

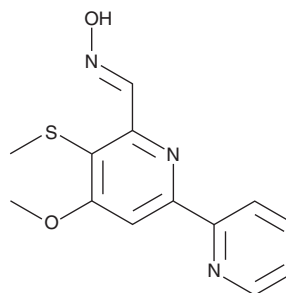
# PRODUCT INFORMATION



## Collismycin A

Item No. 27622

**CAS Registry No.:** 158792-24-6  
**Formal Name:** [C(E)]-4-methoxy-5-(methylthio)-[2,2'-bipyridine]-6-carboxaldehyde oxime  
**Synonym:** SF 2738A  
**MF:** C<sub>13</sub>H<sub>13</sub>N<sub>3</sub>O<sub>2</sub>S  
**FW:** 275.3  
**Purity:** ≥95%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years  
**Item Origin:** Bacterium/*Streptomyces* sp.



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

### Laboratory Procedures

Collismycin A is supplied as a solid. A stock solution may be made by dissolving the collismycin A in the solvent of choice, which should be purged with an inert gas. Collismycin A is soluble in ethanol, methanol, DMSO, and dimethyl formamide.

### Description

Collismycin A is a bacterial metabolite originally isolated from *Streptomyces* that has diverse biological activities, including antibacterial, antiproliferative, and neuroprotective properties.<sup>1</sup> It is active against a variety of bacteria (MICs = 6.25-100 µg/ml) and fungi (MICs = 12.5-100 µg/ml). It inhibits proliferation of A549 lung, HCT116 colon, and HeLa cervical cancer cells (IC<sub>50</sub>s = 0.3, 0.6, and 0.3 µM, respectively) and NIH373 fibroblasts (IC<sub>50</sub> = 56.6 µM) but not MDA-MD-231 breast cancer cells (IC<sub>50</sub> = >100 µM).<sup>2,3</sup> Collismycin A forms a complex with Fe(II) and Fe(III) at a 2:1 ratio, and the addition of iron ions inhibits the antiproliferative effect of collismycin A on HeLa cells, an effect that does not occur with the addition of zinc, manganese, copper, or magnesium ions.<sup>3</sup> Collismycin A (1 µM) prevents apoptosis in the brain region of zebrafish larvae by 44% in a model of neuronal cell death induced by all-*trans* retinoic acid (Item No. 11017).<sup>2</sup>

### References

1. Gomi, S., Amano, S., Sato, E., *et al.* Novel antibiotics SF2738A, B and C, and their analogs produced by *Streptomyces* sp. *J. Antibiot. (Tokyo)* **47(12)**, 1385-1394 (1994).
2. Garcia, I., Vior, N.M., González-Sabín, J., *et al.* Engineering the biosynthesis of the polyketide-nonribosomal peptide collismycin A for generation of analogs with neuroprotective activity. *Chem. Biol.* **20(8)**, 1022-1032 (2013).
3. Kawatani, M., Muroi, M., Wada, A., *et al.* Proteomic profiling reveals that collismycin A is an iron chelator. *Sci. Rep.* **6:38385** (2016).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/19/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM