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**Product Data Sheet**


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Product Name: LCL521  
 Cat. No.: GC33267

**Chemical Properties**

Cas. No. 1226851-11-1

SMILES O=C(CN(C)C)O[C@H](C1=CC=C([N+])([O-])=O)C=C1)[C@@H](COC(CN(C)C)=O)NC(CCCCCCCCCCCC)=O

Formula  $C_{31}H_{52}N_4O_7$  M.Wt 592.77

Solubility DMSO : 165 mg/mL (278.35 mM) Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

**Background**

LCL-521 is an inhibitor of acid ceramidase.<sup>1,2</sup> It inhibits acid ceramidase activity in MCF-7 breast cancer cell lysates when used at a concentration of 1  $\mu$ M.<sup>1</sup> LCL-521 (1 and 10  $\mu$ M) decreases sphingosine levels in MCF-7 cells. It inhibits the proliferation of MCF-7 cells ( $IC_{50}$  = 7.46  $\mu$ M) and induces cell cycle arrest at the G<sub>1</sub> phase when used at a concentration of 2.5  $\mu$ M.<sup>2</sup>

1. Bai, A., Szulc, Z.M., Bielawski, J., et al. Targeting (cellular) lysosomal acid ceramidase by B13: Design, synthesis and evaluation of novel DMG-B13 ester prodrugs. *Bioorg. Med. Chem.* 22(24):6933-6944 (2014)  
 2. Bai, A., Mao, C., Jenkins, R.W., et al. Anticancer actions of lysosomally targeted inhibitor, LCL521, of acid ceramidase. *PLoS One* 12(6):e0177805 (2017)

**Caution: Product has not been fully validated for medical applications. For research use only.**

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