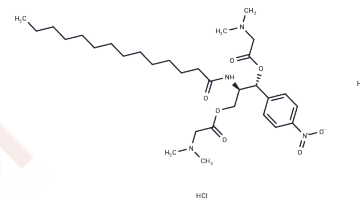


## LCL521 dihydrochloride

### Chemical Properties

CAS No. :	1226759-47-2
Formula:	C <sub>31</sub> H <sub>54</sub> Cl <sub>2</sub> N <sub>4</sub> O <sub>7</sub>
Molecular Weight:	665.69
Storage:	Store at low temperature Powder: -20°C for 3 years   In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



### Biological Description

Description	LCL521 dihydrochloride is a dual inhibitor of acid ceramidase (ACDase) and lysosomal acid sphingomyelinase (ASMase). By targeting these lysosomal enzymes, LCL521 dihydrochloride modulates sphingolipid metabolism, with potential applications in cancer and metabolic disorder research.
Targets(IC50)	Others, Phospholipase
In vitro	LCL521 dihydrochloride is a potent cellular ACDase inhibitor at a concentration of 1 $\mu$ M. At a higher concentration (10 $\mu$ M), LCL521 dihydrochloride additionally exerts a reducing effect on the $\alpha$ -form of ACDase. Specifically, in MCF7 cells, LCL521 dihydrochloride (10 $\mu$ M) induces a time-dependent decrease in the $\alpha$ -ACDase form, which is observable within 1 to 5 hours.[1]

### Solubility Information

Solubility	H <sub>2</sub> O: 20 mg/mL (30.04 mM), Sonication is recommended. DMSO: 80 mg/mL (120.18 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: 3.3 mg/mL (4.96 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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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	1.5022 mL	7.511 mL	15.022 mL
5 mM	0.3004 mL	1.5022 mL	3.0044 mL
10 mM	0.1502 mL	0.7511 mL	1.5022 mL
50 mM	0.030 mL	0.1502 mL	0.3004 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

Bai A, et al. Targeting (cellular) lysosomal acid ceramidase by B13: design, synthesis and evaluation of novel DMG-B13 ester prodrugs. *Bioorg Med Chem.* 2014 Dec 15;22(24):6933-44.

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