

FIG. 1A

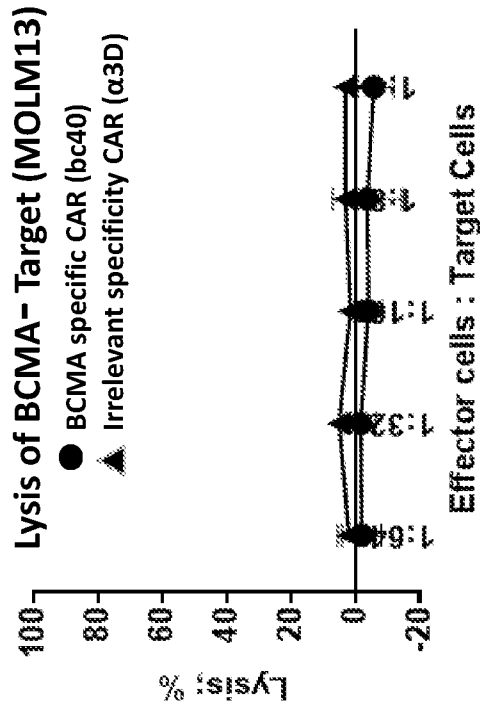


FIG. 1B

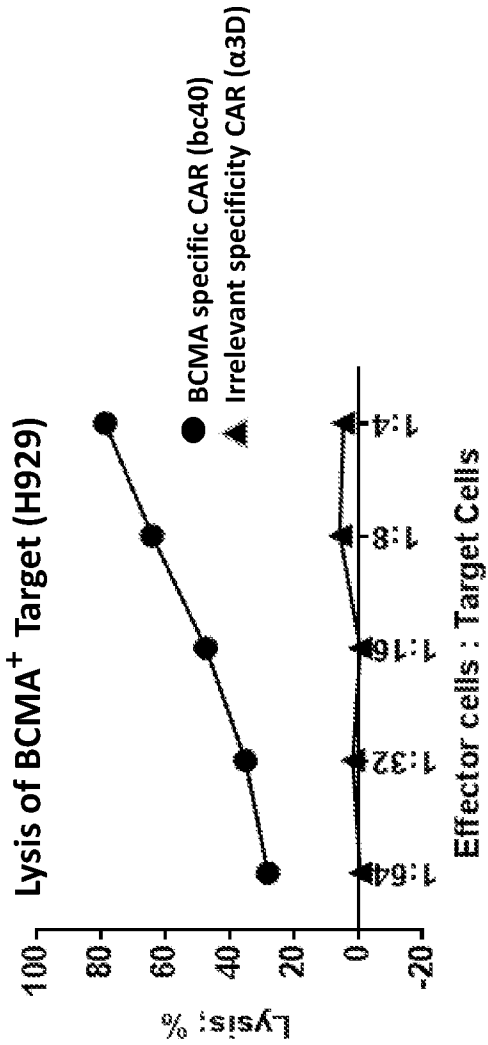


FIG. 1C

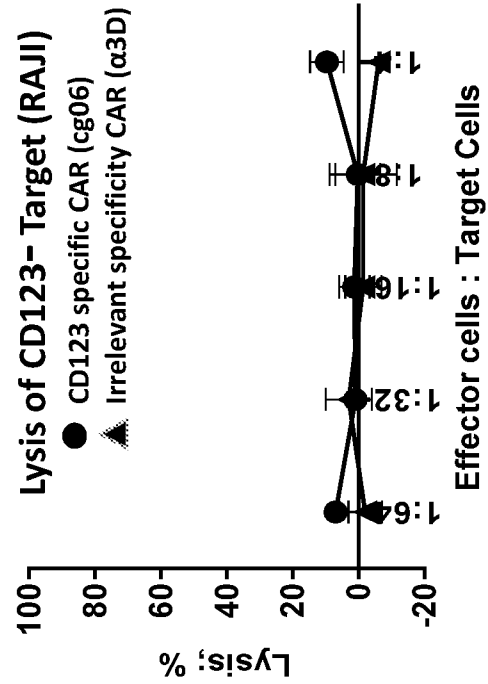
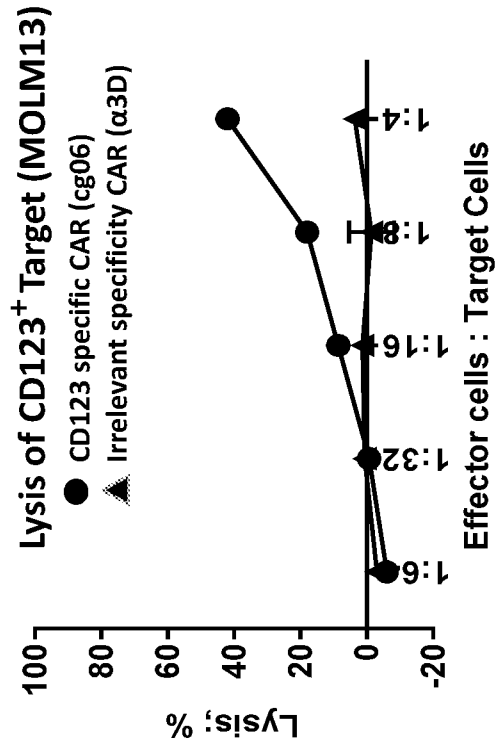


