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# Gallium Ga 68-labeled Affibody ABY-025

National Cancer Institute

## Source

National Cancer Institute. *Gallium Ga 68-labeled Affibody ABY-025*. NCI Thesaurus. Code C107163.

A radioconjugate composed of an optimized affibody conjugated, via its C-terminal cysteine, to maleimide-DOTA, and linked to the radioisotope gallium Ga 68, with potential use as a tracer for human epidermal growth factor receptor type 2 (HER2; ErbB2)-expressing tumors using positron emission tomography (PET). Upon intravenous administration of the gallium Ga 68-labeled affibody ABY-025, the affibody targets HER2-expressing tumor cells. This facilitates both detection of HER2-expressing tumor cells and assessment of responses to HER2-targeting chemotherapeutic agents during PET imaging. The affibody is an optimized antibody mimetic based on a 6.5-kDa 3-helical bundle Z domain derived from the staphylococcal protein A (Z her2:342); the nonbinding surface of the Z domain is reengineered (Z her2:2891) to increase binding affinity for HER2 and to improve tumor imaging. HER2 is overexpressed in many cancer cell types.