For Research Use Only

Clodronic acid disodium salt

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Catalog Number: CM00175

产品信息

Catalog Number:
CM00175

CAS号:
22560-50-5

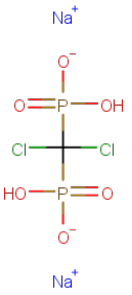
分子式:
$CH_4Cl_2O_6P_{0\cdot2}Na$

主要靶点:
Others

主要通路:
其他

分子量:
288.86

溶解度:
DMSO:Insoluble,H2O:58.82 mg/mL (203.64 mM),Sonification is recommended.



体外活性

Clodronate significantly decreases total viability of cultures of J774 cells with EC50 of 300 μM, while liposome-encapsulated Clodronate decreases total viability of cultures of J774 cells with EC50 of 1 μM. Clodronate and liposome-encapsulated Clodronate is metabolized to a nonhydrolyzable adenosine triphosphate (ATP) analog, adenosine 5'-(beta, gamma-dichloromethylene) triphosphate, which can be detected in J774 cell extracts by using fast protein liquid chromatography. [1] Clodronate induces apoptosis in isolated osteoclasts. Clodronate, when administered in liposomes, also induces apoptosis in rat peritoneal macrophages in vitro and in liver macrophages of mice in vivo but not in murine macrophage-like RAW-264 cells. [2] Clodronate delivered into macrophages by liposome will kill these cells as a result of intracellular accumulation and irreversible metabolic damage. [3] Clodronate encapsulated in liposomes (clodrolip) efficiently depletes the phagocytic cells in the murine F9 teratocarcinoma and human A673 rhabdomyosarcoma mouse tumour models resulting in significant inhibition of tumour growth ranging from 75 to >92%, depending on therapy and schedule. [4] Clodronate, a bisphosphonate that lacks a nitrogen, does not inhibit protein isoprenylation but can be metabolized intracellularly to a beta-gamma-methylene (AppCp-type) analog of ATP, which is cytotoxic to macrophages in vitro. Clodronate is metabolited to AppCCl(2)p, and AppCCl(2)p inhibits mitochondrial oxygen consumption by a mechanism that involves competitive inhibition of the ADP/ATP translocase. [5]

描述

Clodronic acid disodium salt (Lodronate), a bisphosphonate, is a potent antiosteolytic agent which inhibits bone resorption.

储存

Powder: -20°C for 3 years | In solvent: -80°C for 2 years

For technical support and original validation data for this product please contact
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