

Product Data Sheet

Product Name: Cu-GTSM

Cat. No.: GC49557

Chemical Properties

Cas. No. 68341-14-0

SMILES CNC1=N[N]2=CC=[N]3[Cu+2]2([S-]1)[S-]C(NC)=N3

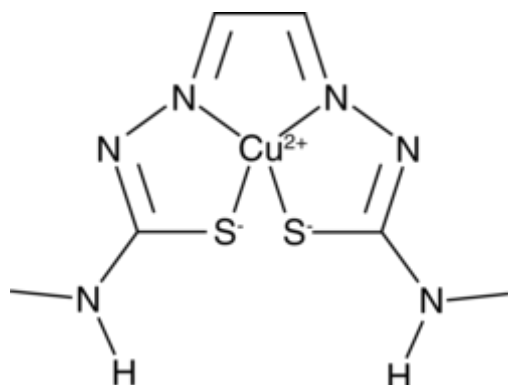
Formula C6H10CuN6S2 M.Wt 293.9

Solubility DMF: 20 mg/mL, DMSO: 10 mg/mL, Ethanol: Slightly soluble, PBS (pH 7.2): 0.16 mg/mL Storage -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

Cu-GTSM is a copper-containing compound and an analog of Cu-ATSM that has diverse biological activities.^{1,2,3,4} It is active against methicillin-sensitive and -resistant *S. aureus* clinical isolates (IC₅₀s = 0.3-0.6 μM for all).¹ Cu-GTSM inhibits the growth of SK-N-MC neuroepithelioma cells and MRC-5 fibroblasts (IC₅₀s = 0.009 and 0.27 μM, respectively).² It induces the production of reactive oxygen species (ROS) in SK-N-MC cells when used at a concentration of 5 μM. Cu-GTSM (2.5 mg/kg) reduces tumor burden in the transgenic adenocarcinoma of mouse prostate (TRAMP) model.

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

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but induces weight loss and renal toxicity in the same model.³ Cu-GTSM-containing positron-emitting copper isotopes have been used in PET imaging applications for copper trafficking in the TASTPM transgenic mouse model of Alzheimer's disease.⁴

- 1.Haeili, M., Moore, C., Davis, C.J.C., et al.Copper complexation screen reveals compounds with potent antibiotic properties against methicillin-resistant Staphylococcus aureusAntimicrob Agents Chemother.58(7)3727-3736(2014)
- 2.Stefani, C., Al-Eisawi, Z., Jansson, P.J., et al.Identification of differential anti-neoplastic activity of copper bis(thiosemicarbazones) that is mediated by intracellular reactive oxygen species generation and lysosomal membrane permeabilizationJ. Inorg. Biochem.15220-37(2015)
- 3.Cater, M.A., Pearson, H.B., Wolyniec, K., et al.Increasing intracellular bioavailable copper selectively targets prostate cancer cellsACS Chem. Biol.8(7)1621-1631(2013)
- 4.Torres, J.B., Andreozzi, E.M., Dunn, J.T., et al.PET imaging of copper trafficking in a mouse model of alzheimer diseaseJ. Nucl. Med.57(1)109-114(2016)

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