

Puromycin, Sterile

1 Contents

Components	HY-K1057-1 mL	HY-K1057-5 mL
Puromycin, Sterile (10 mg/mL)	1 mL	5 mL

2 Introduction

Puromycin is an aminonucleoside antibiotic produced by *Streptomyces alboniger*. It inhibits protein synthesis by disrupting peptide transfer on ribosomes, causing premature chain termination during translation. It can kill most gram-positive bacteria and various animal or insect cells. Resistance to Puromycin is conferred by the puromycin N-acetyl-transferase gene (*pac*) from *Streptomyces alboniger*. Therefore, Puromycin is a popular and effective antibiotic for selecting vectors bearing the *pac* gene in mammalian cell lines and *E. coli*.

3 General Protocol

1. The working concentration of Puromycin varies with cell type, media, growth conditions and cell metabolic rate.
2. Before stable transfected cell lines can be selected, the optimal Puromycin concentration needs to be determined by performing a kill curve titration.
 - 1) Seed the parental cell line in a suitable culture plate at a cell density of 20-25% and incubate the cells for 24 hours at 37°C.
 - 2) Remove medium and then add medium with various concentrations of Puromycin and incubate at 37°C.
 - 3) Refresh the selective medium every 2-3 days and observe the percentage of surviving cells over time.
 - 4) Determine the lowest concentration of antibiotic that kills a large majority of the cells within 7-10 days. This concentration should be used for selection of a stable transfected cell line.

4 Storage

-20°C 2 years

5 Precautions

1. Minimize repeated freeze-thaw cycles.
2. Pay attention to aseptic operation to avoid contamination.
3. The working concentration of this product is set for the serum-containing basal medium. When used in a serum-free medium, the dosage should be appropriately reduced to avoid cytotoxicity.
4. This product is harmful to the human body. Please be careful when handling it, and avoid direct contact with the human body or inhalation of the body.
5. This product is for R&D use only, not for drug, household, or other uses.
6. For your safety and health, please wear a lab coat and disposable gloves to operate.