



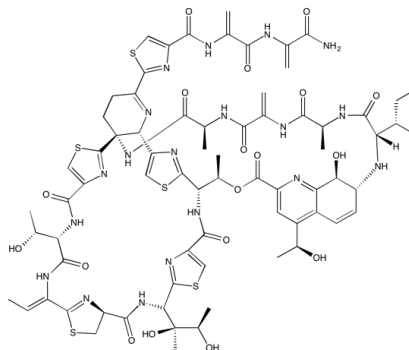
## Catalog # 10-2108

### Thiostrepton

CAS# 1393-48-2

Fermentation product from *Streptomyces azureus*

Lot # X101431



Novel cyclopeptide antibiotic. Blocks bacterial protein synthesis by inhibition of mRNA-tRNA translocation by GTPase elongation factor G (EF-G), EF-TU(GTP)-catalyzed aa-tRNA delivery as well as the activity of initiation factor-1 (IF-2)<sup>1-2</sup>. Displays antitumor activity. Induces apoptosis and cell cycle arrest in various tumor cells via downregulation of FOXM1 expression<sup>3</sup>.

- 1) Bowen et al. (2005), *Interaction of thiostrepton and elongation factor-G with the ribosomal protein L11-binding domain*; J. Biol. Chem., **280** 2934
- 2) Gonzalez et al. (2007), *Thiostrepton inhibition of tRNA delivery to the ribosome*; RNA, **13** 2091
- 3) Kwok et al. (2008), *Thiostrepton selectively targets breast cancer cells through inhibition of forkhead box M1 expression*; Mol. Cancer Ther., **7** 2022

### PHYSICAL DATA

|                        |                                                                                                                                               |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Molecular Weight:      | 1664.91                                                                                                                                       |
| Molecular Formula:     | C <sub>72</sub> H <sub>85</sub> N <sub>19</sub> O <sub>18</sub> S <sub>5</sub>                                                                |
| Purity:                | 98% by TLC and HPLC                                                                                                                           |
| Solubility:            | DMSO (up to 15 mg/ml) or chloroform (up to 5 mg/ml)                                                                                           |
| Physical Description:  | Off-white solid                                                                                                                               |
| Storage and Stability: | Store as supplied dessicated at -20°C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 1 week. |

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