

Product Data Sheet

Product Name: Collismycin A

Cat. No.: GC43299

Chemical Properties

Cas. No. 158792-24-6

SMILES COC1=C(SC)C(/C=N/O)=NC(C2=NC=CC=C2)=C1

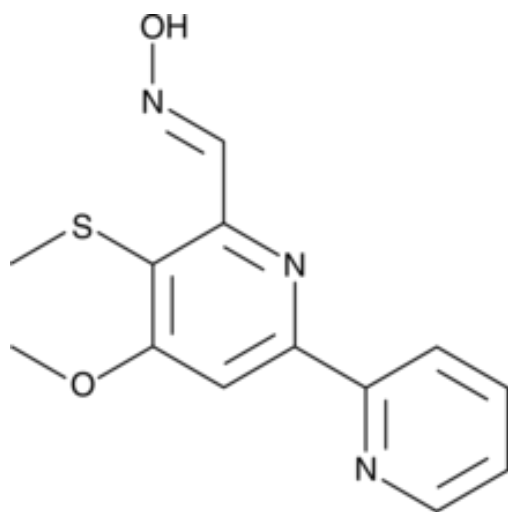
Formula C₁₃H₁₃N₃O₂S M.Wt 275.3

Solubility DMF: soluble, DMSO: soluble, Ethanol: soluble, Methanol: soluble
Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Collismycin A is a bacterial metabolite originally isolated from *Streptomyces* that has diverse biological activities, including antibacterial, antiproliferative, and neuroprotective properties. It is active against a variety of bacteria (MICs = 6.25 and 100 µg/ml) and fungi (MICs = 12.5-100 µg/ml). It inhibits proliferation of A549 lung, HCT116 colon, and HeLa cervical cancer cells (IC₅₀s = 0.3, 0.6, and 0.3 µM, respectively) and NIH373 fibroblasts (IC₅₀ = 56.6 µM) but not MDA-MD-231 breast

Caution: Product has not been fully validated for medical applications. For research use only.

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cancer cells ($IC_{50} = >100 \mu M$). 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. Collismycin A ($1 \mu M$) prevents apoptosis in the brain region of zebrafish larvae by 44% in a model of neuronal cell death induced by all-trans retinoic acid .

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