

CP681301

Chemical Properties

CAS No. :	865317-32-4
Formula:	C17H22N4O
Molecular Weight:	298.38
Storage:	Keep away from direct sunlight 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	CP681301 is a highly potent and specific small molecule inhibitor of CDK5 with an inhibition constant (Ki) of 13.7 nM for CDK5. CP681301 not only completely blocks the kinase activity of CDK5-p35 and CDK5-p25 complexes but also effectively inhibits the expression of stem cell markers (such as SOX2, OLIG2) and the self-renewal capacity of tumor cells in glioma stem cell models, demonstrating anti-tumor proliferative activity.
Targets(IC50)	Others,CDK,DNA/RNA Synthesis
In vitro	CP681301 (1 µM; 96 h) shows variably cytotoxic to the tested GSC cultures but is not toxic to NHNPs[1]. CP681301 (0, 10, 50 µM; 48 h) decreases the expression of CD133, OLIG2, SOX2, KI67, pCDK5 protein level in GSCs[1]. CP681301 (0, 0.5, 1 µM;) suppresses the expression of CREB Ser133 phosphorylation[1].
In vivo	CP681301 (1 mM; fed; 10 days) shows anti-tumor activity in 0- to 2-day-old adult Drosophila[1].

Solubility Information

Solubility	DMSO: 80 mg/mL (268.11 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.3514 mL	16.7572 mL	33.5143 mL
5 mM	0.6703 mL	3.3514 mL	6.7029 mL
10 mM	0.3351 mL	1.6757 mL	3.3514 mL
50 mM	0.067 mL	0.3351 mL	0.6703 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

Mukherjee S, et al. CDK5 Inhibition Resolves PKA/cAMP-Independent Activation of CREB1 Signaling in Glioma Stem Cells. Cell Rep. 2018 May 8;23(6):1651-1664.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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