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(54) Title: KNOCKDOWN OR KNOCKOUT OF ONE OR MORE OF TAP2, NLRC5, β 2m, TRAC, RFX5, RFXAP AND RFXANK TO MITIGATE T CELL RECOGNITION OF ALLOGENEIC CELL PRODUCTS

(57) Abstract: Provided herein are engineered immune cells and populations thereof for administration to patients to treat cancer (e.g., solid tumors or liquid tumors) and other conditions. The cells are engineered to functionally express a reduced level of one or more of RFX5, NLRC5, TAP2, β 2m, TRAC, RFXAP, CIITA and RFXANK. The cells optionally are further engineered to express one or more than one additional protein such as an antigen binding protein (e.g., a chimeric antigen receptor (CAR) or T cell receptor) to target tumor cells or other damaged cells in the patient and/or to express other genes at a reduced level. Also provided are methods of making and using the engineered cells, compositions and kits comprising them, and methods of treating by administering the cells and the compositions.



WO 2022/165233 A1