Product Data Sheet

Product Name: Neridronate
Cat. No.: GC36723

Chemical Properties

Cas. No.	79778-41-9		
SMILES	OC(P(O)(O)=O)(CCCCCN)P(O)(O)=O		
Formula	$C_6H_{17}NO_7P_2$	M.Wt	277.15
Solubility	Water: 18.75 mg/mL (67.65 mM)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Neridronate		

Background

Neridronic acid is an amino bisphosphonate that inhibits farnesyl pyrophosphate (FPP) synthase (IC_{50} = 388.2 nM in a cell-free assay).[1] It decreases the differentiation of RAW 264.7 cells into osteoclasts in a CRL-12257 co-culture model of osteoclastogenesis when used at concentrations ranging from 0.001 to 100 ?M.[2] Neridronic acid (30 ?M) inhibits FGF2-induced proliferation and tube formation in human umbilical vein endothelial cells (HUVECs).[3] It reduces the loss of trabeculae and increases bone density in the tibial metaphysis of growing rats when administered subcutaneously at a dose of 0.1 mg/kg per day.[4]

1.Dunford, J.E., Kwaasi, A.A., Rogers, M.J., et al.Structure-activity relationships among the nitrogen containing bisphosphonates in clinical use and other analogues: Time-dependent inhibition of human farnesyl pyrophosphate synthaseJ. Med. Chem.51(7)2187-2195(2008) 2.Nicolin, V., Bareggi, R., Baldini, G., et al.Effects of neridronic acid on osteoclasts derived by physiological dual-cell culturesActa Histochem.109(5)397-402(2007) 3.Ribatti, D., Nico, B., Mangieri, D., et al.Neridronate inhibits angiogenesis in vitro and in vivoClin. Rheumatol.26(7)1094-1098(2007)

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4.Schenk, R., Eggli, P., Fleisch, H., et al.Quantitative morphometric evaluation of the inhibitory activity of new aminobisphosphonates on bone resorption in the ratCalcif. Tissue Int.38(6)342-349(1986)