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# CD8+NKG2D+ AKT Cell

National Cancer Institute

## Source

National Cancer Institute. *CD8+NKG2D+ AKT Cell*. NCI Thesaurus. Code C132027.

A preparation of human CD8-positive tumor-specific T-lymphocytes engineered to express the natural killer cell activating receptor group 2D (NKG2D) and the serine/threonine kinase AKT, with potential immunomodulating and antineoplastic activities. Upon administration of CD8+NKG2D+ AKT cells, these cells target and kill tumor cells. AKT-mediated signaling enhances the activation, differentiation, proliferation and cytokine production of tumor specific T-cells, which enhances their anti-tumor effects; AKT activity in T-cells is often downregulated in the tumor environment. NKG2D, a stimulatory lymphocyte receptor, mediates the recognition of tumors cells and promotes T-cell activation and T-cell-mediated tumor cell killing; NKG2D ligands are expressed on cancer cells, while they are minimally expressed by or absent from normal, healthy cells.