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Copper Cu 64-ATSM

National Cancer Institute

Source

National Cancer Institute. *Copper Cu 64-ATSM*. NCI Thesaurus. Code C79824.

A radioconjugate consisting of a lipophilic copper(II)bis(thiosemicarbazone) labeled with the positron- and beta-emitting isotope (64)Cu with hypoxia-selective and antineoplastic activities. With a high membrane permeability and redox potential, copper Cu 64-ATSM is preferentially taken up by hypoxic cells compared to normoxic cells; the extent of retention in tissue is inversely related to the state of tissue oxygenation allowing the quantitation of tissue hypoxia by positron emission tomography (PET). In addition, the radioactive copper moiety of this agent may deliver a selective cytotoxic dose of beta radiation to hypoxic tumor cells.