

## **DETERMINATION OF AN OPTIMAL FORMULATION FOR CAR-T CELLS: CRYOPRESERVATION STUDIES USING MODEL T-CELLS**

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Formulation development for T-cells is challenging due to various considerations including optimization of the hold times during filling and after thawing for CAR T-cell administration. Optimization of the formulation of a cryopreservation medium for CAR T-cells was determined through small and large scale formulation screens utilizing a model T-cell line. Pan T-cells were formulated in various combinations of harvest medium and cryopreservation medium to evaluate if any offered superior cell viability and viable cell density (VCD) following thaw when compared to the platform formulation containing HSA and high DMSO. Viability and VCD were measured immediately after thaw and up to 3 days post reconstitution to determine any effect of the cryopreservation media on the cell recovery. Initial screens showed that a difference between cryopreservation media could be observed and larger formulation robustness studies confirmed this difference. Taken together, the results of these studies confirm the development of a robust cryopreservation medium for T-cell formulation.