Product Data Sheet

Product Name: Ibandronic acid
Cat. No.: GC36287

Chemical Properties

Cas. No.	114084-78-5		
SMILES	OC(P(O)(O)=O)(P(O)(O)=O)CCN(C)CCCCC		
Formula	$C_9H_{23}NO_7P_2$	M.Wt	319.23
Solubility	Soluble in DMSO	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	Ibandronic acid		

Background

Ibandronic acid is a highly potent nitrogen-containing bisphosphonate used for the treatment of osteoporosis.Target: OthersIbandronate (1.25-2 μM) significantly reduces endothelial cell growth, while ibandronate (2 μM) also significantly reduces capillary-like tube formation and increases apoptosis of endothelial cells. Ibandronate (< 100 μM) dose-dependently increases VEGF expression in endothelial cells [1]. Ibandronate (< 100 μM) inhibits growth of both prostate cancer cell lines (LNCaP and PC-3) in a dose dependent manner [2].Ibandronate administered either daily (2.5 mg) or intermittently (20 mg every other day for 12 doses every 3 months) significantly reduces the risk of new morphometric vertebral fractures by 62% and 50% (p = 0.0006), respectively, in osteoporotic women after 3 years' treatment. Ibandronate administered either daily (2.5 mg) or intermittently (20 mg every other day for 12 doses every 3 months) significantly and progressively increases BMD of lumbar spine by 6.5% and 5.7%, respectively, in osteoporotic women after 3 years' treatment [3]. Ibandronate (< 125 mg/kg s.c.) results in a dose dependent increase in bone mineral density (BMD), trabecular bone volume and trabecular number, load to failure (Fmax), and yield load in long bones and vertebrae in ovariectomized rats, and increased trabecular separation in ovariectomized

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rats is fully prevented by all doses [4].

[1]. Morgan, C., S. Jeremiah, and J. Wagstaff, Metronomic administration of ibandronate and its anti-angiogenic effects in vitro. Microvasc Res, 2009. 78(3): p. 453-8. [2]. Epplen, R., et al., Differential effects of ibandronate, docetaxel and farnesol treatment alone and in combination on the growth of prostate cancer cell lines. Acta Oncol, 2011. 50(1): p. 127-33. [3]. Chesnut, I.C., et al., Effects of oral ibandronate administered daily or intermittently on fracture risk in postmenopausal osteoporosis. J Bone Miner Res, 2004. 19(8): p. 1241-9. [4]. Bauss, F., et al., Effects of treatment with ibandronate on bone mass, architecture, biomechanical properties, and bone concentration of ibandronate in ovariectomized aged rats. J Rheumatol, 2002. 29(10): p. 2200-8.

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