

ABSTRACT

DEFINED COMPOSITION GENE MODIFIED T-CELL PRODUCTS

Aspects of the invention described herein, concern approaches to make genetically modified T-cells comprising a chimeric antigen receptor for human therapy. In some alternatives, the methods utilize a selection and/or isolation of CD4+ and/or CD8+ T-cells from a mixed T-cell population, such as, peripheral blood or apheresis derived mononuclear cells. Once selected/isolated, the CD4+ and/or CD8+ T-cells are then activated, genetically modified, and propagated, preferably, in separate or isolated cultures in the presence of one or more cytokines, which support survival, engraftment and/or proliferation of the cells, as well as, preferably promoting or inducing the retention of cell surface receptors, such as CD62L, CD28, and/or CD27. Included herein are also methods of treatment, inhibition, amelioration, or elimination of a cancer by administering to a subject in need thereof, one or more types of the genetically engineered T-cells or compositions that comprise the genetically engineered T-cell prepared as described herein.

FIG. 11A and FIG. 11B