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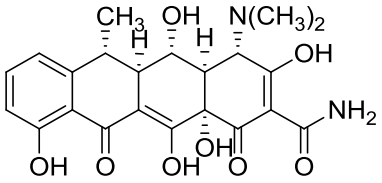
PRODUCT DATA SHEET

Doxycycline

Code No.: **BIA-D1469**

Pack sizes: **5 mg, 25 mg**



Synonyms : 6- Deoxy-5-hydroxytetracycline, 6-Deoxyoxytetracycline, Doxytetracycline, GS 3065, Hydramycin, Medeomycin, Vibramycin

Specifications

CAS #	:	**564-25-0**
Molecular Formula	:	**$C_{22}H_{24}N_2O_8$**
Molecular Weight	:	**444.4**
Source	:	**Semi-synthetic**
Appearance	:	**Yellow to orange solid**
Purity	:	**>98% by HPLC**
Long Term Storage	:	**-20°C**
Solubility	:	**Soluble in ethanol, methanol, DMF or DMSO. Limited water solubility.**

Application Notes

Doxycycline is a semi-synthetic tetracycline prepared by hydrogenolysis of oxytetracycline to remove the 6-hydroxy group. Although the synthesis was reported in 1958, it was not released for use until 1967. Doxycycline, together with minocycline, is regarded as a 'third generation' tetracycline largely replacing the analogues and pro-drugs produced in the early 1960s for mainstream antibiotic applications. Like all tetracyclines, doxycycline shows broad spectrum antibacterial and antiprotozoan activity and acts by binding to the 30S and 50S ribosomal subunits, blocking protein synthesis. Doxycycline has been extensively cited in the literature with over 10,000 references.

References

1. Hydrogenolysis studies in the tetracycline series - 6-Deoxytetracyclines. Stephens C.R. et al. J. Am. Chem. Soc. 1958, 80, 5324.
2. Comparison of in vitro activity and clinical pharmacology of doxycycline with other tetracyclines. Rosenblatt J.E. et al. Antimicrob. Agents Chemother. 1966, 6, 134.

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