# Ibandronic Acid-$d_3$ sodium

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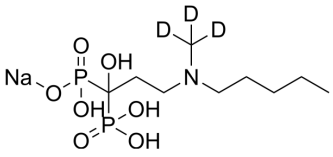
| **Cat. No.:** | HY-B0515AS |
| **CAS No.:** | 1329834-28-7 |
| **Molecular Formula:** | $C_9H_{19}D_3NNaO_7P_2$ |
| **Molecular Weight:** | 344.23 |
| **Target:** | Apoptosis; Isotope-Labeled Compounds |
| **Pathway:** | Apoptosis; Others |
| **Storage:** | Please store the product under the recommended conditions in the Certificate of Analysis. |



## BIOLOGICAL ACTIVITY

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| **Description** | Ibandronic Acid-$d_3$ (sodium) is the deuterium labeled Ibandronic acid. Ibandronic acid is a highly potent nitrogen-containing bisphosphonate used for the treatment of osteoporosis[1][2]. |
| **In Vitro** | Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

## REFERENCES


[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

[2]. 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.

[3]. 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.

[4]. 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.

[5]. 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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