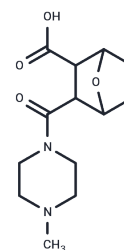


(Rac)-LB-100

## Chemical Properties

CAS No. : 2061038-65-9  
 Formula: C<sub>13</sub>H<sub>20</sub>N<sub>2</sub>O<sub>4</sub>  
 Molecular Weight: 268.31  
 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	(Rac)-LB-100, a novel Protein Phosphatase 2A (PP2A) inhibitor, sensitizes malignant meningioma cells to the therapeutic effects of radiation
Targets(IC50)	Phosphatase
In vitro	(Rac)-LB-100, a small molecular inhibitor of protein phosphatase 2A (PP2A), has been shown to enhance T cell anti-tumor activity through activation of the mTOR signaling pathway. Herein, Investigated if a treatment strategy consisting of a combination of LB-100 and anti-CAIX CAR-T cell therapy produced a synergistic anti-tumor effect. LB-100 enhanced anti-CAIX CAR-T cell treatment efficacy in vitro and in vivo. LB-100 in augmenting the cytotoxic activity of anti-CAIX CAR-T cells and underscore the synergistic therapeutic potential of applying combination LB-100 and CAR-T Cell therapy to other solid tumors[1].
Kinase Assay	PP2A activity assays: Cultured pancreatic cancer cells are treated with IC50 of LB-100 for each cell line or equal volume of vehicle for 2 hours, and PP2A activity assays are then performed using Ser/Thr phosphatase assay kit. Cells are lysed with an ultrasonic cell disruptor, and the PP2A concentration is measured using a Ser/Thr phosphatase assay kit according to the instructions. Assays for each cell line are performed in triplicate.
Cell Research	Cytotoxicity is conducted by using a Cell Counting Kit-8. Cells are seeded in 96-well plates with a density of 3000 cells per well and are assessed after treatments following the CCK-8 protocol. Relative cytotoxicity is expressed as a percentage of specific controls. (Only for Reference)

## Solubility Information

Solubility	DMSO: < 1 mg/mL (insoluble or slightly soluble), H <sub>2</sub> O: 49 mg/mL (182.62 mM), Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	3.727 mL	18.6352 mL	37.2703 mL
5 mM	0.7454 mL	3.727 mL	7.4541 mL
10 mM	0.3727 mL	1.8635 mL	3.727 mL
50 mM	0.0745 mL	0.3727 mL	0.7454 mL

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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

Cui J , H Wang, Medina R , et al. Inhibition of PP2A with LB-100 Enhances Efficacy of CAR-T Cell Therapy Against Glioblastoma[J]. *Cancers*, 2020, 12(1):139-.

Yue J, Vendramin R, Liu F, et al. Targeted chemotherapy overcomes drug resistance in melanoma. *Genes & Development*. 2020, 34(9-10): 637-649

D'Arcy B M , Swingle M R , Papke C M , et al. The Antitumor Drug LB-100 is a Catalytic Inhibitor of Protein Phosphatase 2A (PPP2CA) and 5 (PPP5C) Coordinating with the Catalytic Metals in the Active Site of PP5C[J]. *Molecular Cancer Therapeutics*, 2019.

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