FIG. 1D



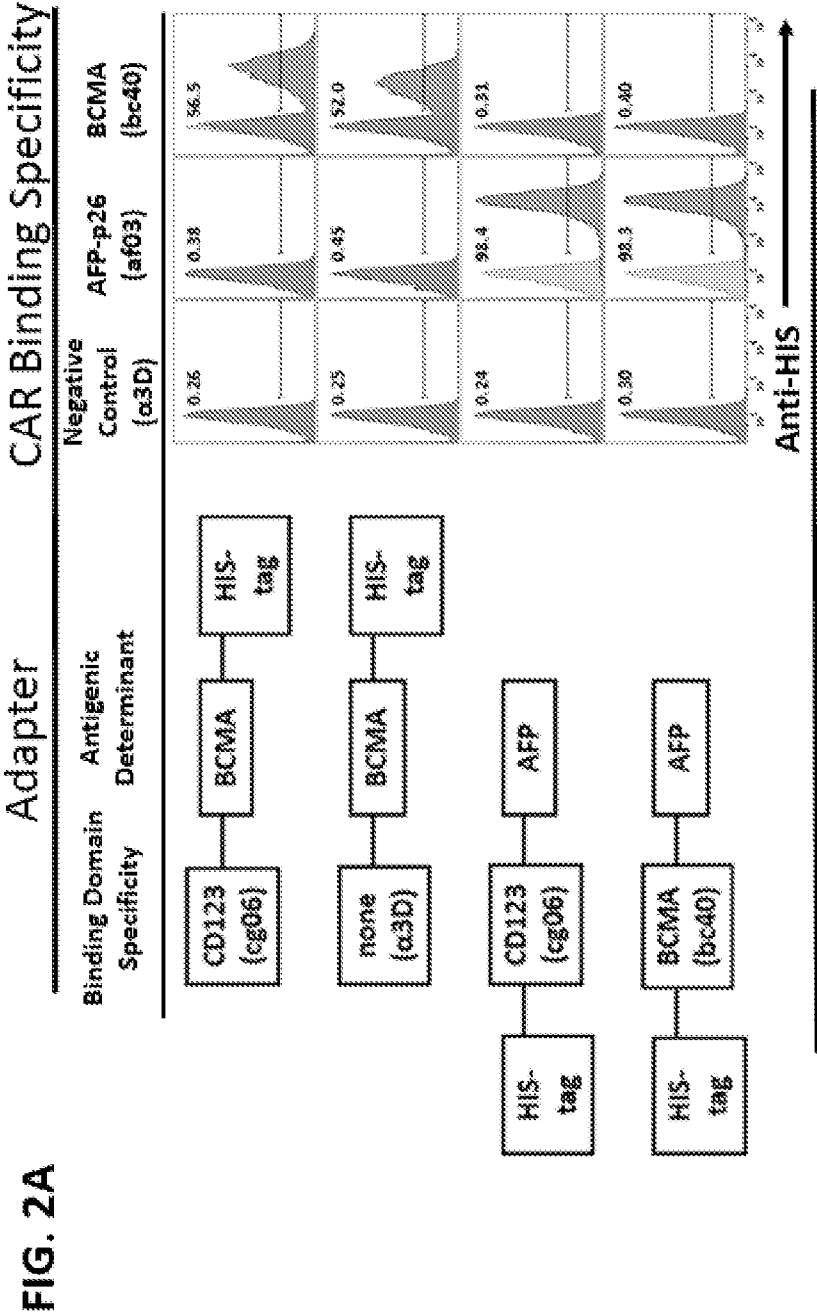
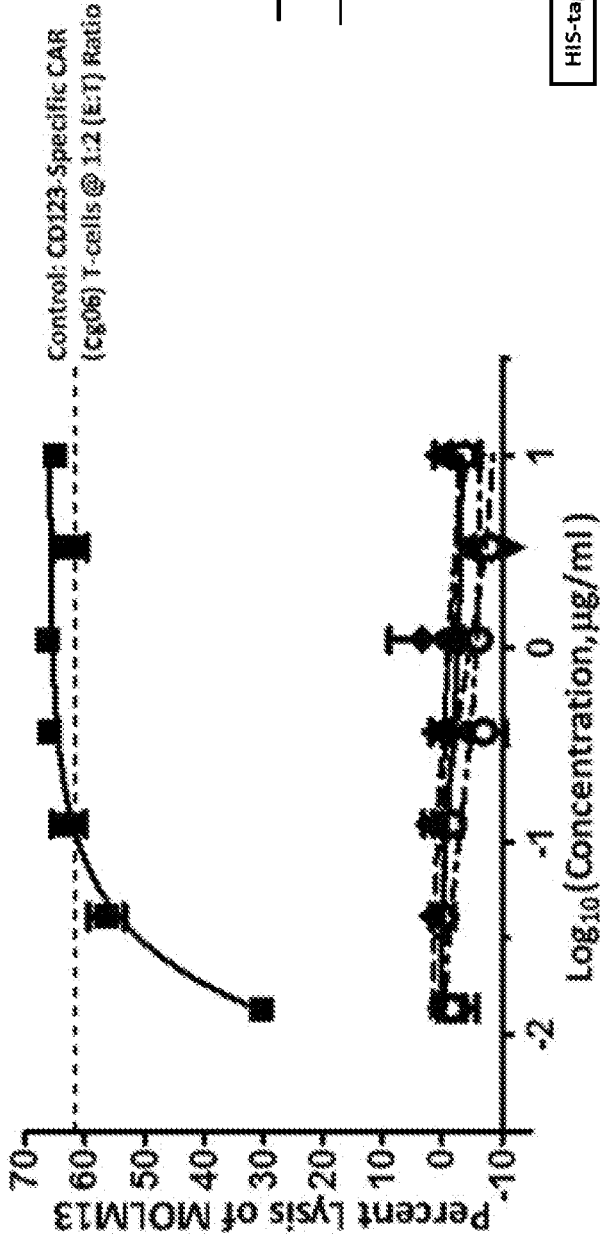


FIG. 3A

Lysis of CD123⁺ Target (MOLM13)



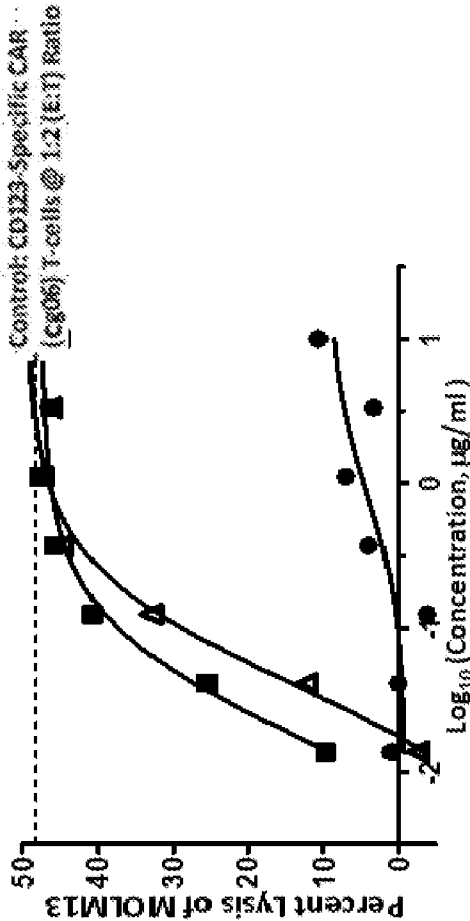
Adapter

Binding domain Specificity	Antigenic Determinant
CD123 (cg06)	BCMA HIS-tag
none (α3D)	BCMA HIS-tag
CD123 (cg06)	AFP

- cg06-BCMA Adapter
- cg06-BCMA Adapter + BCMA-Binding (bc40) CAR T-cells
- ▲ α3D-BCMA Adapter
- ▼ α3D-BCMA Adapter + BCMA-Binding (bc40) CAR T-cells
- ◆ cg06-AFP (p26) Adapter
- cg06-AFP (p26) Adapter + BCMA-Binding (bc40) CAR T-cells

FIG. 3B

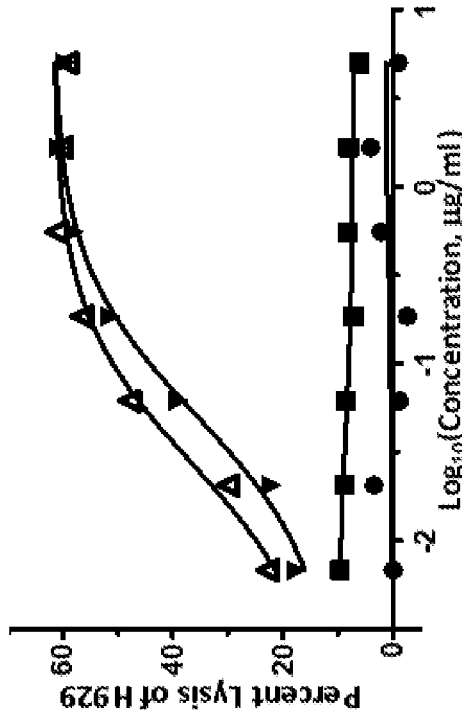
Lysis of CD123⁺ Target (MOLM13)



- cg06-AFP (p26) Adapter
- cg06-AFP (p26) Adapter + AFP-Binding (Af03) CAR T-cells
- ▲ cg06-AFP (p26) Adapter + AFP-Binding (Af05) CAR T-cells

