

PZL-A

Chemical Properties

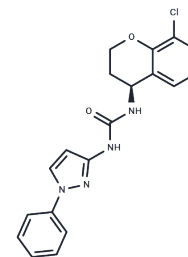
CAS No. : 3068830-89-4

Formula: C₁₉H₁₇ClN₄O₂

Molecular Weight: 368.82

Storage: Keep away from moisture, Store at low temperature
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	PZL-A, an activator of mtDNA synthesis, restored the function and activity of the most common POLγ mutant variant and activated mtDNA synthesis in the cells of pediatric patients with fatal diseases, thereby enhancing the oxidative phosphorylation mechanism and the biogenesis of cellular respiration, and can be used to treat progressive diseases associated with mtDNA depletion.
Targets(IC50)	OXPHOS, Mitochondrial Metabolism, DNA/RNA Synthesis
In vitro	PZL-A (1 μM; 37°C, 15-60min) enhanced DNA polymerase activity of mutant POLγ complexes in primer extension assays using recombinant enzymes and M13 ssDNA. PZL-A improved processivity without affecting exonuclease function[1]. PZL-A (≥10nM; 4-7d) promoted mtDNA recovery and improved mitochondrial function in POLG-mutant patient fibroblasts and neural stem cells after ethidium bromide-induced depletion[1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7113 mL	13.5567 mL	27.1135 mL
5 mM	0.5423 mL	2.7113 mL	5.4227 mL
10 mM	0.2711 mL	1.3557 mL	2.7113 mL
50 mM	0.0542 mL	0.2711 mL	0.5423 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.

Reference

Valenzuela S, et al. Small molecules restore mutant mitochondrial DNA polymerase activity. Nature. 2025 Apr 9.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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