Copper Cu 64-DOTA B-Fab

National Cancer Institute

Source

National Cancer Institute. Copper Cu 64-DOTA B-Fab. NCI Thesaurus. Code C121928.

A radioimmunoconjugate containing a bivalent monospecific tandem immunoglobulin fragment (B-Fab) derived from the humanized monoclonal antibody DS6 targeting the tumor-associated mucin-1 (MUC1)-sialoglycotope CA6 conjugated with the bifunctional, macrocyclic chelating agent 1,4,7,10-tetra-azacyclododecane-1,4,7,10-tetra-acetic acid (DOTA) and labeled with the radioisotope copper Cu 64 with potential use as an imaging agent for CA6-expressing tumors using positron emission tomography (PET). The B-Fab moiety of Copper Cu 64-DOTA B-Fab binds, with high affinity, to the cell surface antigen CA6. Upon binding, the radioisotope moiety may be detected using PET, thereby allowing the imaging and quantification of CA6-expressing tumor cells. This tracer could be used to select patients who could benefit from and to monitor efficacy of CA6-targeted anti-cancer therapies. Compared to DS6, the antibody fragment allows for increased tumor penetration, faster blood clearance, and more rapid renal elimination. The CA6 epitope is found on a variety of solid tumors.