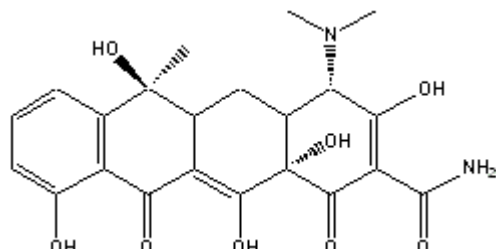




Catalog Number: 103012

Tetracycline Free base

Structure:



Molecular Formula: $C_{22}H_{24}N_2O_8$

Molecular Weight: 444.4

CAS # : 60-54-8

Synonyms: [4S-(4 α , 4a α , 5a α , 6 β , 12a α)]- 4-(Dimethylamino)- 1, 4, 4a, 5, 5a, 6-11, 12a- octahydro-3, 6, 10, 12, 12a-pentahydroxy- 6- methyl-1, 11-dioxo-2-naphthacenecarboxamide; deschlorobiomycin; tsiklomitsin; Abricycline; Ambramycin; Bio-Tetra; Cyclomycin; Dumocyclin; Tetradecin.

Solubility: Stable in neutral and in alkaline solutions. Soluble in water (1.7 mg/ml), or methanol (> 20 mg/ml - clear, yellow solution).

Description: Acts as an inhibitor of protein synthesis by binding to the 30S subunit and inhibiting binding of aminoacyl-tRNA. Antibiotic substance (gram-positive, gram-negative and mycoplasma) produced by *Streptomyces spp.* pKa (50% aq DMF): 8.3, 10.2.

It is typically used at a concentration of 10 ug/ml and is stable in media at 37°C for approximately 4 days.¹⁰

Also Available:

Catalog Number	Description	Size
103012	Tetracycline Free Base	5 g 25 g 100 g

Availability:

<i>Catalog Number</i>	<i>Description</i>	<i>Size</i>
103011	Tetracycline Hydrochloride	5 g 25 g 100 g
194542	Tetracycline Hydrochloride cell culture reagent	1 g 5 g
194798	Tetracycline Hydrochloride, molecular biology reagent, gamma-irradiated	10 mg 20 mg

References:



1. *Merck Index*, **12th Ed.**, No. 9337.
2. J. H. Boothe, et. al., *J. Am. Chem. Soc.*, **v. 75**, 4621 (1953)
3. L. H. Conover, et. al., *ibid.* 4622
4. J. H. Boothe, et. al., *J. Am. Chem. Soc.*, **v. 81**, 1006 (1959)
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6. V. N. Dobrynin, et. al., *Tetrahedron Letters*, 901 (1962).
7. Weiss, et. al., *Antibiot. Chemother.*, **v. 7**, 374 (1957).
8. A. Kaji, M. Ryoji in *Antibiotics vol. 5* (pt. 1), F. E. Hahn, Ed. (Springer-Verlag, New York, 1979) pp 304-328.
9. C. R. Hutchinson in *Antibiotics vol. 4*, J. W. Corcoran, Ed. (Springer-Verlag, New York, 1981) pp 1-12.
10. Perlman, D., "Use of Antibiotics in cell culture media." *Methods in Enzymology: Cell Culture*, Jakoby, W.B. and Pastan, I.H. (eds.), Academic Press: New York, p. 112 (1979).



Certificate of Analysis

Product Description: Tetracycline Free Base

Catalog Number: 103012

Lot: 2033J

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

CAS #: 60-54-8

Physical Description: Yellow Powder

Formula Weight: 444.4

Storage: -0° C, protect from light, store under nitrogen

Test	Specification	Result
Identity Test	Passes	Passes
Potency	≥ 900 $\mu\text{g}/\text{mg}$	944 $\mu\text{g}/\text{mg}$
FTIR	Conforms to Standard	Conforms to Standard
UV/VIS: λ max (0.1N HCl)	217-220, 268-271, 355-356 nm	217, 269, 355 nm

Identification: Positive reaction

pH: 4.70

Specific Rotation: -271°

Loss on Drying: 7.49%

Heavy Metals: <40 ppm

Sulphated Ash: 0.21%

Related Substances:

-----4-epitetracycline: 4.84%

-----4-epianhydrotetracycline: 0.01%

Peak Tail: 0.01%

Assay: 94.4%

Conclusion: This product conforms to BP 2002/EP4

2006/04/27 - Robert Beattie

MP Biomedicals, LLC.

Technical Director

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