



LKT Laboratories, Inc.

Alendronate Monosodium Trihydrate

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Product Information

Product ID A4515
CAS No. 121268-17-5
Chemical Name 4-Amino-1-hydroxybutylidene-1,1-bisphosphate

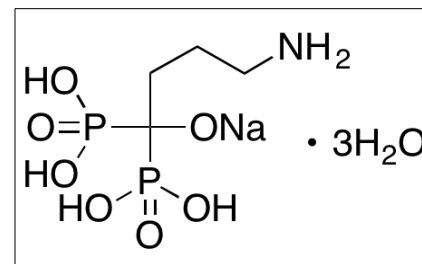
Synonym Alendronic acid, ABDP

Formula $C_4H_{12}NNaO_7P_2 \cdot 3H_2O$
Formula Wt. 325.08
Melting Point 233-235°C (dec)
Purity ≥98%
Solubility Soluble in water (10 mg/mL). PBS 0.25 mg/mL. DMSO <1 mg/mL.

Store Temp Ambient

Ship Temp Ambient

Description Alendronate is a second generation bisphosphonate that exhibits anti-resorptive, anti-inflammatory, immunomodulatory, and anticancer chemotherapeutic activities. Alendronate inhibits bone resorption but does not have any effects on bone mineralization; it also inhibits osteoclast formation and decreases phosphorylation of Akt and ERK1/2 in vitro. In animal models, alendronate decreases production of Th2 and Th17 cytokines and eotaxin-2, suppressing antigen-induced pulmonary immune responses. Additionally, this compound increases $\delta\gamma$ T cell activation and inhibits tumor growth in vivo.



Bulk quantities available upon request

Product ID	Size
A4515	100 mg
A4515	500 mg

References Tsubaki M, Komai M, Itoh T, et al. Nitrogen-containing bisphosphonates inhibit RANKL- and M-CSF-induced osteoclast formation through the inhibition of ERK1/2 and Akt activation. J Biomed Sci. 2014 Feb 3;21:10. PMID: 24490900.

Sasaki O, Imamura M, Yamazumi Y, et al. Alendronate attenuates eosinophilic airway inflammation associated with suppression of Th2 cytokines, Th17 cytokines, and eotaxin-2. J Immunol. 2013 Sep 15;191(6):2879-89. PMID: 23935198.

Gutman D, Epstein-Barash H, Tsuril M, et al. Alendronate liposomes for antitumor therapy: activation of $\gamma\delta$ T cells and inhibition of tumor growth. Adv Exp Med Biol. 2012;733:165-79. PMID: 22101722.

Takahashi H, Kinbara M, Sato N, et al. Nickel allergy-promoting effects of microbial or inflammatory substances at the sensitization step in mice. Int Immunopharmacol. 2011 Oct;11(10):1534-1540. PMID: 21621645.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.