Data Sheet (Cat.No.T0308)

TargetMol

Etidronic acid

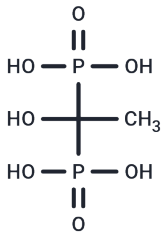
Chemical Properties

CAS No. : 2809-21-4

Formula: C2H8O7P2

Molecular Weight: 206.03

Storage: Pure form: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.



Biological Description

Description	Etidronic acid (HEDP) is a diphosphonate which affects calcium metabolism. It inhibits ectopic calcification and slows down bone resorption and bone turnover.
Targets(IC50)	Apoptosis,HBV,Phosphatase
In vitro	Etidronate inhibits directly osteoclastic bone-resorbing activity by pit assay. Etidronate also directly induces apoptosis and disrupts actin rings in osteoclasts. [1]
In vivo	Etidronate, when administered s.c. repeatedly at 10 or 40 mg/kg/day, gradually suppresses the adjuvant-induced allodynia In the rats with adjuvant arthritis, as assessed by 10-g von Frey hair. Etidronate (10-40 mg/kg/day) suppresses the adjuvant-induced mechanical allodynia in rat hindpaw. Etidronate (5-10 mg/kg/day) dose-dependently prevents the decrease in bone mineral density (BMD) in the proximal tibia of the arthritic rats. [2] Etidronate inhibits the histidine decarboxylase induction, but not the other inflammatory reactions induced by alendronate. Etidronate (unlike clodronate) also inhibits alendronate-induced BP-line formation in mice (even at 40 mmol/kg). Etidronate (160 mmol/kg) also inhibits the physicochemical changes in the tibia induced by six, weekly injections of alendronate. [3] Etidronate (10 mg/kg) combined with Calcitriol after subtotal nephrectomy (SNx) significantly inhibits thoracic and abdominal aortic calcification 3 weeks after the operation in rats. [4] Etidronate (5 mg/kg or 10 mg/kg) significantly reduces the thoracic and abdominal aortic calcification induced by calcitriol in the renal failure rat. Etidronate (5 mg/kg or 10 mg/kg) also reduces the dysfunction in aortic contraction. Etidronate (5 mg/kg) reverses the reduction in the aortic expression of matrix Gla protein mRNA observed in

Solubility Information

Solubility	DMSO: 45 mg/mL (218.41 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (9.71 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and*

In vivo Formulation	*used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.8537 mL	24.2683 mL	48.5366 mL
5 mM	0.9707 mL	4.8537 mL	9.7073 mL
10 mM	0.4854 mL	2.4268 mL	4.8537 mL
50 mM	0.0971 mL	0.4854 mL	0.9707 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.

Reference

Hiroi-Furuya E, et al. Calcif Tissue Int, 1999, 64(3), 219-223.
Kawabata A, et al. Neuropharmacology, 2006, 51(2), 182-190.
Funayama H, et al. Calcif Tissue Int, 2005, 76(6), 448-457.
Tamura K, et al. J Pharmacol Sci, 2005, 99(1), 89-94.
Tamura K, et al. Eur J Pharmacol, 2007, 558(1-3), 159-166.