

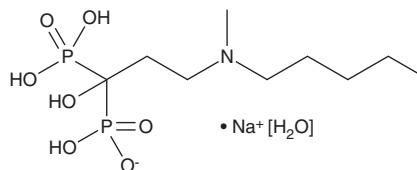
PRODUCT INFORMATION



Ibandronate (sodium hydrate)

Item No. 21361

CAS Registry No.: 138926-19-9
Formal Name: P,P'-[1-hydroxy-3-(methylpentylamino)propylidene]bis-phosphonic acid, monosodium salt, monohydrate
MF: C₉H₂₂NO₇P₂ • Na [H₂O]
FW: 359.2
Purity: ≥95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Ibandronate (sodium hydrate) is supplied as a crystalline solid. A stock solution may be made by dissolving the ibandronate (sodium hydrate) in the solvent of choice, which should be purged with an inert gas. Ibandronate (sodium hydrate) is sparingly soluble in ethanol, DMSO, and dimethyl formamide.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of ibandronate (sodium hydrate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of ibandronate (sodium hydrate) in PBS (pH 7.2) is approximately 0.25 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Ibandronate is a bisphosphonate that has been used in formulations for the treatment of osteoporosis.^{1,2} It binds to hydroxyapatite crystals with an affinity constant of 2.36 μM, inhibiting their growth and bone resorption.³

References

1. Bell, N. H. and R. H. Johnson Bisphosphonates in the treatment of osteoporosis. *Endocrine* **6(2)**, 203-206 (1997).
2. Hou, Y., Gu, K., Xu, C., *et al.* Dose-effectiveness relationships determining the efficacy of ibandronate for management of osteoporosis: A meta-analysis. *Medicine (Baltimore)* **94(26)**, e1007 (2015).
3. Daly, J. W., Butts-Lamb, P., and Padgett, W. Subclasses of adenosine receptors in the central nervous system: Interaction with caffeine and related methylxanthines. *Cell. Mol. Neurobiol.* **3(1)**, 69-80 (1983).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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