

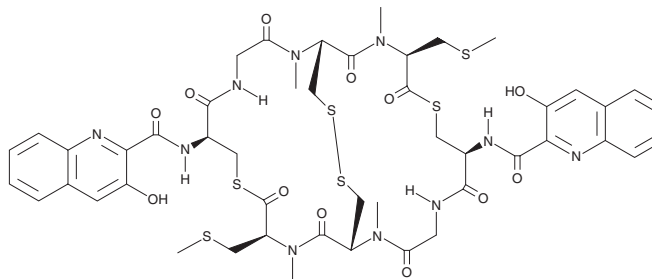
# PRODUCT INFORMATION



## Thiocoraline

Item No. 29509

**CAS Registry No.:** 173046-02-1  
**Formal Name:** N-[(3-hydroxy-2-quinoliny)lcarbonyl]-D-cysteinyglycyl-N-methyl-L-cysteinyl-N,S-dimethyl-L-cysteine bimol. (4→1'),(4'→1)-bis(thiolactone), cyclic (3→3')-disulfide  
**Synonym:** PM 93135  
**MF:** C<sub>48</sub>H<sub>56</sub>N<sub>10</sub>O<sub>12</sub>S<sub>6</sub>  
**FW:** 1,157.4  
**Purity:** ≥70%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years  
**Item Origin:** Bacterium/*Micromonospora* sp.



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Thiocoraline is supplied as a solid. A stock solution may be made by dissolving the thiocoraline in the solvent of choice, which should be purged with an inert gas. Thiocoraline is soluble in organic solvents such as ethanol, methanol, dichloromethane, and DMSO.

### Description

Thiocoraline is a depsipeptide and DNA *bis*-intercalator originally isolated from *Micromonospora* with antibacterial and anticancer activities.<sup>1,2</sup> It is active against the Gram-positive bacteria *S. aureus*, *B. subtilis*, and *M. luteus* (MICs = 0.05, 0.05, and 0.03 µg/ml, respectively) but not Gram-negative *E. coli*, *K. pneumoniae*, or *P. aeruginosa* (MICs = >100 µg/ml for all).<sup>1</sup> Thiocoraline inhibits RNA and DNA polymerase and thymidylate synthase (IC<sub>50</sub>s = 6, 6, and 15 µg/ml, respectively), as well as RNA and DNA synthesis *in vitro* (IC<sub>50</sub>s = 0.008 and 0.4 µg/ml, respectively). It is cytotoxic to P388, A549, HT-29, and MEL-28 cancer cells (IC<sub>50</sub>s = 0.002, 0.002, 0.01, and 0.002 µg/ml, respectively).

### References

1. Romero, F., Espilego, F., Pérez Baz, J., *et al.* Thiocoraline, a new depsipeptide with antitumor activity produced by a marine *Micromonospora*. I. Taxonomy, fermentation, isolation, and biological activities. *J. Antibiot. (Tokyo)* **50**(9), 734-737 (1997).
2. Negri, A., Marco, E., García-Hernández, V., *et al.* Antitumor activity, X-ray crystal structure, and DNA binding properties of thiocoraline A, a natural bisintercalating thiodepsipeptide. *J. Med. Chem.* **50**(14), 3322-3333 (2007).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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