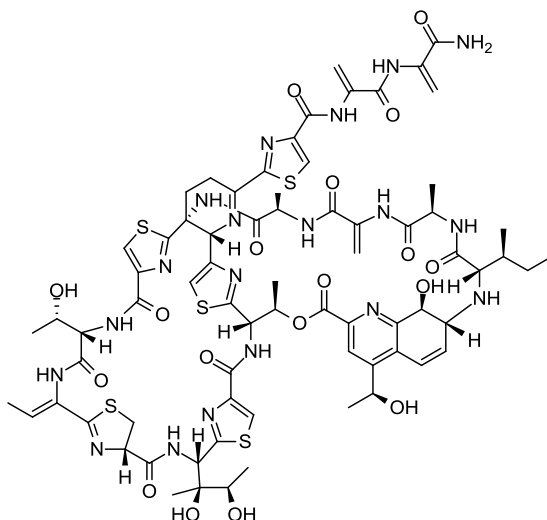


Thiostrepton

Code No.: **BIA-T1158**

Pack sizes: **5 mg, 25 mg**



Synonyms : Bryamycin, Thiactin, Alaninamide, X 146, A 8506, 6761-31

Specifications

CAS #	: 1393-48-2
Molecular Formula	: C₇₂H₈₅N₁₉O₁₈S₅
Molecular Weight	: 1664.9
Source	: <i>Streptomyces</i> sp.
Appearance	: White solid
Purity	: >99% by HPLC
Long Term Storage	: -20°C
Solubility	: Soluble in DMF or DMSO. Moderately soluble in methanol or ethanol. Poor water solubility.

Application Notes

Thiostrepton is a macrocyclic antibiotic incorporating thiazoles and other atypical amino acids. Patented in 1961, thiostrepton has been used as an antibiotic and acts by binding to ribosomes to prevent the binding of the EF-G elongation factor and GTP to the 50S ribosomal subunit. Thiostrepton is an inducer of tipA, a gene that controls the bacterial transcription regulators, and TipAL and TipAS, that are central regulators in multidrug resistance. Thiostrepton is closely related to siomycin, a recently discovered inhibitor of oncogenic transcription factor, FoxM1.

References

1. Thiostrepton, its salts and production Donovick R. 1961 US Patent 2982689.
2. Broad spectrum thiopeptide recognition specificity of the *Streptomyces lividans* TipAL protein and its role in regulating gene expression. Chiu M.L. et al., J. Biol. Chem. 1999, 274, 20578.
3. Identification of a chemical inhibitor of the oncogenic transcription factor Forkhead Box M1. Radhakrishnan et al., Cancer Res. 2006, 19, 9731.