FIG. 3C

Lysis of BCMA⁺ Target (H929)

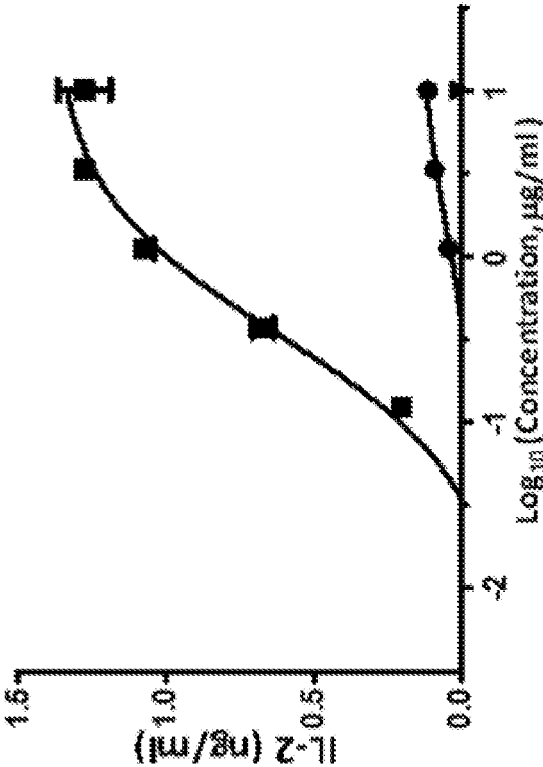


- bc40-AFP (p26) Adapter
- bc40-AFP (p26) Adapter + Mock-Transduced T-cells
- ▲ bc40-AFP (p26) Adapter + AFP-Binding (Af03) CAR T-cells
- ▼ bc40-AFP (p26) Adapter + AFP-Binding (Af05) CAR T-cells

Adapter

Binding Domain		Antigenic
Specificity		Determinant
HIS-tag	CD123 (cg06)	AFP
HIS-tag	BCMA (bc40)	AFP

FIG. 4A



- cg06-BCMA Adapter
- cg06-BCMA Adapter + MOLM13
- ▲ α3D-BCMA Adapter
- ✱ α3D-BCMA Adapter + MOLM13
- ◆ cg06-AFP (p26) Adapter
- ⊕ cg06-AFP (p26) Adapter + MOLM13

BCMA-Specific (bc40)
CART T-cells

FIG. 4B

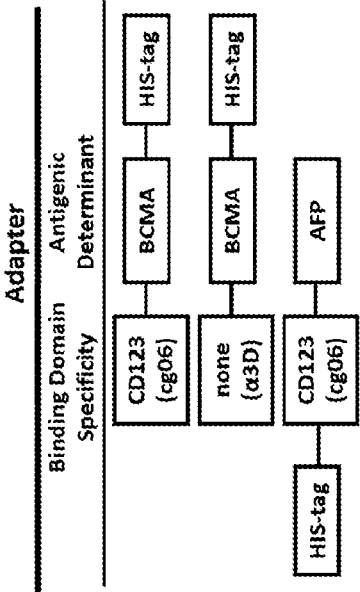
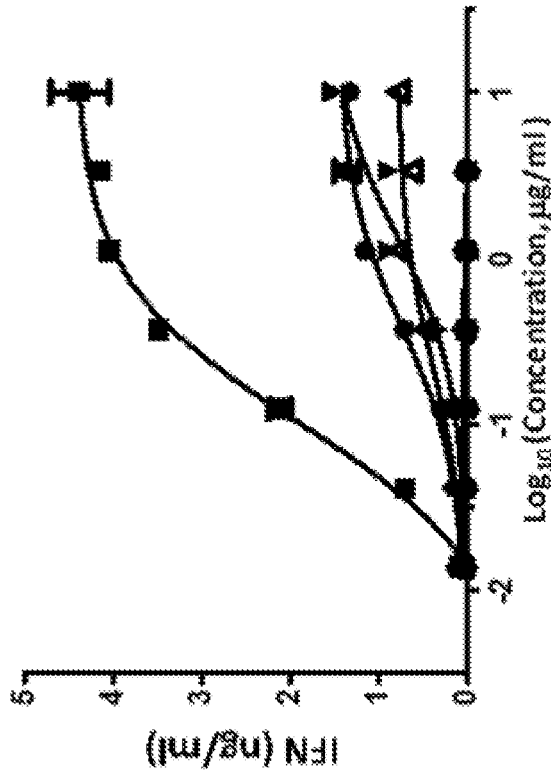


FIG. 4C

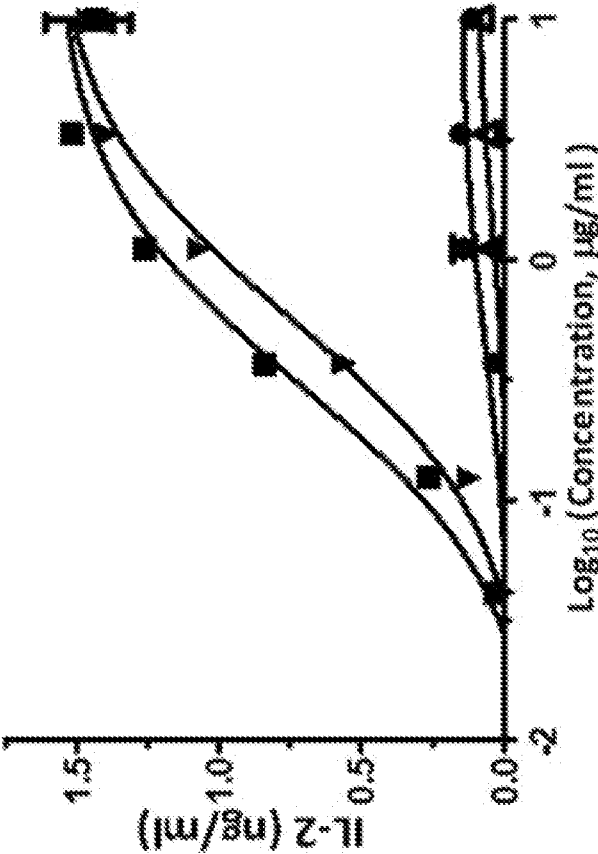
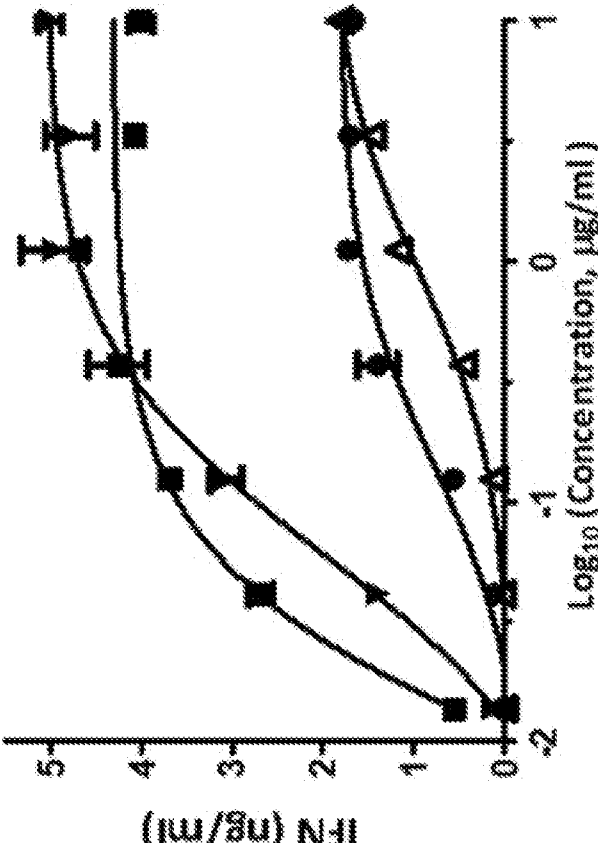


FIG. 4D



- cg06-AFP (p26) Adapter
 - cg06-AFP (p26) Adapter + MOLM13
 - ▲ cg06-AFP (p26) Adapter
 - ★ cg06-AFP (p26) Adapter + MOLM13
- AFP-p26 specific (Af03) CAR T-cells
- AFP-p26 specific (Af05) CAR T-cells

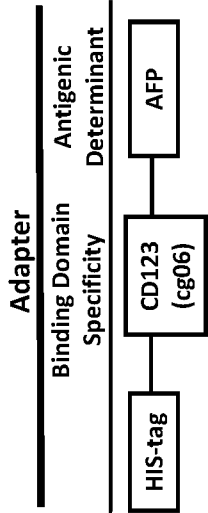
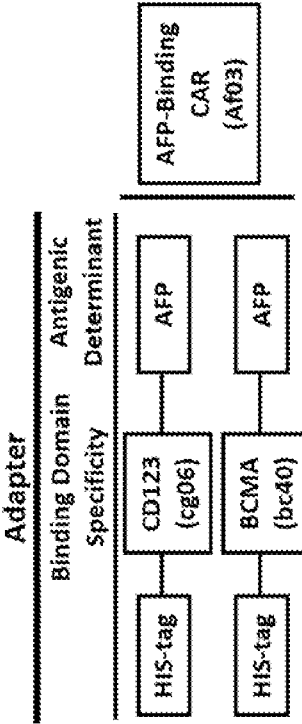
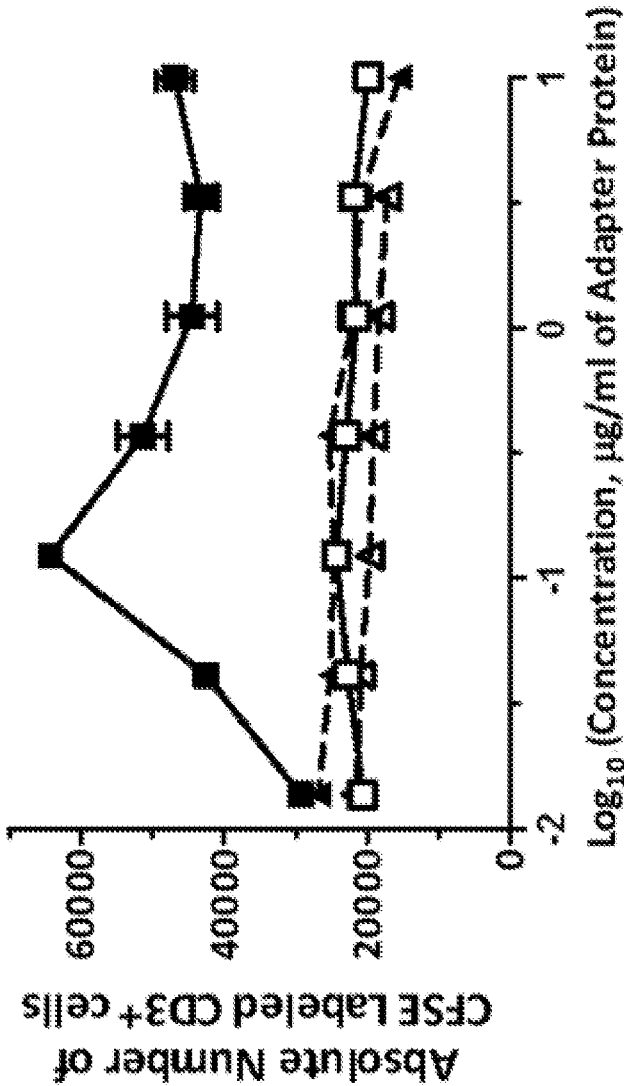


FIG. 5

Proliferation Assay with Adapter Proteins at 72 Hours



- △- cg06-AFP (p26) Adapter
- ▲- cg06-AFP (p26) Adapter + BCMA⁺ H929 Cells
- bc40-AFP (p26) Adapter
- bc40-AFP (p26) Adapter + BCMA⁺ H929 Cells

