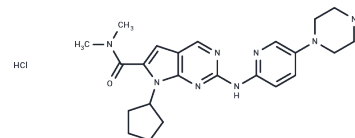


Ribociclib hydrochloride

Chemical Properties

CAS No. : 1211443-80-9
Formula: C₂₃H₃₁ClN₈O
Molecular Weight: 471
Appearance: no data available
Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description

Description	Ribociclib hydrochloride is a highly specific CDK4/6 inhibitor (IC ₅₀ : 10 nM and 39 nM, respectively). It is over 1,000-fold less potent against the cyclin B/CDK1 complex.
Targets(IC ₅₀)	CDK
In vitro	Ribociclib hydrochloride treatment of two neuroblastoma cell lines (BE2C and IMR5) with demonstrated sensitivity to CDK4/6 inhibition results in a dose-dependent accumulation of cells in the G ₀ /G ₁ phase of the cell cycle. This G ₀ /G ₁ arrest becomes significant at Ribociclib concentrations of 100 nM (p=0.007) and 250 nM (p=0.01), respectively. Treatment with Ribociclib obviously inhibits substrate adherent growth relative to the control in 12 of the 17 neuroblastoma cell lines examined (mean IC ₅₀ =306±68 nM, considering sensitive lines only, where sensitivity is defined as an IC ₅₀ of less than 1 μM. Treating a panel of 17 neuroblastoma cell lines with Ribociclib across a four-log dose range (10 to 10,000 nM) [2].
In vivo	Treatment with Ribociclib (200 mg/kg) daily for 21 days significantly delays tumor growth in CB17 immunodeficient mice bearing BE2C or NB-1643 (MYCN amplified, sensitive in vitro) xenografts, with notable effects observed through the treatment period (p<0.0001 for both). However, tumor growth resumes after cessation of treatment. The regimen, also applied to EBC1 (non-amplified, resistant in vitro) xenografts for comparison, demonstrates a favorable safety profile across all xenograft models, indicated by the absence of weight loss or toxicity signs [2].

Solubility Information

Solubility	H ₂ O: 10 mg/mL (21.23 mM), Sonication is recommended. DMSO: 7.69 mg/mL (16.33 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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A DRUG SCREENING EXPERT

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1231 mL	10.6157 mL	21.2314 mL
5 mM	0.4246 mL	2.1231 mL	4.2463 mL
10 mM	0.2123 mL	1.0616 mL	2.1231 mL
50 mM	0.0425 mL	0.2123 mL	0.4246 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.

Reference

VanArsdale T, et al. Molecular Pathways: Targeting the Cyclin D-CDK4/6 Axis for Cancer Treatment. Clin Cancer Res. 2015 Jul 1;21(13):2905-10.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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