Alexidine (hydrochloride)  
Item No. 13876

CAS Registry No.: 1715-30-6  
Formal Name: N1,N14-bis(2-ethylhexyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediimidamide, dihydrochloride

MF: C58H56N10 • 2HCl  
FW: 581.7  
Purity: ≥98%

Stability: ≥2 years at -20°C  
Supplied as: A crystalline solid  
UV/Vis.: λmax: 237 nm

Laboratory Procedures

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

Alexidine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the alexidine (hydrochloride) in the solvent of choice. Alexidine (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of alexidine (hydrochloride) in these solvents is approximately 11, 16, and 5 mg/ml, respectively.

Alexidine (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, alexidine (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Alexidine (hydrochloride) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Alexidine is an alkyl bis(biguanide) antiseptic which has been used in mouthwashes to eliminate plaque forming microorganisms.\(^1\) It binds to lipopolysaccharide and lipoteichoic acid and inhibits fungal phospholipase B (IC\(_{50}\) ~ 250 nM).\(^2,3\) Alexidine also inhibits the mitochondrial phosphatase PTPMT1 (IC\(_{50}\) = 1.08 μM, \textit{in vitro}) and induces apoptosis in cancer cell lines (ED\(_{50}\) = 1.8-2.6 μM).\(^4,5\)

References

Related Products

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