



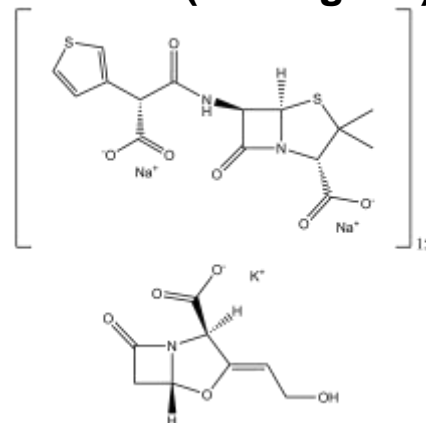
## Product Information Sheet

### T767 Timentin Solution (100 mg/mL)

Synonym: Ticarcillin Disodium Salt/ Potassium  
Clavulanate mixture (15:1), Betabactyl  
CAS: 4697-14-7/ 61177-45-5  
Formula:  $C_{15}H_{14}N_2Na_2O_6S_2$ /  $C_8H_8KNO_5$   
MW: 428.39/ 237.25 g/mol

#### Properties:

Form: Liquid  
Appearance: Clear, Light Yellow to Amber solution  
Application: Plant Tissue Culture Antibiotic  
Solubility: Miscible with water  
Typical Working Concentration: 50-200 mg/L  
Storage Temp: -20°C  
Other Notes: Plant Tissue Culture Tested



#### Application Notes:

Timentin is a mixture of ticarcillin and clavulanic acid. Ticarcillin is a broad spectrum semisynthetic penicillin with greater antibacterial activity toward gram negative rod-shaped bacteria than gram positive cocci (Brogden *et al.* 1980). Clavulanic acid is a  $\beta$ -Lactamase competitive inhibitor which confers stability to  $\beta$ -lactam ring-containing antibiotics (e.g. penicillin, ticarcillin, cefotaxime, carbenicillin, etc.) in the presence of  $\beta$ -Lactamase expressing bacteria (Reading and Cole 1977). Timentin is used most commonly in the regeneration medium for elimination of the *Agrobacterium* post-transformation of foreign DNA into plant cells (Cheng *et al.* 1998).

PhytoTechnology Laboratories® also carries Timentin powder, Product No. T869, and another solution at 50 mg/mL, Product No. T7869.

Please Note: While PhytoTechnology Laboratories™ tests each lot of this product with two or more plant cell/ tissue culture lines, 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:

Brogden RN, Heel RC, Speight TM, and GS Avery (1980) Ticarcillin: A Review of its Pharmacological Properties and Therapeutic Efficacy. *Drugs* 20(5):325-352  
Cheng ZM, Schnurr JA, and JA Kapaun (1998) Timentin as an alternative antibiotic for suppression of *Agrobacterium tumefaciens* in genetic transformation. *Plant Cell Reports*.17(8):646-649.  
*Merck* 13, 2364/9505  
Reading C, and M Cole (1977) Clavulanic Acid: a Beta-Lactamase-Inhibiting Beta Lactam from *Streptomyces clavuligerus*. *Antimicrobial Agents and Chemotherapy*. 11(5):852-857.

**PhytoTechnology Laboratories, LLC™**

P.O. Box 12205 • Shawnee Mission, KS • 66282-2205

Phone: 1-913-341-5343 or 1-888-749-8682 (U.S. Only) Fax: 1-913-341-5442 or 1-888-449-8682 (U.S. Only)

Web Site: [www.phytotechlab.com](http://www.phytotechlab.com)

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