

CLM296

Chemical Properties

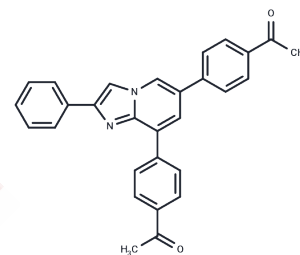
CAS No. : 3067837-25-3

Formula: C₂₉H₂₂N₂O₂

Molecular Weight: 430.50

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	CLM296 is a potent and selective inhibitor of ALDH1A3, with an IC ₅₀ of 2 nM. It does not exhibit off-target effects on the highly homologous ALDH1A1 isoform. CLM296 is capable of inhibiting ALDH1A3-driven breast cancer metastasis and can be utilized in the study of triple-negative breast cancer (TNBC).
Targets(IC ₅₀)	Dehydrogenase
In vitro	CLM296, within a concentration range of 0.01 nM to 10 μM, significantly reduces Aldefluor™ fluorescence in ALDH1A3 overexpressing MDA-MB-231 cells, as well as in MDA-MB-468 and HCC1806 shRNA control cells, with IC ₅₀ values of 2.1 nM, 2.5 nM, and 2.3 nM respectively. CLM296 at 1 μM for 72 hours does not affect cell death or proliferation in MDA-MB-231, MDA-MB-468, or HCC1806 cells. Additionally, CLM296 at 100 nM for 24 hours selectively decreases the enhanced invasiveness due to ALDH1A3 overexpression in MDA-MB-231 cells. Furthermore, CLM296 at concentrations of 1-100 nM for 24 hours specifically blocks ALDH1A3-mediated gene expression changes in MDA-MB-231 cells.
In vivo	CLM296 administered intraperitoneally (IP) at doses ranging from 0 to 4 mg/kg, once daily for 42 consecutive days, significantly reduced tumor volume and metastasis in mice overexpressing ALDH1A3 when started 12 or 15 days post-cell injection.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3229 mL	11.6144 mL	23.2288 mL
5 mM	0.4646 mL	2.3229 mL	4.6458 mL
10 mM	0.2323 mL	1.1614 mL	2.3229 mL
50 mM	0.0465 mL	0.2323 mL	0.4646 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.

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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

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