Kanamycin monosulfate from *Streptomyces kanamyceticus*  
Plant Cell Culture Tested

Product Number  **K 4378**  
Store at Room Temperature

**Product Description**  
Molecular Formula:  $C_{18}H_{36}N_4O_{11} \cdot H_2SO_4$  
Molecular Weight:  582.6  
CAS Number:  25389-94-0

This product has been plant cell culture tested and is recommended for use in plant cell culture applications.

Kanamycin sulfate is an antimicrobial agent effective against Gram-negative and Gram-positive bacteria and mycoplasma. It binds to the 70S ribosomal subunit, inhibits translocation, and elicits miscoding. Cross-resistance occurs between kanamycin and neomycin, framycetin, and paromomycin, and partial cross-resistance has been reported between kanamycin and streptomycin. Aminoglycoside-modifying enzymes (acetyltransferase, phosphotransferase, nucleotidyltransferase) alter the antibiotic, preventing its interaction with ribosomes.

Kanamycin sulfate can be added into agar (agar plate), and the plate should be then be sealed to prevent any evaporation of moisture from the agar. The sealed plate can be stored at 2-8 °C for about one month. If the plate is not sealed to prevent evaporation of moisture, the kanamycin can degrade.

**Precautions and Disclaimer**  
For Laboratory Use Only. Not for drug, household or other uses.

**Preparation Instructions**  
Kanamycin sulfate is soluble in water (50 mg/ml), yielding a clear solution. Kanamycin sulfate is practically insoluble in alcohol, acetone, chloroform, ether, and ethyl acetate. A 1% solution in water has a pH of 6.5 to 8.5. This is in contrast to the pH of 5.5 to 7.5 for a 1% solution in water of kanamycin acid sulfate.

**Storage/Stability**  
Sterile solutions can be prepared by sterile filtration through a 0.2 µm filter. Solutions are stable at 37 °C for approximately 5 days. Aqueous stock solutions can be stored at 2-8 °C for long term storage.

**References**  