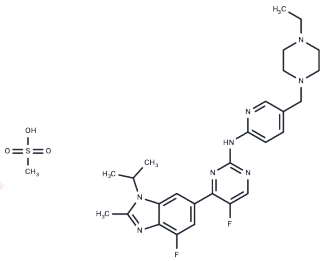
Data Sheet (Cat.No.T3111)

TargetMol

Abemaciclib methanesulfonate

Chemical Properties



CAS No. : 1231930-82-7

Formula: C27H32F2N8·CH4O3S

Molecular Weight: 602.7

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	Abemaciclib methanesulfonate (LY2835219) is a specific and effective inhibitor of CDK4 (IC50=2 nM) and CDK6(IC50=10 nM).
Targets(IC50)	CDK
In vitro	In subcutaneous and intracranial glioma models (U87 mg), MsOH treatment results in LY2835219 inhibiting tumor growth in a dose-dependent manner.
In vivo	In retinoblastoma, LY2835219 inhibits cancer cell growth by specifically targeting and inhibiting CDK4 and CDK6, leading to cell cycle arrest at the G1 phase and suppression of DNA synthesis.
Kinase Assay	Cells (5 × 103) are plated in 96 well plates. Cells are treated the next day for 24 to 48 hours and then assessed for caspase-3 activity by Caspase-Glo-3/7 Assay, as per manufacturer's instructions and a luminescence plate reader.
Cell Research	LY2835219 is dissolved in DMSO to a 10 mM concentration.? Cells are seeded in a 96-well plate, allowed to adhere overnight, and treated with DMSO control (0.1% v/v) or the indicated compounds for 72 h. Cell viability and proliferation are determined using a Cell Counting Kit according to the manufacturer's instructions. The interaction between LY2835219 and mTOR inhibitor is determined using CompuSyn. Combination index (CI) values of 1 indicates and additive drug interaction, whereas a CI of 1 is synergistic and a CI of > 1 is antagonistic.

Solubility Information

Solubility	H2O: 45 mg/mL (74.66 mM),Sonication is recommended. DMSO: 9.62 mg/mL (15.96 mM),Sonication is recommended. Ethanol: 23 mg/mL (38.16 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 (1.66 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 vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.6592 mL	8.296 mL	16.592 mL
5 mM	0.3318 mL	1.6592 mL	3.3184 mL
10 mM	0.1659 mL	0.8296 mL	1.6592 mL
50 mM	0.0332 mL	0.1659 mL	0.3318 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

Sanchez-Martinez et al. Mol Cancer Ther, 2011,10(11 Suppl), Abstract nr B234.
Li Q, Jiang B, Guo J, et al. INK4 tumor suppressor proteins mediate resistance to CDK4/6 kinase inhibitors. Cancer Discovery. 2022, 12(2): 356-371.
Ou J, Li H, Qiu P, et al. CDK9 modulates circadian clock by attenuating REV-ERBα activity[J]. Biochemical and biophysical research communications. 2019 Jun 11;513(4):967-973.
Ou J, Li H, Qiu P, et al. CDK9 modulates circadian clock by attenuating REV-ERBα activity. Biochemical and Biophysical Research Communications. 2019 Jun 11;513(4):967-973