



## Product Information

Product ID M3353

CAS No. 13614-98-7

Chemical Name [4S-(4 $\alpha$ ,4aa,5 $\alpha$ ,12aa)]-4,7-Bis(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,10,12,12a-tetrahydroxy-1,11-dioxo-2-naphthacene-carboxamide hydrochloride

Synonym Dynacin, Klinomycin, Minocin, Vectrin

Formula C<sub>23</sub>H<sub>27</sub>N<sub>3</sub>O<sub>7</sub> · HCl

Formula Wt. 493.94

Melting Point

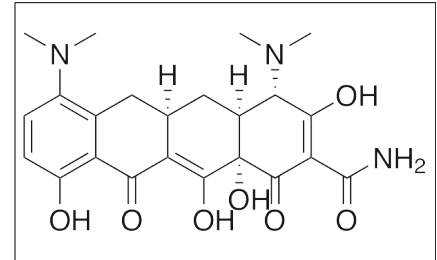
Purity  $\geq$ 98%

Solubility Soluble in dilute acids or bases.

Store Temp 4° C

Ship Temp Ambient

**Description** Minocycline is a tetracycline antibiotic and antifungal compound that also displays neuroprotective, immunosuppressive, and chemotherapeutic activity. Minocycline acts as a bacteriostatic antimicrobial, inhibiting protein synthesis of gram positive and gram negative bacteria. This compound inhibits matrix metalloproteinases and reduces hemorrhagic transformation after stroke and also attenuates isoflurane-induced cognitive impairment in animal models. Additionally, minocycline inhibits NF- $\kappa$ B and T cell signaling as well as microglial activity and the enzyme 5-lipoxygenase, improving symptoms of psychiatric and immune disorders. Minocycline inhibits IL-6 expression, downregulates the IL-6 receptor system, and decreases expression of phosphorylated STAT3, phosphorylated ERK1/2, MCL-1, and matrix metalloproteinases 2 and 9 in ovarian cancer cell lines. This compound also displays benefit in an animal model of ALS, inhibiting cytochrome c release and delaying disease progression.



## Pricing and Availability

*Bulk quantities available upon request*

Product ID	Size	List Price
M3353	100 mg	\$97.30
M3353	250 mg	\$149.90
M3353	500 mg	\$277.30

**References** Mora M, Medina-Leendertz SJ, Bonilla E, et al. Minocycline, but not ascorbic acid, increases motor activity and extends the life span of *Drosophila melanogaster*. *Invest Clin*. 2013 Jun;54(2):161-70. PMID: 23947005.

Blacker DJ, Prentice D, Alvaro A, et al. Reducing haemorrhagic transformation after thrombolysis for stroke: a strategy utilising minocycline. *Stroke Res Treat*. 2013;2013:362961. PMID: 23691430.

Kong F, Chen S, Cheng Y, et al. Minocycline attenuates cognitive impairment induced by isoflurane anesthesia in aged rats. *PLoS One*. 2013 Apr 17;8(4):e61385. PMID: 23613842.

Watabe M, Kato TA, Tsuboi S, et al. Minocycline, a microglial inhibitor, reduces 'honey trap' risk in human economic exchange. *Sci Rep*. 2013;3:1685. PMID: 23595250.

Ataie-Kachoe P, Morris DL, Pourgholami MH. Minocycline suppresses interleukine-6, its receptor system and signaling pathways and impairs migration, invasion and adhesion capacity of ovarian cancer cells: in vitro and in vivo studies. *PLoS One*. 2013 Apr 8;8(4):e60817. PMID: 23593315.

Giuliani F, Hader W, Yong VW. Minocycline attenuates T cell and microglia activity to impair cytokine production in T cell-microglia interaction. *J Leukoc Biol*. 2005 Jul;78(1):135-43. PMID: 15817702.

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