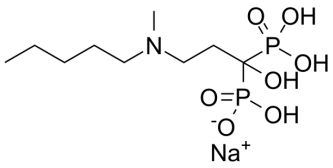
Ibandronate Sodium

Cat. No.:	HY-B0515B
CAS No.:	138844-81-2
Molecular Formula:	$C_9H_{22}NNaO_7P_2$
Molecular Weight:	341.21
Target:	Others
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Ibandronate Sodium 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 rats is fully prevented by all doses [4].

REFERENCES

[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.

Caution: Product has not been fully validated for medical applications. For research use only.

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