

PRODUCT INFORMATION



4-*epi* Minocycline

Item No. 90001066

CAS Registry No.: 43168-51-0
Formal Name: (4R,4aS,5aR,12aS)-4,7-bis(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,10,12,12a-tetrahydroxy-1,11-dioxo-2-naphthacenecarboxamide

Synonyms: 4-EMC, Minocycline Impurity A

MF: C₂₃H₂₇N₃O₇

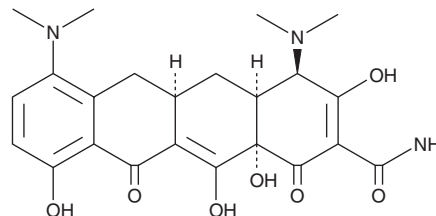
FW: 457.5

Purity: ≥80%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

4-*epi* Minocycline is supplied as a solid. A stock solution may be made by dissolving the 4-*epi* minocycline in the solvent of choice, which should be purged with an inert gas. 4-*epi* Minocycline is soluble in aqueous acid.

Description

4-*epi* Minocycline is the main degradation product of and a potential impurity in commercial preparations of minocycline.^{1,2} Minocycline (Item No. 14454) is a broad spectrum tetracycline antibiotic that has a particularly long half-life in serum. Formulations containing minocycline have been used in the treatment of acne in older patients.³ Minocycline also has both anti-inflammatory and neuroprotective actions.^{4,5}

References

1. Zbinovsky, V. and Chrekian, G. Minocycline. *Analytical profiles of drug substances*. Florey, K., editor, Academic Press, Inc. (1977).
2. Zawilla, N.H., Diana, J., Hoogmartens, J., et al. Improved LC of minocycline drug substance. *J. Pharm. Biomed. Anal.* **40(4)**, 815-821 (2006).
3. Strauss, J.S., Krowchuk, D.P., Leyden, J.J., et al. Guidelines of care for acne vulgaris management. *J. Am. Acad. Dermatol.* **56(4)**, 651-663 (2007).
4. Giuliani, F., Hader, W., and Yong, V.W. Minocycline attenuates T cell and microglia activity to impair cytokine production in T cell-microglia interaction. *J. Leukoc. Biol.* **78(1)**, 135-143 (2005).
5. Maier, K., Merkler, D., Gerber, J., et al. Multiple neuroprotective mechanisms of minocycline in autoimmune CNS inflammation. *Neurobiol. Dis.* **25(3)**, 514-525 (2007).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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