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Anti-ErbB3/Anti-IGF-1R Bispecific Monoclonal Antibody MM-141

National Cancer Institute

Source

National Cancer Institute. *Anti-ErbB3/Anti-IGF-1R Bispecific Monoclonal Antibody MM-141*. NCI Thesaurus. Code C103863.

A bispecific monoclonal antibody directed against the human epidermal growth factor receptor ErbB3 (Her3) and the human insulin-like growth factor-1 receptor (IGF-1R), with potential antineoplastic activity. The anti-IGF-1R targeting arm of anti-IGF-1R/anti-ErbB3 bispecific monoclonal antibody MM-141 binds to IGF-1R on tumor cells thereby preventing the binding of the natural ligands IGF-1, 2 and heregulin (HRG) to IGF-1R; the anti-ErbB3 therapeutic arm prevents the binding of neuregulin (NRG) to ErbB3. This prevents the activation of the PI3K/AKT signal transduction pathway and may result in both the induction of apoptosis and a decrease in cellular proliferation in IGF-1R and ErbB3-overexpressing tumor cells. IGF-1R, a receptor tyrosine kinase of the insulin receptor superfamily, and ErbB3, a member of the epidermal growth factor receptor (EGFR) family of receptor tyrosine kinases, are frequently overexpressed in solid tumors.