Data Sheet (Cat.No.T40792)

TargetMol

Cu(II)GTSM

Chemical Properties

CAS No. : 68341-14-0

Formula: C6H10CuN6S2

Molecular Weight: 293.86

Storage: Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Cu(II)GTSM is a cell permeable copper complex that significantly inhibits GSK3β activity and suppresses levels of neurotoxic amyloid β-trimers and phosphorylated tau, and is able to reverse cognitive deficits in Alzheimer's disease mice.
Targets(IC50)	Beta Amyloid,GSK-3
In vitro	**Methods**: PC12 cells treated with NGF for 48 hours were treated with Cu(II)GTSM (25, 50, 100 nM, 18 hours) and then examined. **Results**: MTT assay **Results** showed a small but significant loss of MTT reduction at 25 and 50 nMd of Cu(II)GTSM treatment; LDH assay showed that there was actually a small but significant reduction in LDH release when using 100 nM Cu(II)GTSM. [3]
In vivo	Treatment of AD mice with Cu(II)GTSM (10 mg/kg) can reduce the level of brain Aβ trimers in AD mice, restore the cognitive ability of AD mice to the expected level of healthy, cognitively normal mice, and reverse the cognitive deficits of APP/PS1 transgenic AD mice. [2]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.403 mL	17.0149 mL	34.0298 mL
5 mM	0.6806 mL	3.403 mL	6.806 mL
10 mM	0.3403 mL	1.7015 mL	3.403 mL
50 mM	0.0681 mL	0.3403 mL	0.6806 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Andres SA, et al. Synthesis, Characterization, and Biological Activity of Hybrid Thiosemicarbazone-Alkylthiocarbamate Metal Complexes. Inorg Chem. 2020;59(7):4924-4935.
Crouch PJ, et al. Increasing Cu bioavailability inhibits Abeta oligomers and tau phosphorylation. Proc Natl Acad Sci U S A. 2009;106(2):381-386.
3. Bica L, et al. Neuroprotective copper bis(thiosemicarbazonato) complexes promote neurite elongation. PLoS One. 2014 Feb 28;9(2):e90070.