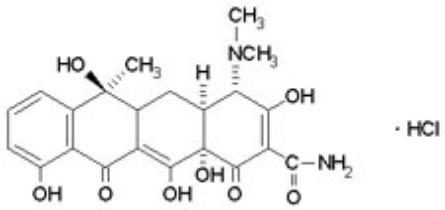
T859
Tetracycline Hydrochloride

Synonyms:	[4S-(4α,4aα,5aα,6β,12aα)]-4-(Dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,6,10,12,12a-pentahydroxy-6-methyl-1,11-dioxo-2-napthacenecarboxamide Hydrochloride
CAS:	64-75-5
Formula:	$C_{22}H_{24}N_2O_8$•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 Storage Temp:	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.
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, Chlamydiaceae*, Mycoplasma spp., Ricekttsia 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.

*Phyto*Technology 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.

India Contact

Life Technologies (India) Pvt Ltd.
306, Agarwal City Mall, Road 44, Pitampura, Delhi - 110034 (India)
Tel: +91-11-4220-8000; 4220-8111; 4220-8222 Fax: +91-11-4220-8444, Mobile: +91-98105-21400
Email - customerservice@lifetechindia.com | customerservice@atzlabs.com