FIG. 6A

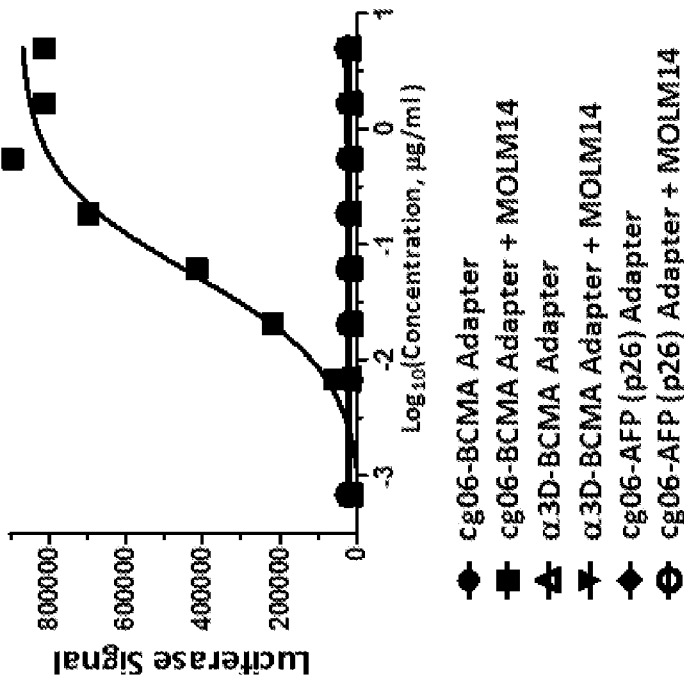


FIG. 6B

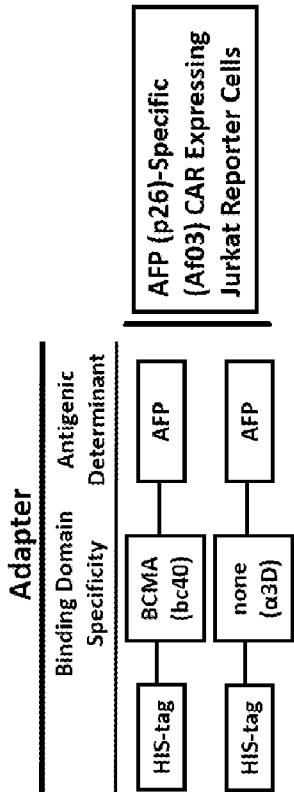
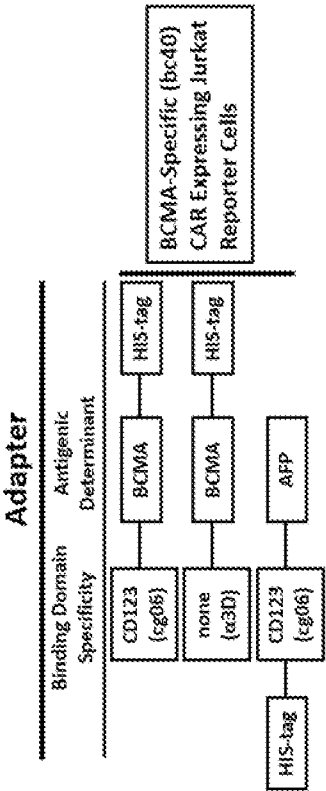
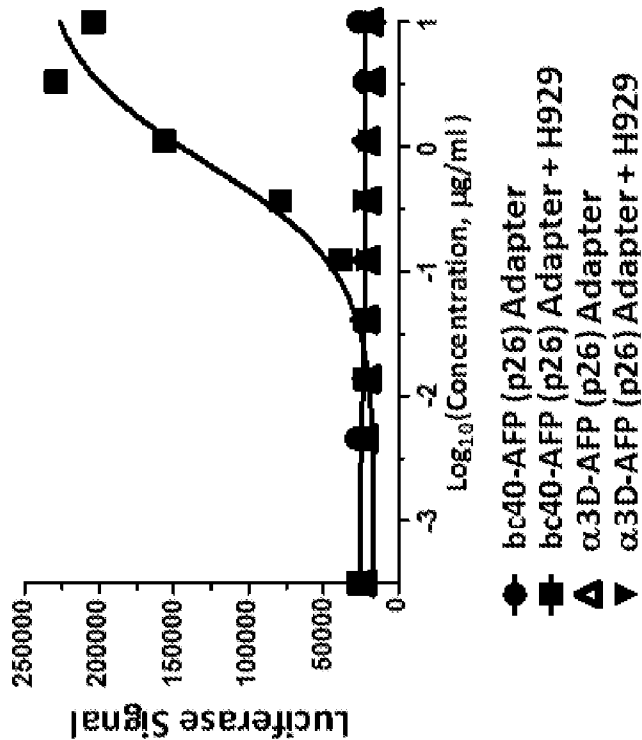
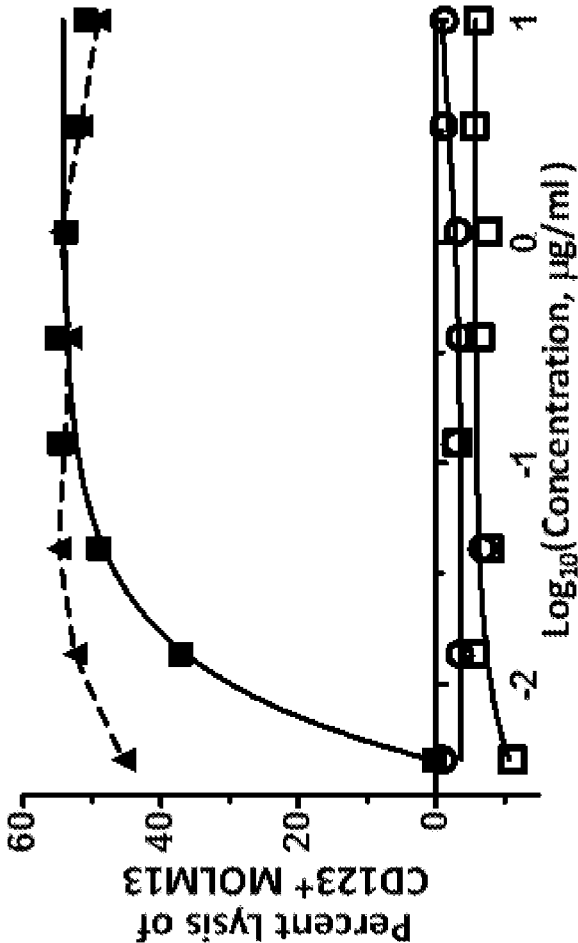


FIG. 7A

Lysis of CD123+ Target (MOLM13)



- cg06-BCMA Adapter
- cg06-BCMA Adapter + Non-Specific (α3D) CAR T-cells
- △ cg06-BCMA Adapter + BCMA-Specific scFv (c11D5-3) CAR T-cells
- cg06-BCMA Adapter + BCMA-Specific Domain (bc40) CAR T-cells

FIG. 7B

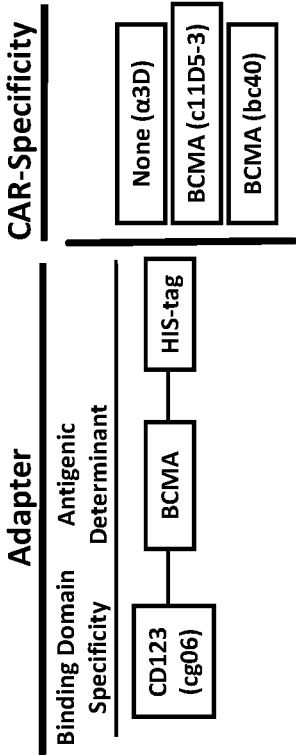
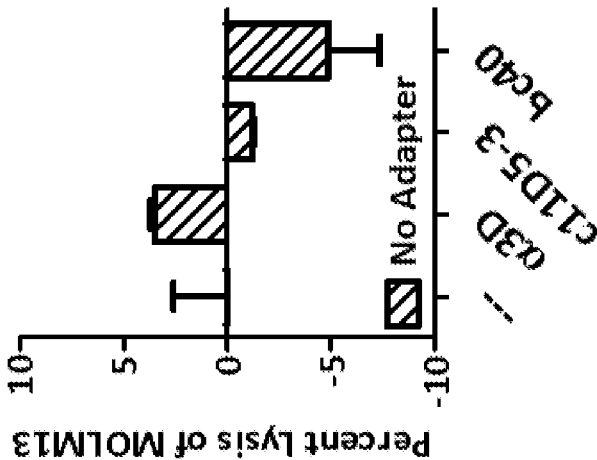


FIG. 8A

Ratio BCMA:CD123 Binding Adapters (μg of protein)

