Development and optimization of lead CD5 CAR-NK for T cell malignancies

Korea Research Institute of Bioscience and Biotechnology (KRIBB)



ONCOLOGY	Lead
Product Type	Chimeric Antigen Receptor(CAR)- NK cell
Indication	1st indication: T cell malignancies
Target	CD5
MoA(Mechanism of Action)	Generation of CD5 CAR-NK cells → Interaction with antigen expressing target cells → NK degranulation and release cytokines → cell death
Competitiveness	 Because NK cells don't express CD5, harnessing CD5 CAR-NK cell is a promising strategy to avoid fratricide. CAR-NK cells using novel scFv to recognize CD5 widely expressed on malignant T cells but not on NK cells. CD5 CAR-NK cells show low toxicity to normal cells by the specific ability of NK cells to recognize abnormal cells. CAR-NK92 cells can be single-cell clonalized and then we can choose the lead cell which is insusceptible to normal cells
Development Stage	Lead
Route of Administration	Parenteral-Intravenous