HLA-A*0201-Restricted URLC10-VEGFR1-VEGFR2 Multipeptide Vaccine

National Cancer Institute

Source

*National Cancer Institute. HLA-A*0201-Restricted URLC10-VEGFR1-VEGFR2 Multipeptide Vaccine. NCI Thesaurus. Code C77900.*

A cancer vaccine containing three HLA-A*0201-restricted peptide epitopes with potential immunostimulatory, antiangiogenic, and antitumor activities. Vaccine peptide epitopes are derived from the tumor associated antigen (TAA) URLC (up-regulated in lung cancer 10) and vascular endothelial growth factor receptors (VEGFR) 1 and 2. Upon administration, HLA-A*0201-restricted URLC10-VEGFR1-VEGFR2 multipeptide vaccine may stimulate a cytotoxic T lymphocyte (CTL) response against URLC10-expressing tumor cells and the tumor microvasculature expressing VEGFR 1 and 2 peptides; this may result in tumor cell lysis, the inhibition of tumor angiogenesis, and decreased tumor growth. HLA-A*0201 is an MHC class I molecule that presents antigenic peptides to CD8+ T cells; epitope design restricted to epitopes that bind most efficiently to HLA-A*0201 may improve antigenic peptide immunogenicity.