



LKT Laboratories, Inc.

Tetracycline Hydrochloride

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Product Information

Product ID T1679

CAS No. 64-75-5

Chemical Name [4S-(4 α , 4a α , 5a α ,6 β ,12a α)]-4-(Dimethylamino)- 1,4,4a,5,5a,6-11,12a-octahydro-3,6,10,12,12a-penta- hydroxy-6-methyl-1,11-dioxo-2-naphthacene- carboxamide hydrochloride

Synonym Achromycin, Panmycin, Topicycline, Cyclopar, Diocyclin

Formula C₂₂H₂₄N₂O₈ • HCl

Formula Wt. 480.90

Melting Point 220-223 °C

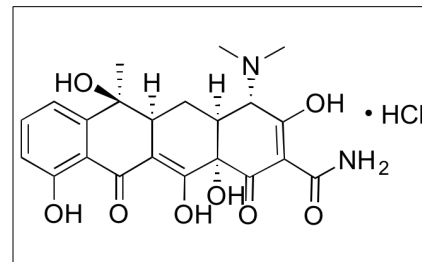
Purity ≥95%

Solubility Soluble in water (100 mg/mL), methanol and ethanol (10 mg/mL). Insoluble in ether and hydrocarbons.

Store Temp 4 °C

Ship Temp Ambient

Description Tetracycline is a polyketide antibiotic originally produced by *Streptomyces* that exhibits antibacterial and neuroprotective activities. Tetracycline binds the 30S subunit of the bacterial ribosome, preventing aminoacyl-tRNA from binding to the ribosomal A site and inhibiting protein synthesis. Tetracycline is clinically used to treat acne, rosacea, Lyme disease, and various bacterial infections. Tetracycline binds amyloid- β (A β) peptides, increasing their solubility and decreasing their neurotoxicity in vitro. Tetracycline may also inhibit matrix metalloproteinases (MMPs). Additionally, tetracycline inhibits mammalian RNA splicing.



Pricing and Availability

Bulk quantities available upon request

Product ID	Size	List Price
T1679	1 g	\$40.50
T1679	5 g	\$52.50
T1679	25 g	\$90.30
T1679	100 g	\$188.00

References Kennedy R, Alibhai M, Shakib K. Tetracycline: a cure all? Br J Oral Maxillofac Surg. 2014 Apr;52(4):382-3. PMID: 24613100.

Mahajan GB, Balachandran L. Antibacterial agents from actinomycetes - a review. Front Biosci (Elite Ed). 2012 Jan 1;4:240-53. PMID: 22201868.

Airolidi C, Colombo L, Manzoni C, et al. Tetracycline prevents A β oligomer toxicity through an atypical supramolecular interaction. Org Biomol Chem. 2011 Jan 21;9(2):463-72. PMID: 21063627.

Griffin MO, Fricovsky E, Ceballos G, et al. Tetracyclines: a pleiotropic family of compounds with promising therapeutic properties. Review of the literature. Am J Physiol Cell Physiol. 2010 Sep;299(3):C539-48. PMID: 20592239.

Hertweck M, Hiller R, Mueller MW. Inhibition of nuclear pre-mRNA splicing by antibiotics in vitro. Eur J Biochem. 2002 Jan;269(1):175-83. PMID: 11784311.

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