Kanosamine (hydrochloride)
Item No. 16623

CAS Registry No.: 57649-10-2
Formal Name: 3-amino-3-deoxy-D-glucose, monohydrochloride
MF: C_6H_{13}NO_5 • HCl
FW: 215.6
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid

Laboratory Procedures
For long term storage, we suggest that kanosamine (hydrochloride) be stored as supplied at -20°C. It should be stable for at least two years.

Kanosamine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the kanosamine (hydrochloride) in the solvent of choice. Kanosamine (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of kanosamine (hydrochloride) in ethanol is approximately 5 mg/ml and approximately 25 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of kanosamine (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of kanosamine (hydrochloride) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Kanosamine, a constituent of kanamycin (Item No. 16140), is an antibiotic produced by Streptomyces and Bacillus that can inhibit cell wall synthesis in plant-pathogenic oomycetes (MIC = 25 µg/ml for P. medicaginis M2913) and certain fungi as well as some bacterial species (MIC = 400 µg/ml for S. aureus).1,2 It has been explored as an alternative and/or supplement to synthetic pesticides and genetic resistance of crop plants for the management of plant disease.1,2

References

Related Products
For a list of related products please visit: www.caymanchem.com/catalog/16623