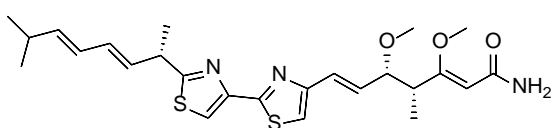


Product data sheet



MedKoo Cat#: 564035 Name: Myxothiazol CAS: 76706-55-3 Chemical Formula: C ₂₅ H ₃₃ N ₃ O ₅ S ₂ Exact Mass: 487.1963 Molecular Weight: 487.677		
Product supplied as:		Powder
Purity (by HPLC):		≥ 98%
Shipping conditions		Ambient temperature
Storage conditions:		Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:

Myxothiazol is an inhibitor of mitochondrial respiratory chain complexes III. Myxothiazol induces transcription of the p53-responsive SESN2 gene that plays an important role in stress response and homeostatic regulation.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
TBD	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.05 mL	10.25 mL	20.51 mL
5 mM	0.41 mL	2.05 mL	4.10 mL
10 mM	0.21 mL	1.03 mL	2.05 mL
50 mM	0.04 mL	0.21 mL	0.41 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. von Jagow G, Ljungdahl PO, Graf P, Ohnishi T, Trumpower BL. An inhibitor of mitochondrial respiration which binds to cytochrome b and displaces quinone from the iron-sulfur protein of the cytochrome bc1 complex. *J Biol Chem.* 1984 May 25;259(10):6318-26. PMID: 6327677.

2. Thierbach G, Reichenbach H. Myxothiazol, a new antibiotic interfering with respiration. *Antimicrob Agents Chemother.* 1981 Apr;19(4):504-7. doi: 10.1128/AAC.19.4.504. PMID: 7247372; PMCID: PMC181466.

In vivo study

1. Davoudi M, Kallijärvi J, Marjavaara S, Kotarsky H, Hansson E, Levéen P, Fellman V. A mouse model of mitochondrial complex III dysfunction induced by myxothiazol. *Biochem Biophys Res Commun.* 2014 Apr 18;446(4):1079-84. doi: 10.1016/j.bbrc.2014.03.058. Epub 2014 Mar 21. PMID: 24661880.

7. Bioactivity

Biological target:

Myxothiazol, an antifungal antibiotic, is a mitochondrial electron transport chain complex III (bc1 complex) inhibitor.

In vitro activity

Product data sheet



Myxothiazol, a new antibiotic from the myxobacterium *Myxococcus fulvus*, inhibited the growth of many yeasts and fungi at concentrations between 0.01 and 3 micrograms/ml. It was generally inactive against bacteria. The inhibitory effect was cytostatic.

Reference: Antimicrob Agents Chemother. 1981 Apr;19(4):504-7. <https://pubmed.ncbi.nlm.nih.gov/7247372/>

In vivo activity

This study developed a mouse model of biochemically induced and reversible CIII inhibition using myxothiazol. This study administered myxothiazol intraperitoneally at a dose of 0.56 mg/kg to C57Bl/J6 mice every 24 h and assessed CIII activity, histology, lipid content, supercomplex formation, and gene expression in the livers of the mice.

Reference: Biochem Biophys Res Commun. 2014 Apr 18;446(4):1079-84. <https://pubmed.ncbi.nlm.nih.gov/24661880/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.