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# MAGE-A3/HPV 16 Peptide Vaccine

National Cancer Institute

## Source

National Cancer Institute. *MAGE-A3/HPV 16 Peptide Vaccine*. NCI Thesaurus. Code C61088.

A multi-epitope Trojan antigen (TA) construct vaccine consisting of human melanoma antigen A3 (MAGE-A3) and human papillomavirus (HPV) 16 peptide epitopes linked by the furin-sensitive linker peptide RVKR (arginine-serine-lysine-arginine) with immunostimulatory and antitumor activities. The TA construct enters the cytoplasm of antigen-presenting cells (APC) and is processed by the endoplasmic reticulum (ER) and the trans-Golgi network (TGN), where the endopeptidase furin releases the epitopes from the RVKR linker peptide and, together with various exopeptidases, generates MHC class I-binding peptides. Expressed on the cell surfaces of APC, these MHC class I-binding peptides stimulate a cytotoxic T lymphocyte (CTL) response against tumor cells that display the same peptide epitopes on their cell surfaces.