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# Anti-Epidermal Growth Factor Receptor 2 Antibody Expressing Pluripotent Killer T-Lymphocytes

National Cancer Institute

## Source

National Cancer Institute. *Anti-Epidermal Growth Factor Receptor 2 Antibody Expressing Pluripotent Killer T-Lymphocytes*. NCI Thesaurus. Code C125633.

A specific population of pluripotent killer (PIK) T-cells that have been induced to express high levels of antibodies against human epidermal growth factor receptor 2 (ERBB2; HER2), with potential antitumor activity. Although the exact mechanism(s) of action through which PIK-HER2 cells exert their effects has yet to be elucidated, upon infusion, these cells secrete antibodies targeting HER2 expressed on the surface of tumor cells. This may inhibit HER2-dependent signaling, which may lead to inhibition of cellular proliferation and differentiation. Additionally, these cells may stimulate the host immune system to mount both a highly-specific cytotoxic T-lymphocyte (CTL) response and antibody-dependent cell cytotoxicity (ADCC) directed against HER2-overexpressing tumors, which leads to tumor cell lysis. HER2 is a member of the epidermal growth factor receptor (EGFR) family of receptor tyrosine kinases and is frequently overexpressed in solid tumors.