

# PRODUCT INFORMATION



## 4-Epidoxycycline

Item No. 23225

CAS Registry No.: 6543-77-7

Formal Name: (4R,4aR,5S,5aR,6R,12aS)-4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,5,10,12,12a-pentahydroxy-6-methyl-1,11-dioxo-2-naphthacenecarboxamide

Synonym: 4-ED

MF:  $C_{22}H_{24}N_2O_8$

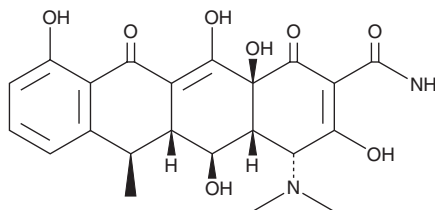
FW: 444.4

Purity:  $\geq 70\%$

Supplied as: A solid

Storage:  $-20^{\circ}\text{C}$

Stability:  $\geq 2$  years



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

### Laboratory Procedures

4-Epidoxycycline is supplied as a solid. A stock solution may be made by dissolving the 4-epidoxycycline in the solvent of choice. 4-Epidoxycycline is slightly soluble in methanol and water.

### Description

4-Epidoxycycline is the 4-epimer hepatic metabolite of the antibiotic doxycycline (Item No. 14422).<sup>1,2</sup> Unlike doxycycline, 4-epidoxycycline lacks antibiotic activity, therefore, it may not induce the intestinal inflammation in mice associated with doxycycline use. It is an alternative to doxycycline to inactivate the transactivator protein tTA or activate the reverse transactivator rtTA protein in Tet-Off- and Tet-On-based gene expression systems *in vitro* and in mice.

### References

1. Nelis, H.J.C.F., and De Leenheer, A.P. Evidence for metabolic inertness of doxycycline. *J. Pharm. Sci.* **70**(2), 226-228 (1981).
2. Eger, K., Hermes, M., Uhlemann, K., *et al.* 4-Epidoxycycline: An alternative to doxycycline to control gene expression in conditional mouse models. *Biochem. Biophys. Res. Commun.* **323**(3), 979-986 (2004).

#### 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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