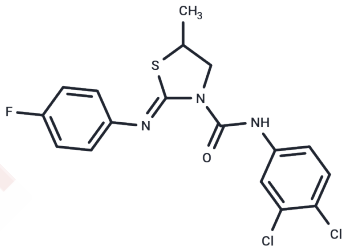
Data Sheet (Cat.No.T11728)

TargetMol

JR-AB2-011

Chemical Properties



CAS No. : 2411853-34-2

Formula: C17H14Cl2FN3OS

Molecular Weight: 398.28

Storage: Keep away from direct sunlight,Store at low temperature
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	JR-AB2-011 is a selective mTORC2 inhibitor with an IC50 value of 0.36 μM. It inhibits mTORC2 activity by blocking Rictor-mTOR association (Ki: 0.19 μM) and exhibits cytotoxicity in glioblastoma [1].
Targets(IC50)	mTOR
In vitro	JR-AB2-011 (1 μM; 24 hours) shows good anti-GBM properties, blocks mTORC2 signaling and Rictor association with mTOR [1]. JR-AB2-011 (0.5-2 μM; 48 hours) displays the least toxicity to normal neurons with no significant cytotoxic effects for concentrations up to 10 mM compared to CID613034 [1]. Apoptosis Analysis [1] Cell Line: U87 GBM cells; LN229 GBM cells Concentration: 1 μM Incubation Time: 24 hours Result: Had good anti-GBM properties and blocked mTORC2 signaling and Rictor association with mTOR. Cell Cytotoxicity Assay [1] Cell Line: Normal mature human neurons Concentration: 0.5, 1, 2 μM Incubation Time: 48 hours Result: Displayed the least toxicity to normal neurons with no significant cytotoxic effects for concentrations up to 10 mM.
In vivo	Mice administered JR-AB2-011 through intraperitoneal injection at doses of 4 mg/kg or 20 mg/kg daily for 10 days exhibited significant suppression of tumor growth compared to those treated with a vehicle control. Specifically, the lower dose achieved a 74% reduction in tumor growth rate with a 10-day delay in tumor progression, while the higher dose resulted in an 80% reduction and a 12-day delay. This study utilized female C.B.-17-scid mice implanted with LN229 cells, demonstrating that JR-AB2-011 is potent in inhibiting tumor growth at both tested concentrations.

Solubility Information

Solubility	DMSO: 61.5 mg/mL (154.41 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 (5.02 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*

In vivo Formulation	*vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5108 mL	12.554 mL	25.108 mL
5 mM	0.5022 mL	2.5108 mL	5.0216 mL
10 mM	0.2511 mL	1.2554 mL	2.5108 mL
50 mM	0.0502 mL	0.2511 mL	0.5022 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

Benavides-Serrato A, et al. Correction: Specific blockade of Rictor-mTOR association inhibits mTORC2 activity and is cytotoxicin glioblastoma. PLoS One. 2019 Feb 6;14(2):e0212160.
Xu W, Qadir M M F, Nasteska D, et al.Architecture of androgen receptor pathways amplifying glucagon-like peptide-1 insulinotropic action in male pancreatic β cells.Cell Reports.2023, 42(5).
Zhou S, Lin W, Jin X, et al.CD97 maintains tumorigenicity of glioblastoma stem cells via mTORC2 signaling and is targeted by CAR Th9 cells.Cell Reports Medicine.2024