

Product Data Sheet

Product Name: Thimerosal

Cat. No.: GC48571

Chemical Properties

Cas. No. 54-64-8

SMILES O=C([O-])C1=CC=CC=C1[S][Hg]CC.[Na+]

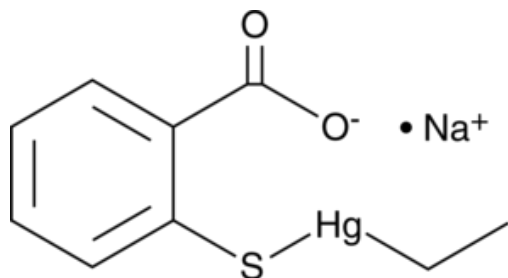
Formula C9H9HgO2S.Na M.Wt 404.8

Solubility H2O : 100 mg/mL (229.95 mM; Need ultrasonic and warming) Storage Store at -20°C, protect from light

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

Thimerosal is a mercurial antimicrobial agent.^{1,2} It is bacteriostatic against hemolytic streptococci and fungistatic against *H. capsulatum*, *B. dermatitidis*, and *S. schenckii*. Thimerosal (1-250 µM) induces apoptosis in HCN-1A human cortical neurons and various neuroblastoma cells.^{3,4} *In vivo*, thimerosal (80 mg/kg, i.p.) induces footpad swelling and dorsal skin contact dermatitis in a mouse model of pseudo-allergic reaction.⁵ Formulations containing thimerosal have been used as antiseptics and preservatives in vaccines.

1. Morton, H.E., North, L.L., Jr., and Engley, F.B., Jr. The bacteriostatic and bactericidal actions of some mercurial compounds on hemolytic streptococci. *J. Am. Med. Assoc.* 136(1):37-41 (1948)

2. Deighton, F.J., Hall, N.K., and Larsh, H.W. Merthiolate treatment of pathogenic fungi. *J. Clin.*

Caution: Product has not been fully validated for medical applications. For research use only.

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Microbiol.10(2)144-146(1979) 3.Baskin, D.S., Ngo, H., and Didenko, V.V.Thimerosal induces DNA breaks, caspase-3 activation, membrane damage, and cell death in cultured human neurons and fibroblastsToxicol. Sci.74361-368(2003) 4.DÓrea, J.G.Integrating experimental (in vitro and in vivo) neurotoxicity studies of low-dose thimerosal relevant to vaccinesNeurochem. Res.36(3)927-038(2011) 5.Peng, B., Che, D., Hao, Y., et al.Thimerosal induces skin pseudo-allergic reaction via Mas-related G-protein coupled receptor B2J. Dermatol. Sci.95(3)99-106(2019)

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