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Copper Cu 64-DOTA-Trastuzumab

National Cancer Institute

Source

National Cancer Institute. *Copper Cu 64-DOTA-Trastuzumab*. NCI Thesaurus. Code C90576.

A radioimmunoconjugate containing the recombinant humanized monoclonal antibody trastuzumab conjugated with the bifunctional, macrocyclic chelating agent tetra-azacyclododecanetetra-acetic acid (DOTA) and labeled with the radioisotope copper Cu 64 with radioisotopic activity and potential use as an imaging agent. The trastuzumab moiety of copper Cu 64-DOTA-trastuzumab binds with high affinity to the extracellular domain of human epidermal growth factor receptor 2 (HER2). Upon binding, the radioisotope moiety may be detected using positron emission tomography (PET), thereby allowing the imaging and quantification of HER2-expressing tumor cells. HER2, a tyrosine kinase and client protein of heat shock protein 90 (Hsp90), may be overexpressed on the cell surfaces of various tumor cell types.