

Cyanostatin B

Chemical Properties

CAS No. :	850131-23-6
Formula:	C ₄₀ H ₅₉ N ₅ O ₉
Molecular Weight:	753.94
Storage:	Keep away from moisture Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>

Biological Description

Description	Cyanostatin B, a lipopeptide derived from cyanobacteria, acts as a leucine aminopeptidase (LAP) inhibitor with an IC ₅₀ of 12 ng/mL. It exhibits weak inhibitory effects on protein phosphatase (PP2A) and angiotensin-converting enzyme (ACE), with an IC ₅₀ of 130 µg/mL. While Cyanostatin B shows no toxicity to brine shrimp, it demonstrates cytotoxicity and genotoxicity in human liver cells in vitro. Furthermore, Cyanostatin B inhibits the proliferation of HepG cells, induces DNA single-strand breaks, and causes genomic instability.
Targets(IC ₅₀)	Aminopeptidase,Angiotensin-converting Enzyme (ACE),DNA/RNA Synthesis, Phosphatase
In vitro	Cyanostatin B exhibits no toxicity to brine shrimp larvae (nauplii) at concentrations of 0-75 µg/mL over 24 hours. When HepG2 cells are exposed to 0-10 µg/mL for 24-48 hours, Cyanostatin B shows concentration-dependent inhibition of cell proliferation after 72 hours. At concentrations of 0-1 µg/mL over 24-48 hours, it induces DNA single-strand breaks (SSB) but not DNA double-strand breaks (DSB) in HepG2 cells. At 1 µg/mL for 24-72 hours, Cyanostatin B causes chromosomal breakage, resulting in chromosome breakage or complete chromosome loss in HepG2 cells.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.3264 mL	6.6318 mL	13.2637 mL
5 mM	0.2653 mL	1.3264 mL	2.6527 mL
10 mM	0.1326 mL	0.6632 mL	1.3264 mL
50 mM	0.0265 mL	0.1326 mL	0.2653 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

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