LKT Laboratories, Inc.

Zoledronic Acid Hydrate

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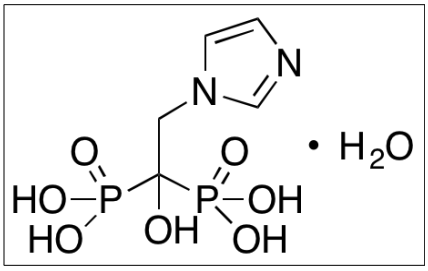
Product Information

Product ID Z5744
CAS No. 165800-06-6
Chemical Name [1-Hydroxy-2-(1H-imidazol-1-yl)ethylidene]- bisphosphonic acid
Synonym Zoledronate, Zometa



Formula $C_5H_{10}N_2O_7P_2 \cdot H_2O$
Formula Wt. 290.10
Melting Point 239°C (dec.)
Purity ≥98%
Solubility Soluble in 0.1 N sodium hydroxide.

Bulk quanitites available upon request

Product ID	Size
Z5744	10 mg
Z5744	25 mg
Z5744	100 mg

Store Temp Ambient
Ship Temp Ambient

Description Zoledronic acid is a third generation bisphosphonate that exhibits anti-resorptive, anti-osteoporotic, anti-angiogenic, and anticancer chemotherapeutic activities. In giant cell tumor bone stromal cells, zoledronic acid increases expression of Cbfa-1, osteocalcin, and osterix, inducing apoptosis and osteogenic differentiation; it also inhibits bone resorption and prevents osteoporosis in animal models. In animal models of renal cell carcinoma, zoledronic acid decreases mean vessel density. In breast cancer cells, zoledronic acid reverses the epithelial-to-mesenchymal transition (EMT) by inactivating NF-κB, decreasing self-renewal and cell proliferation. In other cellular models, zoledronic acid inhibits farnesyl diphosphate synthase (FPPS), which results in activation of γδ T cells. Across several breast cancer cell lines, zoledronic acid activates caspases 3, 8, and 9 and decreases expression of Ras and MAPK, resulting in the induction of cell cycle arrest or apoptosis.

References

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