



Product Information

Product ID T3134
CAS No. 1393-48-2
Chemical Name

Synonym

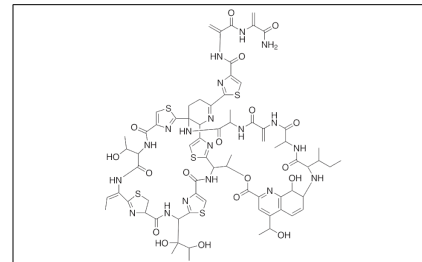
Formula $C_{72}H_{85}N_{19}O_{18}S_5$
Formula Wt. 1664.89
Melting Point 246-256 °C dec.
Purity $\geq 97\%$, HPLC

Solubility Practically insoluble in water.
Soluble in chloroform,
dichloromethane, DMF. DMSO
solution (1 %) is unstable -
should be freshly prepared

Store Temp 4 °C

Ship Temp Ambient

Description Thiostrepton is a thiazole antibiotic that exhibits antibacterial and anticancer properties. Thiostrepton inhibits the proteasome, binding 23s rRNA; it inhibits phosphate release after GTP hydrolysis in the ribosome, preventing tRNA translocation and turnover and inhibiting elongation during protein synthesis. Thiostrepton also inhibits the expression of Forkhead box M1 (FOXO1), an oncogenic transcription factor involved in cell cycle progression and oxidative stress responses. This compound alters the electrophoretic mobility of peroxiredoxin 3 (PRX3), disabling mitochondrial antioxidative activities during oxidative stress.



Bulk quantities available upon request

Product ID	Size
T3134	100 mg
T3134	500 mg
T3134	1 g
T3134	5 g

References Newick K, Cunniff B, Preston K, et al. Peroxiredoxin 3 is a redox-dependent target of thiostrepton in malignant mesothelioma cells. *PLoS One*. 2012;7(6):e39404. PMID: 22761781

Rodnina MV, Savelsbergh A, Matassova NB, et al. Thiostrepton inhibits the turnover but not the GTPase of elongation factor G on the ribosome. *Proc Natl Acad Sci U S A*. 1999 Aug 17;96(17):9586-90. PMID: 10449736.

Naaktgeboren N, Roobol K, Gubbens J, et al. The mode of action of thiostrepton in the initiation of protein synthesis. *Eur J Biochem*. 1976 Nov 1;70(1):39-47. PMID: 795651.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.