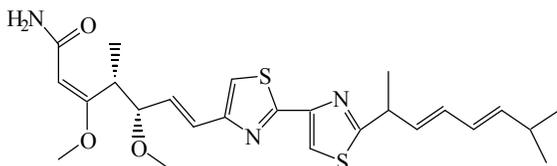


## Product Information

### Myxothiazol from *Myxococcus fulvus* fx16

Catalog Number **T5580**  
Storage Temperature  $-20\text{ }^{\circ}\text{C}$

CAS RN 76706-55-3



#### Product Description

Molecular formula:  $\text{C}_{25}\text{H}_{33}\text{N}_3\text{O}_3\text{S}_2$   
Molecular weight: 487.68

Myxothiazol was first isolated as an antifungal antibiotic which was also active against several Gram-positive bacteria.<sup>1</sup> Myxothiazol was found to bind to the quinol oxidation (Qo) site of the bc1 complex, blocking electron transfer to the Rieske iron-sulfur protein in the mitochondrial respiratory chain.<sup>1-4</sup> Oxygen consumption blockage leads to a cytostatic effect that could be reversed.<sup>3-5</sup> Myxothiazol, as other epothilones, which are known for their antitumor activity, contains a thiazole ring that is formed by the incorporation of cysteine into the polyketide backbone.<sup>6</sup>

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

#### Preparation Instructions

Soluble in DMSO, methanol, acetone, ethyl acetate, ethanol, chloroform, and dichloromethane.

#### Storage/Stability

Store the product sealed at  $-20\text{ }^{\circ}\text{C}$  under argon. Protect from light. Under these conditions the product is stable for at least 2 years.

#### References

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2. Taifo, M. et al., A novel biosynthetic pathway providing precursors for fatty acid biosynthesis and secondary metabolite formation in Myxobacteria. *J. Biol. Chem.*, **277**, 32768-32774 (2002).
3. Thierbach, G., and Reichenbach, H., Myxothiazol, a new antibiotic interfering with respiratory. *Antimicrob. Agents Chemother.*, **19**, 504-507 (1981).
4. Thierbach, G., and Reichenbach, H., Myxothiazol a new inhibitor of the cytochrom b-c1 segment of the respiratory chain. *Biochim. Biophys. Acta*, **638**, 282-289 (1981).
5. Conradt, P. et al., Myxothiazol: A reversible blocker of the cell cycle. *J. Antibiot.*, **17**, 1158-1162 (1989).
6. Silakowski, B. et al., New Lesson for combinatorial biosynthesis from Myxobacteria. *J. Biol. Chem.*, **274**, 37391-37399 (1999).

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