

[Open Peer Review on Qeios](#)

Trichostatin A

National Cancer Institute

Source

National Cancer Institute. *Trichostatin A*. NCI Thesaurus. Code C1261.

A natural derivative of dienohydroxamic acid isolated from species of the bacterial genus *Streptomyces*. Trichostatin A (TSA) reversibly and specifically inhibits histone deacetylases, resulting in hyperacetylation of core histones which modulate chromatin structure. The increase in histone acetylation promotes selective gene transcription and the inhibition of tumor growth. This agent is a potent inducer of tumor cell growth arrest, differentiation and apoptosis in a variety of transformed cells in culture and in tumor-bearing animals. (NCI04)