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Technetium Tc 99m-3PRGD2

National Cancer Institute

Source

National Cancer Institute. *Technetium Tc 99m-3PRGD2*. NCI Thesaurus. Code C104007.

A radiopharmaceutical agent comprised of a pegylated arginine-glycine-aspartic acid (RGD) dimer (PRGD2) labeled with technetium Tc 99m, with potential alphaVbeta3 integrin imaging activity when used with single photon emission computed tomography (SPECT). After intravenous administration of technetium Tc 99m-3PRGD2, the RGD moiety binds to alphaVbeta3 integrin on the cell membrane via the cyclic RGD motif. Upon PET imaging, alphaVbeta3 integrin-expressing tumor cells can be visualized and expression levels can be quantified. Compared to other radiolabeled RGD-containing peptides, this agent shows an increased affinity for alphaVbeta3 integrin, enhanced tumor uptake as well as improved pharmacokinetics. AlphaVbeta3 integrin, a member of the integrin receptor family, is overexpressed on certain tumor cells and tumor endothelial cells while minimally or not expressed on healthy, normal cells; this receptor plays a key role in angiogenesis, tumor proliferation and survival.