LCL521 dihydrochloride

Cat. No.: HY-103593A

CAS No.: 1226759-47-2

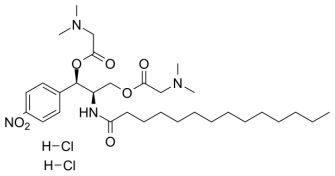
Molecular Formula: $C_{31}H_{54}Cl_2N_4O_7$

Molecular Weight: 665.69

Target: Phospholipase

Pathway: Metabolic Enzyme/Protease

Storage: -20°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 100 mg/mL (150.22 mM; Need ultrasonic)
DMSO : 20.83 mg/mL (31.29 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.5022 mL	7.5110 mL	15.0220 mL
5 mM	0.3004 mL	1.5022 mL	3.0044 mL
10 mM	0.1502 mL	0.7511 mL	1.5022 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 50 mg/mL (75.11 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (3.12 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (3.12 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (3.12 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

LCL521 dihydrochloride is an acid ceramidase (ACDase) inhibitor. LCL521 also inhibits the lysosomal acid sphingomyelinase (ASMase)[1].

IC_{50} & Target

ACDase, ASMase[1]

In Vitro

LCL521 (1 μM) acts as a potent inhibitor of cellular ACDase activity, whereas 10 μM LCL521 has an additional, decreased

affect on the α-form of this enzyme. LCL521 (10μM) causes a time-dependent (1 hours and 5 hours) decrease of the α-ACDase form in MCF7 cells[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Nat Immunol. 2023 May;24(5):802-813.

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REFERENCES

[1]. 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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