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MART-1/gp100/Tyrosinase/MAGE-A3 Peptides-loaded Irradiated Allogeneic Plasmacytoid Dendritic Cells

National Cancer Institute

Source

National Cancer Institute. *MART-1/gp100/Tyrosinase/MAGE-A3 Peptides-loaded Irradiated Allogeneic Plasmacytoid Dendritic Cells*. NCI Thesaurus. Code C107159.

Irradiated allogeneic, HLA-A*0201 positive, plasmacytoid dendritic cells (pDCs) loaded with 4 melanoma peptides derived from the tumor associated antigens (TAAs) MelA/MART-1, gp100/pmel17, tyrosinase, and MAGE-A3, with potential immunostimulating and antineoplastic activities. Upon subcutaneous administration, the irradiated allogeneic pDCs may trigger functional multi-specific T cells from peripheral blood mononuclear cells and tumor-infiltrating lymphocytes, and activate the immune system to mount a cytotoxic T-lymphocyte response against HLA-A*0201 positive melanoma cancer cells expressing the TAAs MelA/MART-1, gp100/pmel17, tyrosinase, and MAGE-A3. These TAAs are upregulated in a variety of tumor cells. The pDCs are derived from a distinct subset of dendritic cells (DCs) with a plasma cell-like morphology and express a characteristic set of surface markers and may increase the anti-tumor immune responses.