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Alloantigen-specific Allogeneic Type 1 Regulatory T Cells T-*allo10*

National Cancer Institute

Source

National Cancer Institute. *Alloantigen-specific Allogeneic Type 1 Regulatory T Cells T-*allo10**. NCI Thesaurus. Code C134838.

A preparation of allogeneic CD4+ cells that were ex vivo stimulated with alloantigens, which involves exposing the cells to host antigen-presenting cells (APCs), in the presence of the immunomodulatory cytokine interleukin-10 (IL-10), with potential to prevent graft-versus-host disease (GvHD). The stimulation of the CD4+ cells by exposure to alloantigens plus IL-10 induces the differentiation of alloantigen-specific type 1 T regulatory (TR1) cells, which are hyporesponsive to the alloantigens. Upon infusion of T-*allo10* and prior to donor hematopoietic stem cell transplantation (HSCT), the alloantigen-specific type 1 regulatory T-cells are tolerant to the alloantigens and suppress alloreactive immune responses by donor CD4+ and CD8+ T-cells. This may ultimately prevent GvHD. IL-10 plays a key role in controlling inflammation, down-regulating immune responses, and inducing immunological tolerance. IL-10 induces both a long lasting antigen specific T-cell anergy and the differentiation of TR1 cells.