



Product Information Sheet

T859

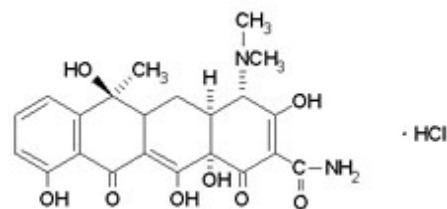
Tetracycline Hydrochloride

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 Hydrochloride

CAS: 64-75-5

Formula: C₂₂H₂₄N₂O₈•HCl

Mol. Weight: 480.94



Properties

Form: Powder
Appearance: Yellow Powder
Application: Plant Tissue Culture Antibiotic
Solubility: Soluble in Water and DMSO
Storage Temp: -20 to 0 °C
Stock Solution: Solutions of Tetracycline are stable at -20 to 0° C for short periods of time. Tetracycline hydrolyzes in the presence of water to form a turbid solution. It will not hydrolyze completely, and the resulting trace amount solutions are stable for longer periods of time at -20 to 0° C.
Storage Temp:
Other Notes: This product is hygroscopic. Protect from light.

Application Notes

Tetracycline is a broad spectrum antibiotic effective against many aerobic and anaerobic Gram-positive and Gram-negative bacteria, Chlamydiae, *Mycoplasma spp.*, *Rickettsia spp.*, spirochaetes and some protozoa. Tetracycline inhibits protein synthesis by binding reversibly to 30S subunit of the ribosome to prevent the binding of aminoacyl tRNA.^{2, 3}

Minimum inhibitory concentration (MIC) of tetracycline HCL has been reported for many bacteria. MIC of tetracycline HCL against *M.luteus* is >100 µg/mL, *S. aureus* is 2.5 µg/mL, *P. aeruginosa* is 50 µg/mL, *B. subtilis* is ≤ 1 µg/mL, and *K. pneumonia* is 5 µg/mL.⁴

Tetracycline can also be used as a selective agent for cells containing tetracycline resistance gene.

PhytoTechnology Laboratories® also carries Tetracycline Hydrochloride Solution (10 mg/mL), Product No. T7859.

Please Note: It is the sole responsibility of the purchaser to determine the appropriateness of this product for the specific plants that are being cultured and applications that are being used.

References

1. Merck 13, 9271
2. Martindale: The Complete Drug Reference, 35th ed., Paul S. Blake, Ed. (Royal Pharmaceutical Society, 2007), p. 310.
3. Chopra, Ian, and Marilyn Roberts. 2001. Tetracycline antibiotics: mode of actions, applications, molecular biology, and epidemiology of bacterial resistance. *Micrbiol Mol Biol Rev.* 65(2):232-260.
4. Yeshwanth, M. 2013. Comparative anti bacterial study in the leaves of four *Bauhinia* species. *International Journal of Current Microbiology and Applied Sciences.* 2(11):158-167.

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