

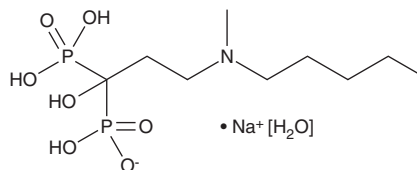
# PRODUCT INFORMATION



## 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:**  $C_9H_{22}NO_7P_2 \cdot Na [H_2O]$   
**FW:** 359.2  
**Purity:**  $\geq 95\%$   
**Supplied as:** A crystalline solid  
**Storage:**  $-20^\circ C$   
**Stability:**  $\geq 2$  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. Ibandronate (sodium hydrate) is sparingly soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. For biological experiments, we suggest that organic solvent-free aqueous solutions of ibandronate (sodium hydrate) 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.<sup>1,2</sup> It binds to hydroxyapatite crystals with an affinity constant of 2.36  $\mu M$ , inhibiting their growth and bone resorption.<sup>3</sup>

### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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