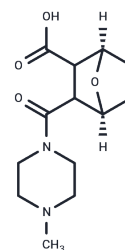


LB100

## Chemical Properties

CAS No. : 1632032-53-1  
Formula: C<sub>13</sub>H<sub>20</sub>N<sub>2</sub>O<sub>4</sub>  
Molecular Weight: 268.31  
Appearance: no data available  
Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



## Biological Description

|               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description   | LB100 (LB-100) is a water soluble protein phosphatase 2A (PP2A) inhibitor.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Targets(IC50) | Phosphatase                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| In vitro      | In xenograft mouse models of pancreatic cancer, LB-100 (2 mg/kg, i.p.) enhances the therapeutic efficacy of the chemotherapy agent doxorubicin. LB-100 increases both the blood flow velocity on the tumor surface and the microvascular density of the tumor.                                                                                                                                                                                                                                                                                                                                                                                        |
| In vivo       | Compared to the control group, LB-100 significantly increased the intracellular concentration of doxorubicin by approximately 2.5 times, enhancing the tumor cells' sensitivity to doxorubicin. Additionally, LB-100 amplified the secretion of vascular endothelial growth factor, thereby promoting angiogenesis mediated by HIF-1 $\alpha$ -VEGF. LB-100 also demonstrated a notable inhibitory effect on the growth of BxPc-3 (IC <sub>50</sub> : 2.3 $\mu$ M) and Panc-1 (IC <sub>50</sub> : 1.7 $\mu$ M) cells. Following treatment with LB-100, a reduction of 30-50% in PP2A activity was observed in BxPc-3, SW1990, and Panc-1 tumor cells. |
| Kinase Assay  | PP2A activity assays: Cultured pancreatic cancer cells are treated with IC <sub>50</sub> 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 | H <sub>2</sub> O: 49 mg/mL (182.6 mM),<br>DMSO: < 1 mg/mL (insoluble or slightly soluble),<br>Ethanol: < 1 mg/mL (insoluble or slightly soluble),<br>&lt; 1 mg/ml refers to the product slightly soluble or insoluble) |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## A DRUG SCREENING EXPERT

### Preparing Stock Solutions

|       | 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  |

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

Bai X, et al. Inhibition of protein phosphatase 2A sensitizes pancreatic cancer to chemotherapy by increasing drug perfusion via HIF-1 $\alpha$ -VEGF mediated angiogenesis. Cancer Lett. 2014 Oct 7. pii: S0304-3835(14)00589-8.

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