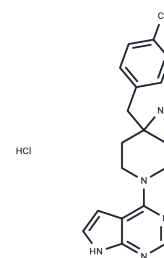


CCT128930 hydrochloride

Chemical Properties

CAS No. :	2453324-32-6
Formula:	C ₁₈ H ₂₁ Cl ₂ N ₅
Molecular Weight:	378.3
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	CCT128930 hydrochloride (CCT128930 hydrochloride) is a potent and selective inhibitor of AKT with IC ₅₀ of 6 nM. CCT128930 hydrochloride induces cell cycle arrest, DNA damage, and autophagy. CCT128930 hydrochloride has 28-fold selectivity over the closely related PKA kinase (IC ₅₀ : 168 nM) through the targeting of Met282 of AKT, as well as 20-fold selectivity over p70S6K (IC ₅₀ : 120 nM).
Targets(IC ₅₀)	Apoptosis,Akt,Autophagy,mTOR,PKA
In vitro	In U87MG human glioblastoma cells, CCT128930 hydrochloride(0.1-60 μM; 1 hour) shows an initial induction of AKT phosphorylation at serine 473 up to 20 μM, followed by a decreased in phosphorylation at higher concentrations[1]. CCT128930 (18.9 μM) hydrochloride causes an increase in phosphorylation of pSer473 AKT after 30 minutes, which is sustained for 48 hours. Total AKT protein signal decreases gradually from 8 hours to 48 hours of treatment[1]. The GI ₅₀ values of CCT128930 hydrochloride for growth inhibition are 6.3 μM for U87MG human glioblastoma cells, 0.35 μM for LNCaP human prostate cancer cells, and 1.9 μM for PC3 human prostate cancer cells, all of which are PTEN-deficient human tumor cell lines[1]. CCT128930 hydrochloride inhibits direct substrates of AKT (Ser9 GSK3β, pThr246 PRAS40 and pT24 FOXO1/p32 FOXO3a) at ≥5 μM, and the downstream target, pSer235/236 S6RP at ≥10 μM, with generally constant levels of the respective total proteins and GAPDH[1].
In vivo	CCT128930 hydrochloride shows antitumor activities in U87MG and BT474 human breast cancer xenografts[1].

Solubility Information

Solubility	DMSO: 55 mg/mL (145.39 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 (5.29 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	2.6434 mL	13.217 mL	26.434 mL
5 mM	0.5287 mL	2.6434 mL	5.2868 mL
10 mM	0.2643 mL	1.3217 mL	2.6434 mL
50 mM	0.0529 mL	0.2643 mL	0.5287 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

Wang FZ, et al. CCT128930 induces cell cycle arrest, DNA damage, and autophagy independent of Akt inhibition. *Biochimie*. 2014;103:118-125.

Yap TA et al. Preclinical pharmacology, antitumor activity, and development of pharmacodynamic markers for the novel, potent AKT inhibitor CCT128930. *Mol Cancer Ther*. 2011 Feb;10(2):360-71.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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