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# Allodepleted Haploidentical T Cells-expressing Inducible Caspase 9

National Cancer Institute

## Source

National Cancer Institute. *Allodepleted Haploidentical T Cells-expressing Inducible Caspase 9*. NCI Thesaurus. Code C102757.

Allodepleted haploidentical T-lymphocytes transduced with the Gal-V pseudotyped retrovirus vector encoding SFG.iCasp9-2A-deltaCD19, with potential immune reconstitution property. SFG.iCasp9-2A-deltaCD19 contains the suicide gene inducible caspase 9 (iCasp9) linked with a 2A-like cleavable peptide to the selectable marker, truncated human CD19 (deltaCD19). iCasp9 consists of a human FK506 drug-binding domain with an F36V mutation (FKBP12-F36V) linked to human caspase 9 using a short linker (SGGGS). Donor T cell therapy may help control transplant-related viral infections following allogeneic hematopoietic stem cell transplantation. However, even the addition of allodepleted donor T cells can lead to graft-versus-host disease (GVHD). In the event that GVHD begins to develop, the chemical homodimerizer AP1903 can be administered, which binds to the FKBP12-F36V domain activating caspase 9. This results in the death of T cells causing GVHD while sparing the virus reactive T-cells.