

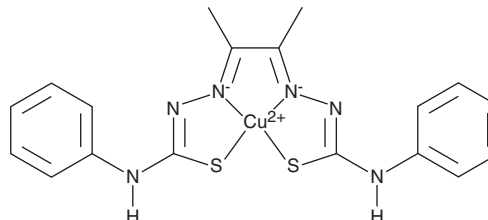
PRODUCT INFORMATION



Cu-ATSP

Item No. 35322

CAS Registry No.: 68341-12-8
Formal Name: (SP-4-2)-[[[2, 2'-(1,2-dimethyl-1,2-ethanediylidene)bis[N-phenylhydrazinecarbothioamidato-κN²,κS]](2-)]-copper
Synonyms: copper-ATSP, Cu^{II}(atasp)
MF: C₁₈H₁₈CuN₆S₂
FW: 446.1
Purity: ≥98%
UV/Vis.: λ_{max}: 247, 315, 395, 494 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Cu-ATSP is supplied as a solid. A stock solution may be made by dissolving the Cu-ATSP in the solvent of choice, which should be purged with an inert gas. Cu-ATSP is soluble in the organic solvent dimethyl formamide at a concentration of approximately 1 mg/ml.

Description

Cu-ATSP is a copper-containing *bis*(thiosemicarbazone) complex with ferroptosis inhibitory activity.¹ It traps peroxy radicals in a cell-free assay when used at a concentration of 6 μM. Cu-ATSP inhibits ferroptosis induced by (1S,3R)-RSL3 (Item No. 19288) in Pfa1 mouse embryonic fibroblasts (MEFs) and HT22 mouse hippocampal cells (EC₅₀s = 8.5 and 16 nM, respectively). It increases intracellular copper levels but, unlike the *bis*(thiosemicarbazone) complexes Cu-CQ2 and CuNC2, does not reduce amyloid-β (1-40) (Aβ40) levels in CHO cells overexpressing amyloid precursor protein (APP).²

References

1. Zilka, O., Poon, J.-F., and Pratt, D.A. Radical-trapping antioxidant activity of copper and nickel *bis*(thiosemicarbazone) complexes underlies their potency as inhibitors of ferroptotic cell death. *J. Am. Chem. Soc.* **143**(45), 19043-19057 (2021).
2. Donnelly, P.S., Caragounis, A., Du, T., *et al.* Selective intracellular release of copper and zinc ions from *bis*(thiosemicarbazonato) complexes reduces levels of Alzheimer disease amyloid-β peptide. *J. Biol. Chem.* **283**(8), 4568-4577 (2008).

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.

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