Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Zinc Pyrithione

Catalog No: tcsc2679

Available Sizes

Size: 1g

Size: 5g

Specifications

CAS No:
13463-41-7

Formula:
$C_{10}H_8N_2O_2S_2Zn$

Pathway:
Membrane Transporter/Ion Channel

Target:
Proton Pump

Purity / Grade:
>98%

Solubility:
H2O :

Observed Molecular Weight:
317.69

Product Description

Zinc Pyrithione is an antifungal and antibacterial agent disrupting membrane transport by blocking the proton pump.

Target: Proton Pump

Zinc pyrithione is considered as a coordination complex of zinc. The pyrithione ligands, which are formally monoanions, are chelated to Zn 2+ via oxygen and sulfur centers. In the crystalline state, zinc pyrithione exists as a centrosymmetric dimer, where each zinc is

bonded to two sulfur and three oxygen centers. In solution, however, the dimers dissociate via scission of one Zn-O bond. Zinc pyrithione, which is a dimer but is probably biologically active as a monomer, induces plasma membrane depolarization with half-maximal effect (K1/2) of about 0.3 mM [1]. Zinc pyrithione is an unusual synthetic potentiator that potently activates both heterologous and native M channels by inducing channel opening at the resting potential [2]. Zinc pyrithione rapidly accumulated in the tissues of the exposed mussels, proportionately to both exposure concentration and time. Even though the 7-d median lethal concentration (LC50) = 8.27 µM established here appears high with respect to reported ZnPT environmental concentrations, the results indicate that this biocide could represent a threat for marine organisms in coastal environments and that further investigations on its biological effects at sublethal doses are needed [3].