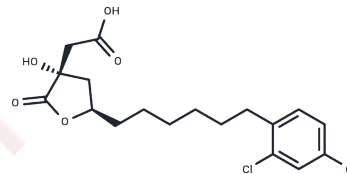


SB 204990

## Chemical Properties

CAS No. : 154566-12-8  
 Formula: C<sub>18</sub>H<sub>22</sub>Cl<sub>2</sub>O<sub>5</sub>  
 Molecular Weight: 389.27  
 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	SB 204990 is a lactone prodrug of SB-201076, a potent and specific ATP citrate lyase inhibitor.
Targets(IC50)	ATP Citrate Lyase
In vitro	<b>METHODS:</b> Primary hepatocytes were treated with SB-204990 (10 μM, 16 hours) under different experimental conditions to determine the effects occurring early after exposure to the Acly inhibitor SB-204990. <b>RESULTS</b> Phosphorylation of pThr 172 Ampk and pSer 79 Acc was reduced in primary hepatocytes treated with SB-204990 for 16 hours, while markers of Sirt1 or mTOR activity were absent. [1]
In vivo	<b>METHODS:</b> Mice were treated with SB-204990 (30 mg/kg body weight; oral gavage; treatment for 3 hours) to determine whether SB-204990 could induce effects in mitochondria in vivo. <b>RESULTS</b> Freshly isolated liver mitochondria from mice showed blocking and limiting effects on ADP-induced and FCCP-induced increases in OCR, respectively. [1]

## Solubility Information

Solubility	DMSO: 242 mg/mL (621.68 mM), Sonication is recommended. H <sub>2</sub> O: 10 mg/mL (25.69 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: 5 mg/mL (12.84 mM), Sonication is recommended. <i>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.</i>

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	2.5689 mL	12.8446 mL	25.6891 mL
5 mM	0.5138 mL	2.5689 mL	5.1378 mL
10 mM	0.2569 mL	1.2845 mL	2.5689 mL
50 mM	0.0514 mL	0.2569 mL	0.5138 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

Sola-García A, et al. Metabolic reprogramming by Acly inhibition using SB-204990 alters glucoregulation and modulates molecular mechanisms associated with aging. *Commun Biol.* 2023 Mar 8;6(1):250.

Li W, Han J, Huang B, et al. SLC25A1 and ACLY maintain cytosolic acetyl-CoA and regulate ferroptosis susceptibility via FSP1 acetylation. *The EMBO Journal.* 2025: 1-22.

Pearce NJ, et al. The role of ATP citrate-lyase in the metabolic regulation of plasma lipids. Hypolipidaemic effects of SB-204990, a lactone prodrug of the potent ATP citrate-lyase inhibitor SB-201076. *Biochem J.* 1998 Aug 15;334 ( Pt 1)(Pt 1):113-9.

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