Data Sheet (Cat.No.T61346)

TargetMol

Ph-Ph+

Chemical Properties

CAS No. :

Formula: C24H17N4+

Molecular Weight: 361.42

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	Ph-Ph+ is a hemiprotonic compound derived from the dimerization of phenanthroline (ph), exhibiting notable antitumor, antibacterial, and antifungal properties [1].
Targets(IC50)	Apoptosis,Others,Antibacterial,Antifungal
In vitro	Ph-Ph+ (0.0039-2 μmol/mL; 24-72 hours) selectively inhibits tumor cell proliferation in a dose- and time-dependent manner across several cell lines, including H22, U251MG, SH-SY5Y, B16, and A549, without affecting the viability of human L02 and [HUVEC] cells. Optical microscopy shows that Ph-Ph+ treatment causes tumor cells to shrink and form apoptotic bodies, indicating selective antitumor activity through apoptosis induction. Additionally, Ph-Ph+ exhibits broad-spectrum antibacterial and antifungal effects, effectively combating drug-resistant pathogens such as methicillin-resistant Staphylococcus aureus.
In vivo	Tumor-bearing mice, created through subcutaneous transplantation of the mouse hepatoma H22 cell line, exhibited reduced tumor volume and weight following treatment with Ph-Ph+ (2-8 mg/kg; i.v; over 8 days) in a dose-dependent manner [1]. Additionally, in liver cancer animal models with concomitant fungal infection, Ph-Ph+ administration (2-8 mg/kg; i.v; daily for 9 days) not only inhibited the proliferation of hepatoma cells but also alleviated pneumonia and encephalitis induced by Cryptococcus neoformans [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7669 mL	13.8343 mL	27.6686 mL
5 mM	0.5534 mL	2.7669 mL	5.5337 mL
10 mM	0.2767 mL	1.3834 mL	2.7669 mL
50 mM	0.0553 mL	0.2767 mL	0.5534 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.