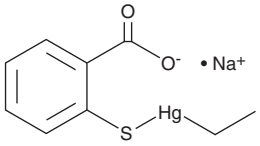
PRODUCT INFORMATION

Thimerosal

Item No. 33432

CAS Registry No.: 54-64-8
Formal Name: ethyl[2-(mercapto-κS)benzoato(2-)-κO]-mercurate(1-), monosodium
Synonyms: Merthiolate, NSC 4794
MF: $C_9H_9HgO_2S \bullet Na$
FW: 404.8
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Thimerosal is supplied as a crystalline solid. A stock solution may be made by dissolving the thimerosal in the solvent of choice, which should be purged with an inert gas. Thimerosal is soluble in organic solvents such as ethanol. Thimerosal is also soluble in water. We do not recommend storing the aqueous solution for more than one day.

Description

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.

References

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. 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 fibroblasts. *Toxicol. Sci.* **74(2)**, 361-368 (2003).
4. Dórea, J.G. Integrating experimental (in vitro and in vivo) neurotoxicity studies of low-dose thimerosal relevant to vaccines. *Neurochem. 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 B2. *J. Dermatol. Sci.* **95(3)**, 99-106 (2019).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

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