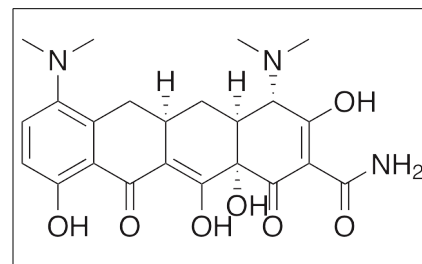




## Product Information

**Product ID** M3353  
**CAS No.** 13614-98-7  
**Chemical Name** [4S-(4 $\alpha$ ,4a $\alpha$ ,5a $\alpha$ ,12a $\alpha$ )]-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** ≥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.

**Bulk quantities available upon request**

Product ID	Size
M3353	100 mg
M3353	250 mg
M3353	500 mg

**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.

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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.

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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.