Creative Enzymes®

aminoglycoside 2''-phosphotransferase

Cat. No. EXWM-3023

Lot. No. (See product label)

Introduction

Description	Requires Mg2+. This bacterial enzyme phosphorylates many 4,6-disubstituted aminoglycoside antibiotics that have a hydroxyl group at position 2'', including kanamycin A, kanamycin B, tobramycin, dibekacin, arbekacin, amikacin, gentamicin C, sisomicin and netilmicin. In most, but not all, cases the phosphorylation confers resistance against the antibiotic. Some forms of the enzyme use ATP as a phosphate donor in appreciable amount. The enzyme is often found as a bifunctional enzyme that also catalyses 6'-aminoglycoside N-acetyltransferase activity. The bifunctional enzyme is the most clinically important aminoglycoside-modifying enzyme in Gram-positive bacteria, responsible for high-level resistance in both Enterococci and Staphylococci.
Synonyms	aphD (gene name); APH(2''); aminoglycoside (2'') kinase; gentamicin kinase (ambiguous); gentamicin phosphotransferase (ambiguous)

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 2.7.1.190
Reaction	GTP + gentamicin = GDP + gentamicin 2''-phosphate
Notes	This item requires custom production and lead time is between 5-9 weeks. We can custom produce according to your specifications.

Storage and Shipping Information

Storage	Store it at +4 ℃ for short term. For long term storage, store it at -20 ℃~-80 ℃.