Protocol

TD-P Revision 2.0

Creation Date: 7/10/2014
Revision Date: 2/6/2019

Timentin™ 100 mg/ml EZ-Pak™ Protocol

Introduction

Timentin™ is a 15:1 mixture of ticarcillin and clavulanate. Ticarcillin is a penicillin ß-lactam antibiotic, which is susceptible to ß-lactamase degradation. When combined with clavulanate, a ß-lactamase inhibitor, its efficacy is greatly increased. Timentin™ exhibits high activity against gram-negative bacteria and resistant *Agrobacterium* species.

Penicillins are a type of β-lactam antibiotic consisting of a four-membered β-lactam ring bound to a five-membered thiazolidine ring. This two-ring system causes distortion of the β-lactam amide bond, resulting in decreased resonance stabilization and increased reactivity. β-lactams inhibit the formation of peptidoglycan cross-links within bacterial cell walls by targeting penicillin-binding proteins or PBPs. Consequently, the bacterial cell wall becomes weak and cytolysis occurs. Resistance to β-lactam antibiotics occurs in the presence of cells containing plasmid encoded extended spectrum β-lactamases or ESBLs.

The Timentin™ EZ Pak™ is the fastest and easiest way to make a set amount of sterile Timentin™ solution. The kit includes pre weighed Timentin™ powder, a sterile filter, and a sterile container for the filtered solution. No need to calculate, simply add the stated amount of deionized H_2O, filter, and pour into the labeled bottle for easy usage. The EZ Pak™ includes high quality GoldBio Timentin™ and the sterile solution is ready for tissue culture, bacterial media, or any number of uses.

Materials

- 1 Bottle of Timentin™ powder
- 1 Sterile empty bottle for solution
- 1 Sterile Filter (and syringe for EZ10)

Method

Reconstitution Protocol

1. Warm Timentin™ powder bottle to Room Temperature.

2. Add specified volume of dH_2O to Timentin™ powder bottle. ‘

Product Catalog #	Volume of H_2O to Add	Final Volume
T-104-EZ10	9.6 ml	10 ml

Gold Biotechnology
St. Louis, MO
Ph: (800) -248-7609
Web: www.goldbio.com
Email: contactgoldbio86@goldbio.com

T-104-EZ50	48.0 ml	50 ml
T-104-EZ100	96.0 ml	100 ml

3. Mix until all product goes into solution.

4. Sterile Filter:
    a. For T-104-EZ10-
        i. Remove syringe from packaging.
        ii. Carefully remove top of sterile filter packaging.
        iii. Aspirate as much solution as possible into the syringe.
        iv. Screw the Leur end of the syringe into the top of the sterile filter.
        v. Carefully place the filter assembly above the empty bottle, and slowly depress the syringe plunger. Allow all the solution to flow through the filter.
        vi. Once all solution has been filtered, close the top of the solution bottle and store at -20°C. Make aliquots if desired. Discard filter and syringe.

    b. For T-104-EZ50 and EZ100-
        i. Remove vacuum filter from packaging.
        ii. Attach the vacuum hose according to instructions on filter packaging.
        iii. Add solution to the upper cup of the filter.
        iv. Apply vacuum pressure and let all the solution in the top cup flow through the filter into the bottom cup. Stop vacuum when all the solution is filtered.
        v. Remove the vacuum attachments from filter and close the bottle with the provided sterile cap.
        vi. Tightly seal the solution bottle and store at -20°C. Make aliquots if desired. Discard filter.

5. Use Timentin™ at a final concentration of 100 µg/ml.