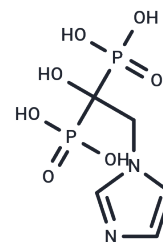


## Zoledronic Acid

## Chemical Properties

CAS No. :	118072-93-8
Formula:	C <sub>5</sub> H <sub>10</sub> N <sub>2</sub> O <sub>7</sub> P <sub>2</sub>
Molecular Weight:	272.09
Appearance:	no data available
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year



## Biological Description

Description	Zoledronic Acid (ZOL 446) is a bisphosphonate. Zoledronic Acid (ZOL 446) is used to prevent skeletal fractures in patients with cancers such as multiple myeloma and prostate cancer. It can also be used to treat hypercalcemia of malignancy and can be helpful for treating pain from bone metastases. An annual dose of Zoledronate may also prevent recurring fractures in patients with a previous hip fracture. Zoledronic Acid (ZOL 446) is a single 5 mg infusion for the treatment of Paget's disease of bone. In 2007, the FDA also approved Reclast for the treatment of postmenopausal osteoporosis.
Targets(IC50)	Apoptosis,Rho,Autophagy
In vitro	Zoledronic acid (120 mg/kg, subcutaneously) prevented damage formation, prevented cancellous bone loss and loss of bone mineral density, and reduced osteoclast circumference in 5T2 mM mice, also decreasing paraprotein concentration and tumor load, and reducing angiogenesis.
In vivo	Zoledronic acid (120 mg/kg, subcutaneously) prevented damage formation, prevented cancellous bone loss and loss of bone mineral density, and reduced osteoclast circumference in 5T2 mM mice, also decreasing paraprotein concentration and tumor load, and reducing angiogenesis.

## Solubility Information

Solubility	H <sub>2</sub> O: 1.6 mg/mL (5.88 mM),Sonication is recommended. DMSO: < 1 mg/mL (insoluble or slightly soluble) 0.1M NaOH: 12.5 mg/mL (45.94 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.6753 mL	18.3763 mL	36.7525 mL
5 mM	0.7351 mL	3.6753 mL	7.3505 mL
10 mM	0.3675 mL	1.8376 mL	3.6753 mL
50 mM	0.0735 mL	0.3675 mL	0.7351 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.

### Reference

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Viereck V, et al. Biochem Biophys Res Commun, 2002, 291(3), 680-686.

Croucher PI, et al. J Bone Miner Res, 2003, 18(3), 482-492.

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