



LKT Laboratories, Inc.

Demeclocycline Hydrochloride

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Product Information

Product ID D1748

CAS No. 64-73-3

Chemical Name [4S-(4 α ,4aa,5 α ,6B,12aa)]-7-Chloro-4-(dimethyl- amino)-1,4,4a,5,5a,6,11,12a-octahydro-3,6,10,12,12a-pentahydroxy-1,11,-dioxo-2-naphthacene-carboxamide hydrochloride

Synonym Clortetrin, Demetraciclina, Detraavis, Mexocine

Formula C₂₁H₂₁ClN₂O₈ • HCl

Formula Wt. 501.30

Melting Point

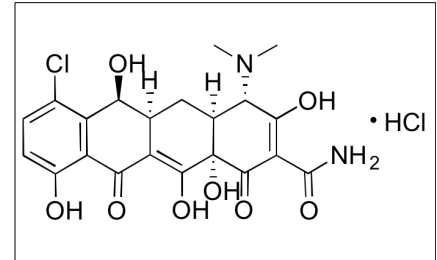
Purity ≥85%

Solubility Soluble in water (16 mg/mL), methanol (20 mg/mL).

Store Temp 4° C

Ship Temp Ambient

Description Demeclocycline is a tetracycline antibiotic found in *Streptomyces*. Like other tetracyclines, demeclocycline exhibits antibacterial efficacy by binding the 30S bacterial ribosomal subunit and inhibiting aminoacyl tRNA binding, therefore preventing protein translation and synthesis. Demeclocycline decreases expression of aquaporin 2 (AQP2) and adenylate cyclase 5/6, decreasing cAMP levels and preventing hyponatremia in SIADH. Demeclocycline also exhibits neuroprotective activity in cellular models of glutamate-induced neuronal death and in animal models of cerebral ischemia, potentially through the inhibition of calpain.



Bulk quantities available upon request

Product ID	Size
D1748	100 mg
D1748	250 mg
D1748	1 g

References Kortenoeven ML, Sinke AP, Hadrup N, et al. Demeclocycline attenuates hyponatremia by reducing aquaporin-2 expression in the renal inner medulla. *Am J Physiol Renal Physiol.* 2013 Dec 15;305(12):F1705-18. PMID: 24154696.

Jiang SX, Lertvorachon J, Hou ST, et al. Chlortetracycline and demeclocycline inhibit calpains and protect mouse neurons against glutamate toxicity and cerebral ischemia. *J Biol Chem.* 2005 Oct 7;280(40):33811-8. PMID: 16091365.

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