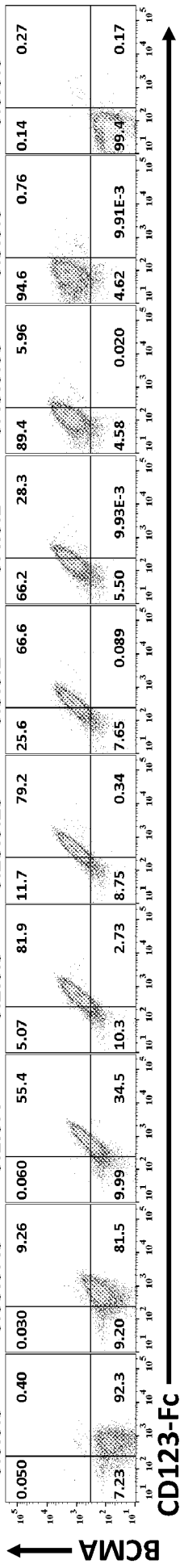


FIG. 8B

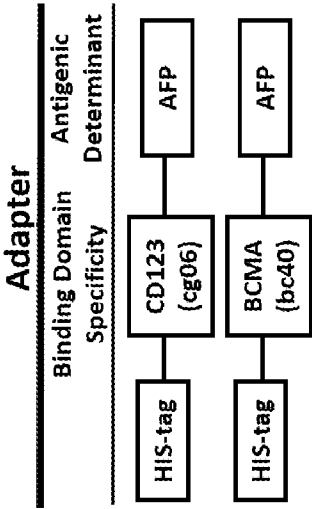
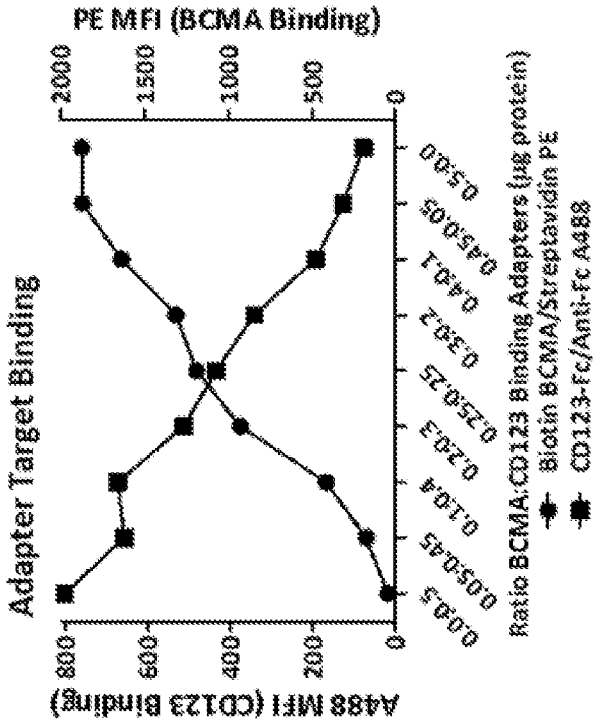


FIG. 9A

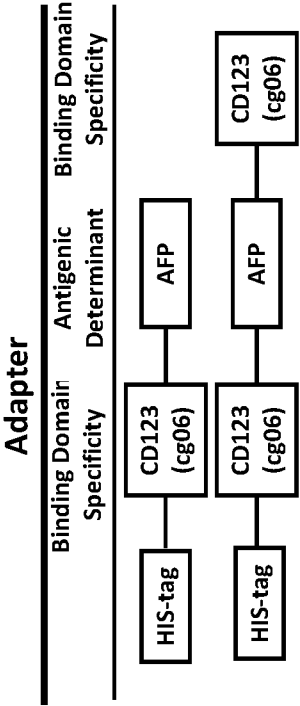
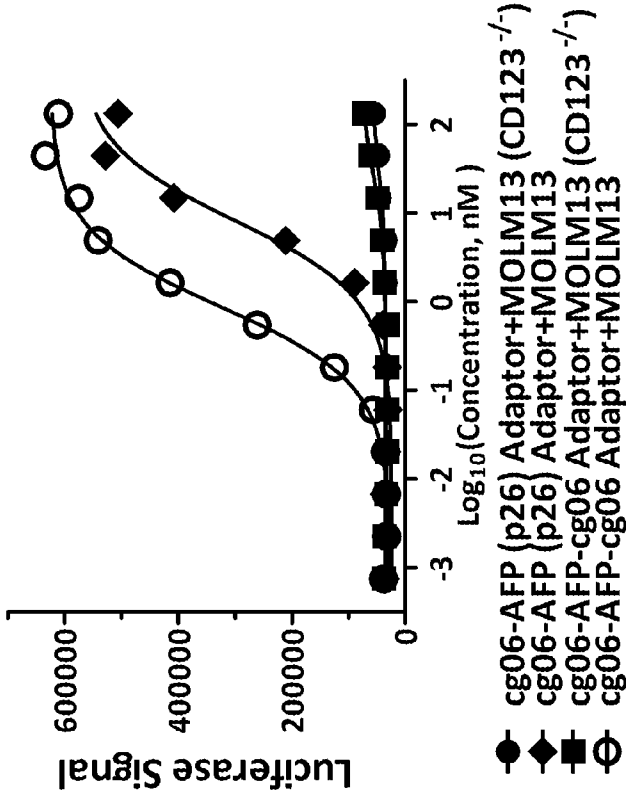


FIG. 9B

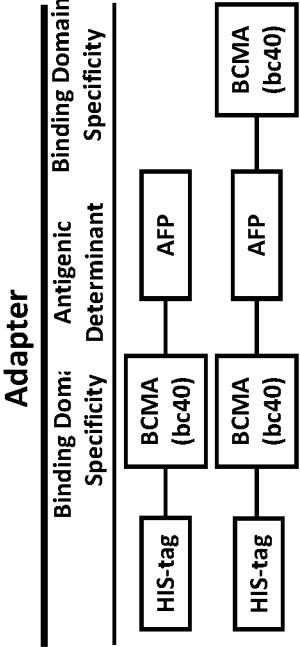
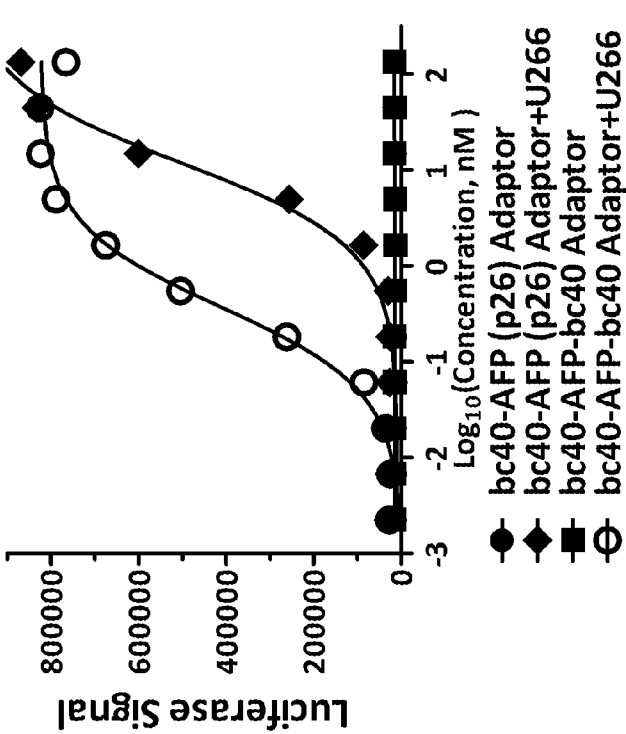


