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HLA-DP0401/0402-Restricted MAGE-A3-Reactive T Cell Receptor-transduced Autologous T Cells

National Cancer Institute

Source

National Cancer Institute. *HLA-DP0401/0402-Restricted MAGE-A3-Reactive T Cell Receptor-transduced Autologous T Cells*. NCI Thesaurus. Code C115979.

Human autologous T-lymphocytes transduced with a retroviral vector encoding a T-cell receptor (TCR) specific for the human leukocyte antigen (HLA)-DP0401/0402-restricted, melanoma antigen A3 (MAGE-A3), with potential antineoplastic activity. CD4-positive cells are isolated from a patient, transduced with an anti-MAGE-A3-DP0401/0402 restricted TCR, expanded ex vivo, and reintroduced into the HLA-DP0401/0402 positive patient. Then, the HLA-DP0401/0402-restricted, MAGE-A3-reactive TCR-transduced autologous T cells bind to tumor cells expressing the MAGE-A3 antigen, which may result in both an inhibition of growth and increased cell death for MAGE-A3-expressing cancer cells. The tumor-associated antigen MAGE-A3 is overexpressed by a variety of cancer cell types.