



LKT Laboratories, Inc.

Doxycycline Hyclate

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Product Information

Product ID D5897

CAS No. 24390-14-5

Chemical Name [4S-(4a,4aa,5a,5aa,6a,12aa)]-4-(Dimethylamino)-1, -4,4a,5,5a,6,11,12a-octahydro-3,5,10,12,12a-penta- hydroxy-6-methyl -1,11-dioxo-2-naphthacenecarbox- amide hydrochloride

Synonym Doxycycline hydrochloride hemiethanolate hemihydrate, Atridox, Bassado, Clinofug, Doryx, Hydramycin, Mespaflinn, Retens, Spanor, Unacil, Zadorin

Formula (C₂₂H₂₄N₂O₈)₂ • 2HCl • H₂O •

Formula Wt. 512.9

Melting Point 220-223 °C

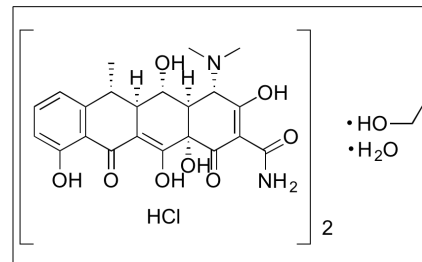
Purity ≥97%

Solubility Soluble in water 50 mg/mL;
DMSO.

Store Temp Ambient

Ship Temp Ambient

Description Doxycycline is a tetracycline antibiotic that exhibits anti-parasitic, anti-helminthic, anti-inflammatory, anticancer, and anti-metastatic activities. Doxycycline exerts its antibacterial activity through binding 16S rRNA of the bacterial 30S ribosome, preventing binding of aminoacyl-tRNA to the ribosomal A site, inhibiting translation. Doxycycline also inhibits matrix metalloproteinases (MMPs). Doxycycline displays slow antimalarial benefit, inhibiting expression of the apicoplast genome and inducing loss of function in parasites. This compound inhibits *Wolbachia* endosymbionts from *Wuchereria*, inducing sterilization and inhibiting growth. Doxycycline improves pulmonary function and parameters of chronic obstructive pulmonary syndrome (COPD) in clinical settings. Additionally, doxycycline inhibits migration and proliferation of breast adenocarcinoma cells. Doxycycline also attenuates cardiac hypertrophy in vivo and displays anti-allergic and anti-asthma benefits, suppressing activation of IgE and upregulating expression of IL-2. TEST!!!!!!



Pricing and Availability

Bulk quantities available upon request

Product ID	Size	List Price
D5897	1 g	\$29.80
D5897	5 g	\$73.90
D5897	10 g	\$132.40
D5897	25 g	\$235.50

References Joks R, Durkin HG. Non-antibiotic properties of tetracyclines as anti-allergy and asthma drugs. *Pharmacol Res.* 2011 Dec;64(6):602-9. PMID: 21501686.

Dalvi PS, Singh A, Trivedi HR, et al. Effect of doxycycline in patients of moderate to severe chronic obstructive pulmonary disease with stable symptoms. *Ann Thorac Med.* 2011 Oct;6(4):221-6. PMID: 21977068.

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Hoerauf A, Mand S, Fischer K, et al. Doxycycline as a novel strategy against bancroftian filariasis-depletion of *Wolbachia* endosymbionts from *Wuchereria bancrofti* and stop of microfilaria production. *Med Microbiol Immunol.* 2003 Nov;192(4):211-6. PMID: 12684759.

Dursun D, Kim MC, Solomon A, et al. Treatment of recalcitrant recurrent corneal erosions with inhibitors of matrix metalloproteinase-9, doxycycline and corticosteroids. *Am J Ophthalmol.* 2001 Jul;132(1):8-13. PMID: 11438047.

Fife RS, Sledge GW Jr. Effects of doxycycline on in vitro growth, migration, and gelatinase activity of breast carcinoma cells. *J*

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