Product Data Sheet

Product Name: LAS17
Cat. No.: GC63518

Chemical Properties

Cas. No.	2362527-67-9		
Formula	$C_{15}H_{20}Cl_2N_4O_2$	M.Wt	359.25
Solubility		Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	LAS17		

Background

LAS17 is a potent and selective tyrosine-directed irreversible inhibitor for glutathione S-Transferase Pi (GSTP1) [1]. LAS17 inhibits GSTP1 activity with an IC50 of 0.5 μM[2].

Glutathione S-Transferase Pi (GSTP1) mediates cellular defense against reactive electrophiles. LAS17 inhibits GSTP1 activity in vitro in a concentration-dependent manner[1]. LAS17 (10 μ Serum-free survival 48 h) treatment in 231MFP breast cancer cells recapitulates the serum-free cell survival impairments observed with genetic inactivation of GSTP1[2]. GSTP1 knockdown in LAS17 (10 μM) treatment in 231MFP cells results in increased levels of phosphorylated AMPK and acetyl CoA carboxylase (ACC) [2].LAS17 treatment in 231MFP cells also shows reduced levels of ATP, lactic acid, purine nucleotides, and diacylated phospholipids and alkylacyl ether lipids and increased levels of acyl carnitines (ACs), ceramides, lysophospholipids[2].

Daily administration of LAS17 (20 mg/kg ip, once per day) significantly impairs 231MFP breast tumor xenograft growth in immune-deficient mice when treatment is initiated 2 days after subcutaneous injection of cells, and LAS17 even slows tumor growth when initiated 16 days after tumor implantation, with no observable toxicity and no weight-change[2].

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[1]. L A Crawford, et al. A tyrosine-reactive irreversible inhibitor for glutathione S-transferase Pi (GSTP1). Mol Biosyst. 2016 May 24;12(6):1768-71.
[2]. Sharon M Louie, et al. GSTP1 Is a Driver of Triple-Negative Breast Cancer Cell Metabolism and Pathogenicity. Cell Chem Biol. 2016 May 19;23(5):567-578.

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