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EBV LMP-2A-specific Autologous CD8+ T-cells

National Cancer Institute

Source

National Cancer Institute. *EBV LMP-2A-specific Autologous CD8+ T-cells*. NCI Thesaurus. Code C157488.

A preparation of autologous cytotoxic T-lymphocytes (CTLs) that are specifically reactive to Epstein-Barr virus (EBV) latent membrane protein-2A (LMP-2A) and expressing the co-stimulatory domain 4-1BB (CD137), with potential antineoplastic activity. Upon administration of the EBV/LMP-2A-specific autologous CD8+ T-cells to patients with EBV-positive tumors, these cells bind to and cause cell death in EBV-infected cells. This inhibits proliferation of EBV LMP-2A-expressing tumor cells. EBV LMP-2A is expressed in various malignancies and plays a key role in tumor cell proliferation and survival. 4-1BB, an inducible costimulatory member of the tumor-necrosis factor receptor (TNFR) family, is expressed on activated T-cells. It activates additional CD8+ T-cells, prevents activation-induced cell death of CD8+ T-cells, and selectively induces T-helper 1 (Th1)-type cytokines such as interferon (IFN)-gamma and tumor-necrosis factor-alpha (TNF-alpha).