FIG. 10

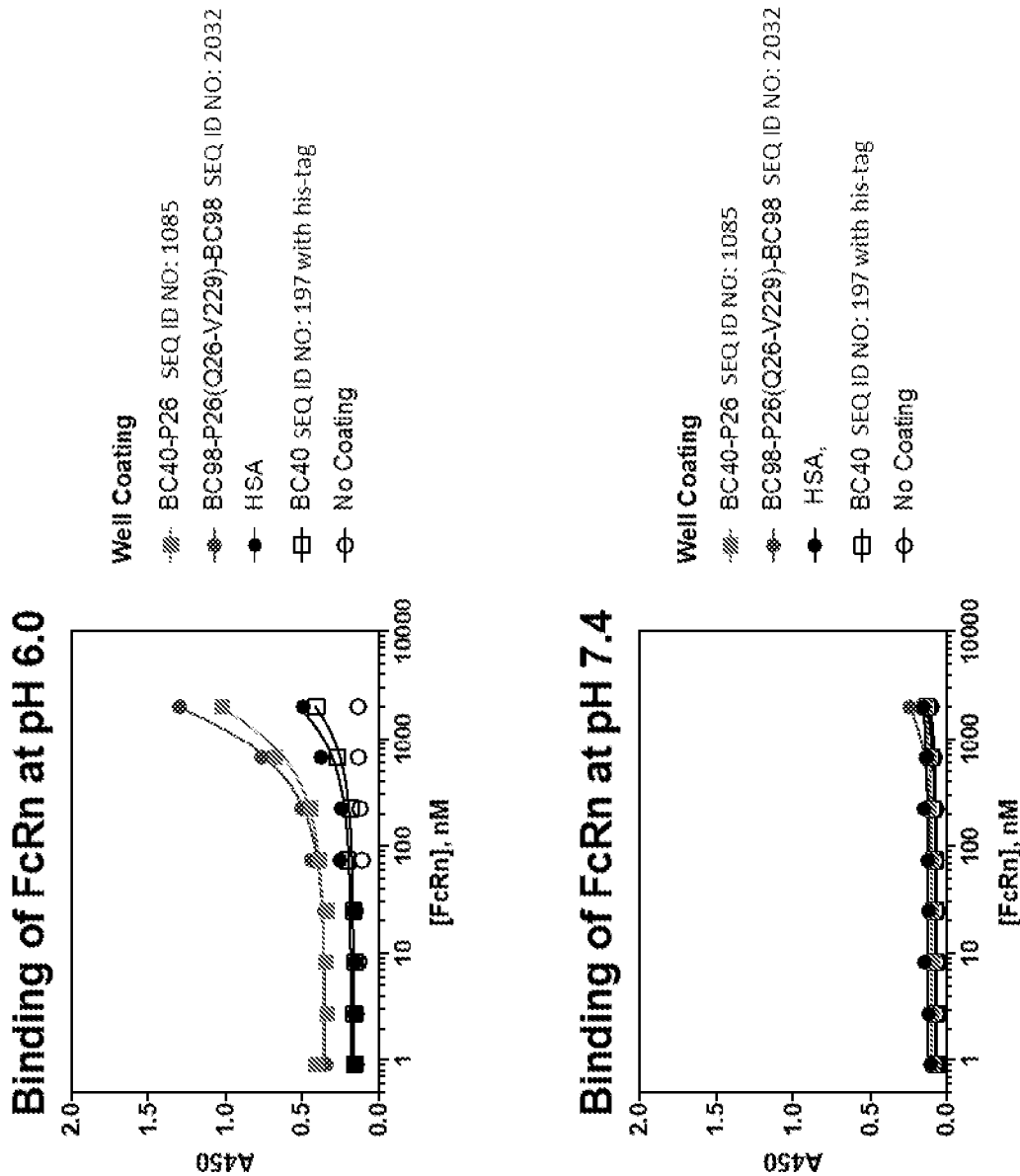


FIG. 11A

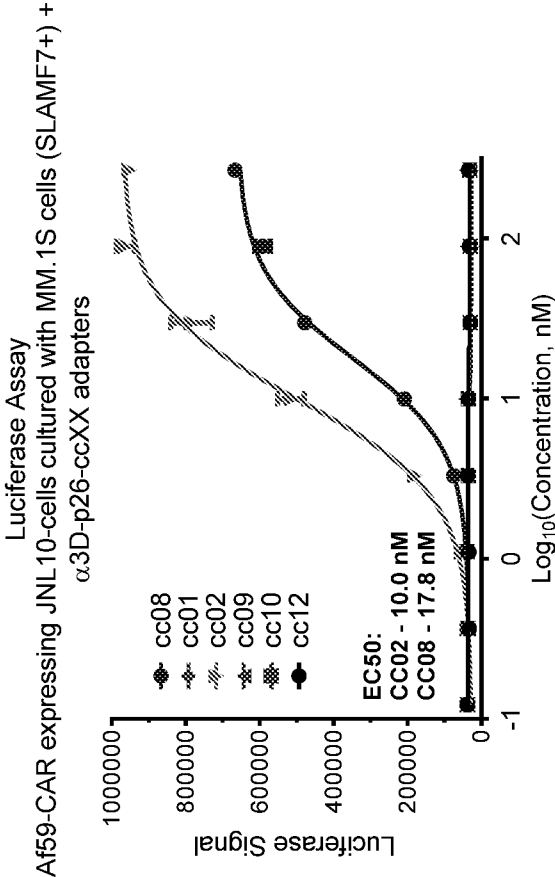


FIG. 11B

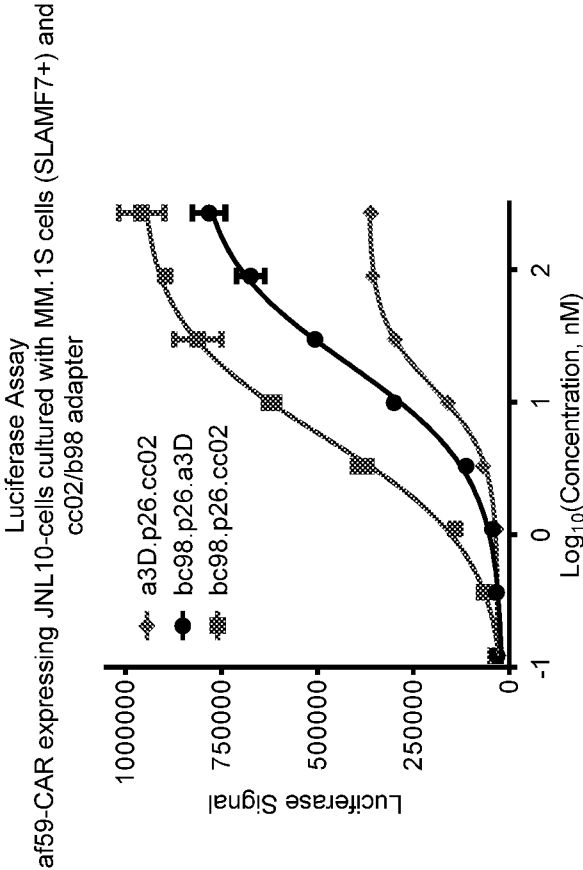


FIG. 11C

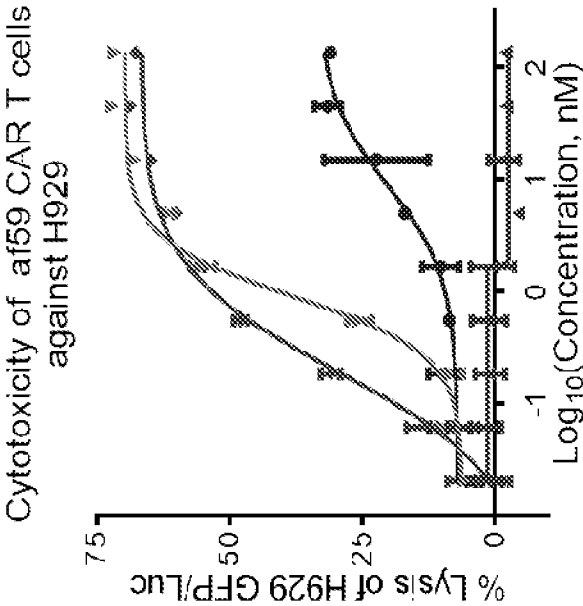


