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# HER2 ECD+TM Virus-like Replicon Particles Vaccine AVX901

National Cancer Institute

## Source

National Cancer Institute. *HER2 ECD+TM Virus-like Replicon Particles Vaccine AVX901*.  
NCI Thesaurus. Code C99903.

A cancer vaccine based on virus-like replicon particles (VRP) packaged with an alphaviral vector encoding the extracellular domain (ECD) and transmembrane (TM) regions of the human epidermal growth factor receptor 2 (EGFR2, NEU or HER2), with potential antineoplastic activity. After immunization with HER2 ECD+TM virus-like replicon particles vaccine AVX901, the VRPs infect cells and express HER2 ECD+TM protein that may activate the immune system to elicit a cytotoxic T-lymphocyte (CTL) response against HER2-expressing tumor cells. The alphaviral replicon of this vaccine is an attenuated strain of the Venezuelan equine encephalitis virus (VEEV) in which 3 of the 7 viral genes were substituted with a truncated HER2 gene to create a self-amplifying replicon RNA. HER2, a tyrosine kinase involved in several cell growth signaling pathways, is dysregulated or overexpressed in a wide variety of cancer cell types.