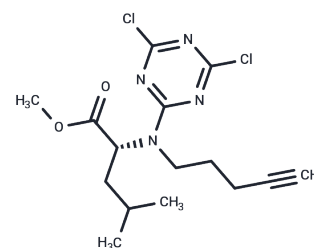


LAS17

Chemical Properties

CAS No. : 2362527-67-9
Formula: C₁₅H₂₀Cl₂N₄O₂
Molecular Weight: 359.25
Appearance: no data available
Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description

Description	LAS17, a potent and selective irreversible inhibitor targeting tyrosine in glutathione S-Transferase Pi (GSTP1), effectively inhibits GSTP1 activity, demonstrated by an IC ₅₀ value of 0.5 μM.
In vitro	Glutathione S-Transferase Pi (GSTP1) plays a crucial role in cellular defense by detoxifying reactive electrophiles. LAS17 is identified to inhibit GSTP1 function in a dose-dependent manner in vitro. At a concentration of 10 μM and after 48 hours of serum-free incubation, LAS17 treatment in 231MFP breast cancer cells mirrors the cell survival challenges witnessed with GSTP1 genetic inactivation. Furthermore, treating 231MFP cells with LAS17 at the same concentration results in heightened phosphorylation of AMPK and acetyl CoA carboxylase (ACC), alongside diminished levels of ATP, lactic acid, purine nucleotides, and certain lipid classes, with an increase in acyl carnitines (ACs), ceramides, and lysophospholipids. Cell viability assays and Western blot analysis conducted under these conditions confirmed the recapitulation of serum-free cell survival impairments and the observed biochemical alterations, underscoring LAS17's potential to mimic GSTP1 inhibition effects.
In vivo	Administering LAS17 daily at a dosage of 20 mg/kg intraperitoneally (prepared in PBS:ethanol:PEG40 (18:1:1)) notably inhibits the growth of 231MFP breast tumor xenografts in severe combined immunodeficiency (SCID) mice. Initiating treatment 2 days post-subcutaneous cell injection significantly restricts tumor expansion and even when begun 16 days after tumor implantation, LAS17 still effectively decelerates tumor progression. This intervention exhibits no observable toxicity or weight change in the mice[2].

A DRUG SCREENING EXPERT

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7836 mL	13.9179 mL	27.8358 mL
5 mM	0.5567 mL	2.7836 mL	5.5672 mL
10 mM	0.2784 mL	1.3918 mL	2.7836 mL
50 mM	0.0557 mL	0.2784 mL	0.5567 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.

Reference

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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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