

[Open Peer Review on Qeios](#)

Thimerosal

National Cancer Institute

Source

National Cancer Institute. *Thimerosal*. NCI Thesaurus. Code C47751.

An organomercurial compound and derivative of thiosalicylic acid with antibacterial and antifungal properties. Although the mechanism of action has not been fully elucidated, thimerosal inhibits sulfhydryl-containing active site of various enzymes and binds to sulfhydryl compounds, such as glutathione, cysteine, and SH groups of proteins. In addition, thimerosal activates the InsP3 calcium channel on endoplasmic reticular membrane, thereby triggering the release of calcium from intracellular stores resulting in a calcium-induced calcium-influx of extracellular calcium. Consequently, thimerosal may induce or inhibit cellular functions dependent on calcium signaling.