



Promab Biotechnologies' CAR-T new product development programs are being designed for pre-clinical and future clinical applications.

CAR-T cells can be used for:

1. Compound screening
2. Antibody screening
3. Co-stimulatory and activation domain comparison
4. Personalized medicine and donor variations for CAR-T screening
5. Checkpoint inhibitors
6. Safety switches and regulators of CAR-T functions
7. Pre-clinical in vivo models
8. Treg and T memory cells in CAR-T setting
9. CAR-T signaling, tumor microenvironment
10. Proof of concept studies for clinical trials

The structure of CAR from Promab

CD33 protein is often overexpressed in leukemia and lymphoma. It is used for targeting this hematological diseases in clinical trials.

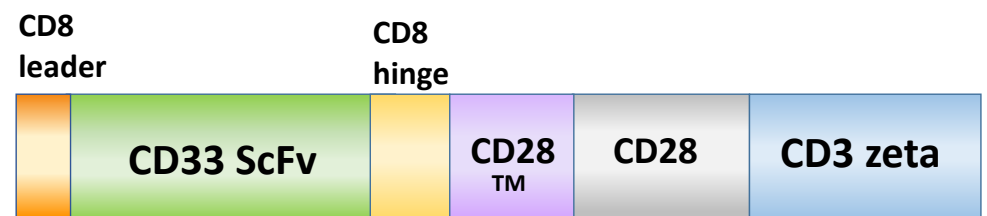
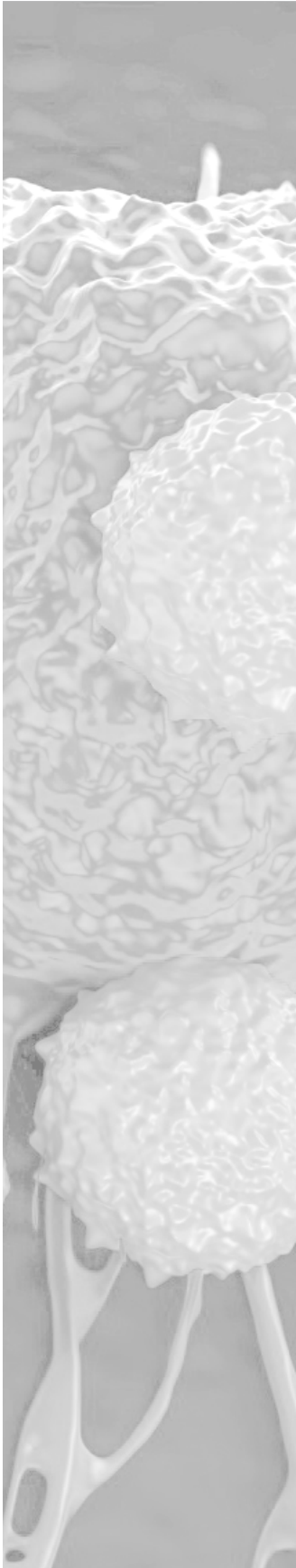


Figure 1. CAR-T cells expressing the above constructs are available from ProMab targeting targeting CD33 antigen. ScFv, single chain variable fragment. These CAR-T cells are generated with CD33-CD28-CD3 zeta CAR construct.

To date Promab generated 2nd generation CAR and CAR controls as shown in Figure 1, CAR-T cells and CAR-Natural Killer (NK) effector cells against cancer target cells that show excellent functionality, including dose-dependent and target cell-specific cytotoxic activity.

These CAR-T cells can be tested with target cells in cytotoxic assays and used for testing modulators of immune checkpoint inhibitors (PD-1, CTLA-4 pathways) or activators of immune response, small molecules affecting T cell or T reg activity.



Data

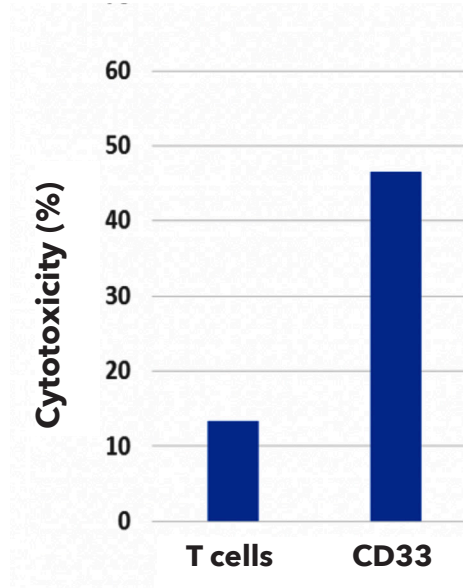


Figure 2. LDH (lactate dehydrogenase) cytotoxicity activity of effector CD33-CD28-CD3-CAR-T cells against RPMI8226 multiple myeloma target cells. Effector: Target cells ratio=5:1.