FIG. 11D

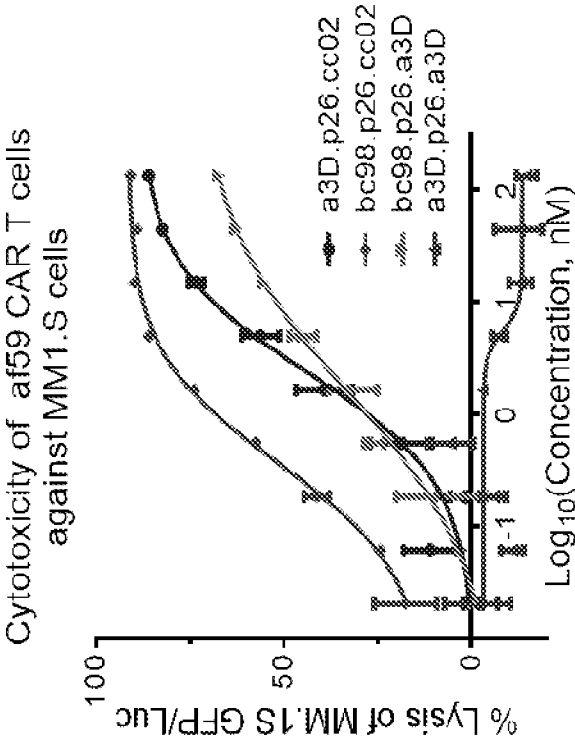


FIG. 12A

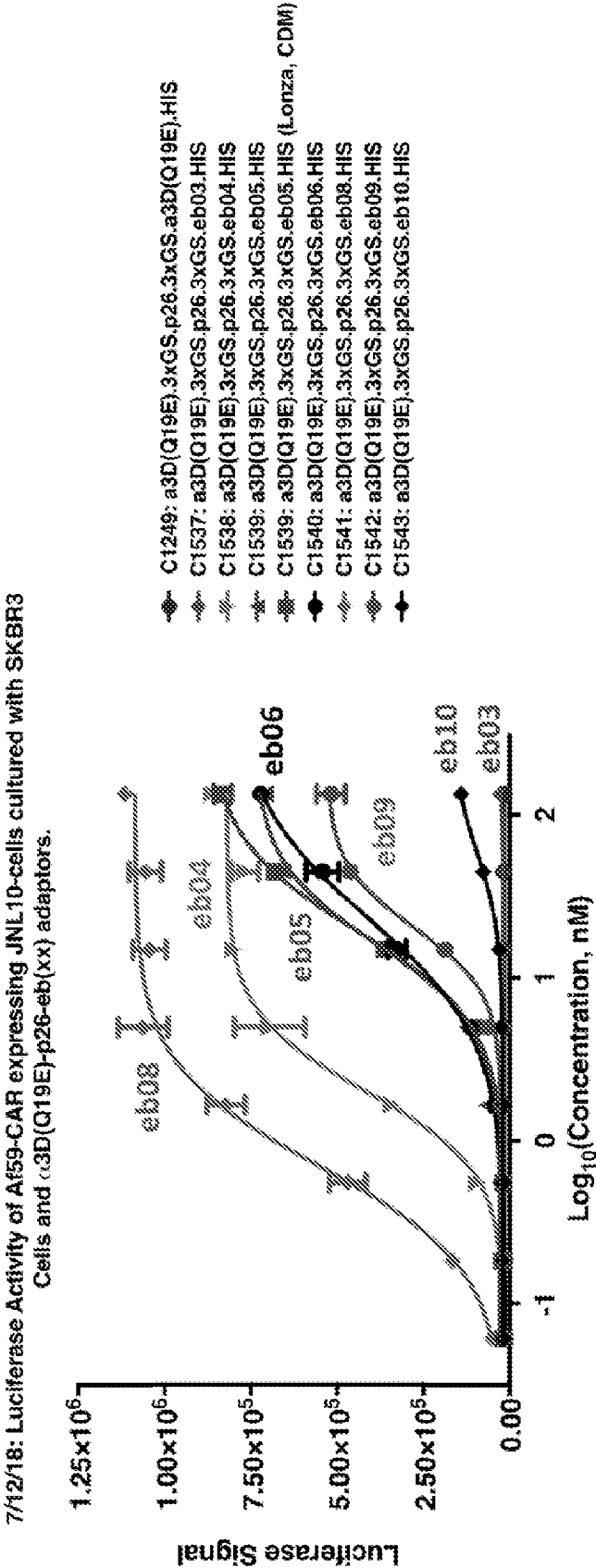


FIG. 12B

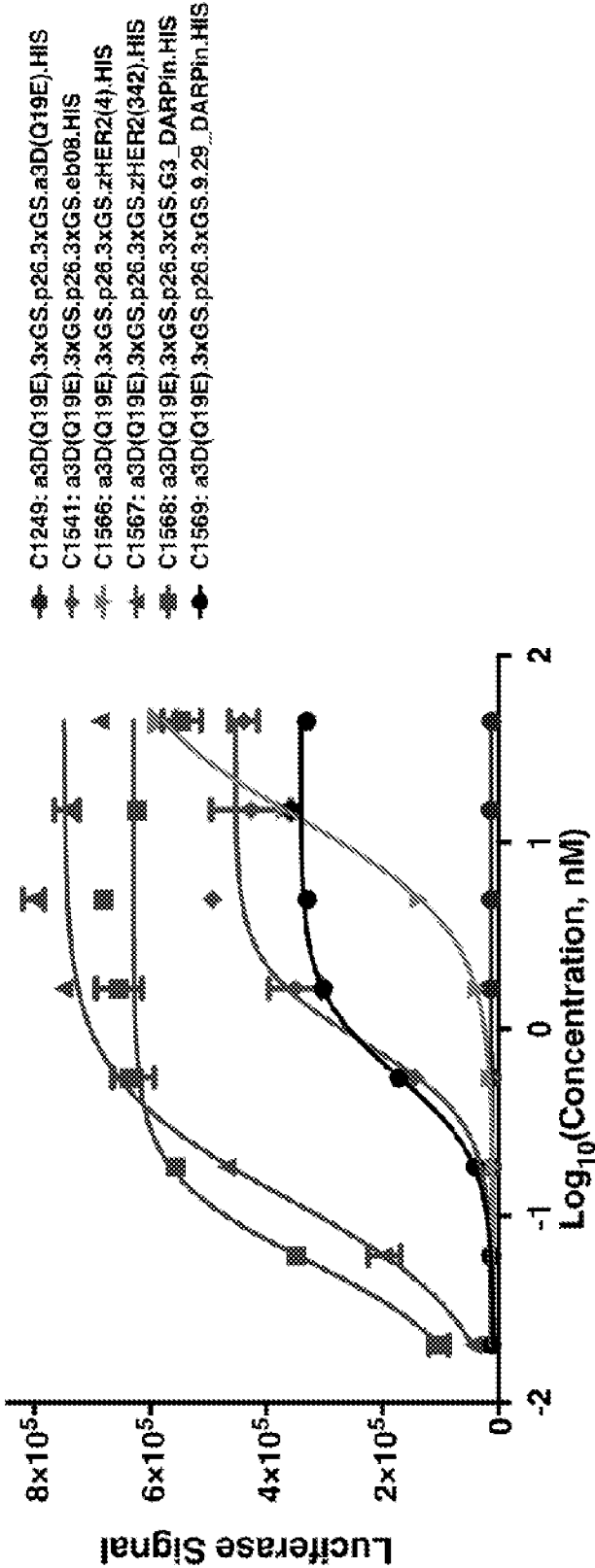


FIG. 12C

