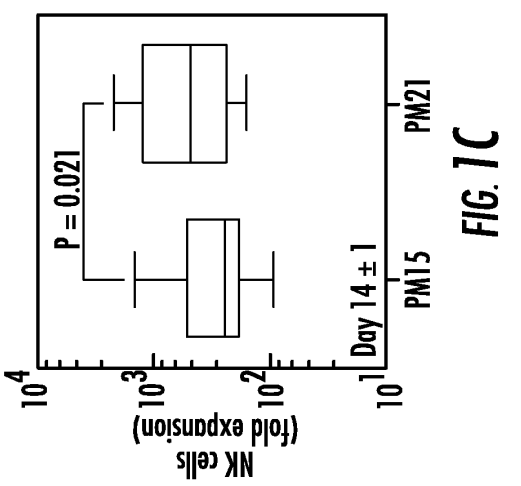


FIG. 1C

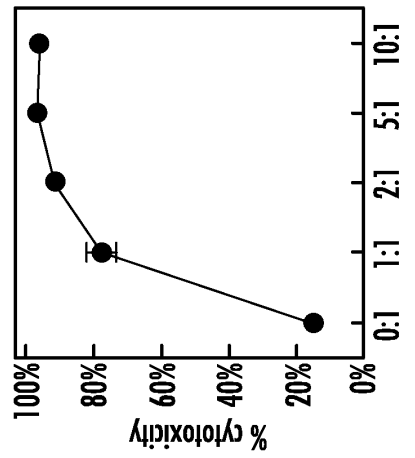


FIG. 1F

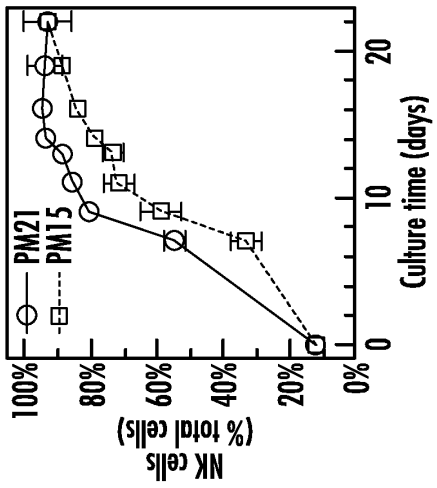


FIG. 1B

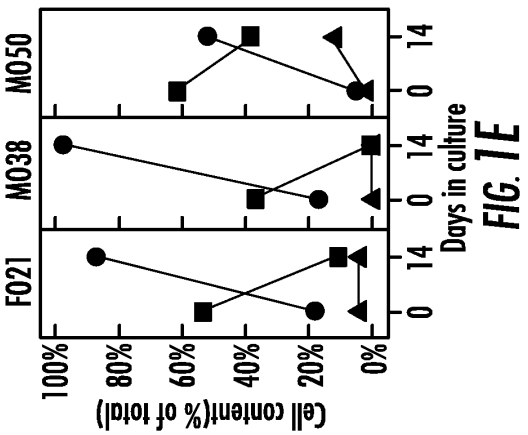


FIG. 1E

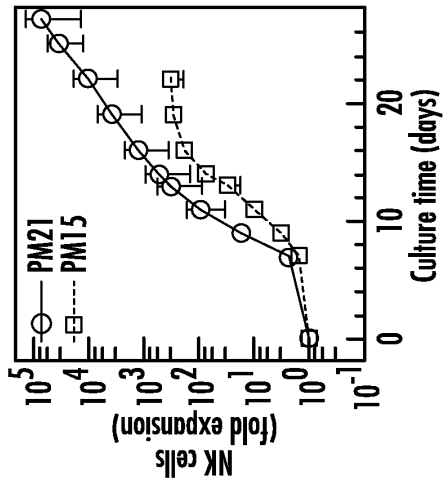


FIG. 1A

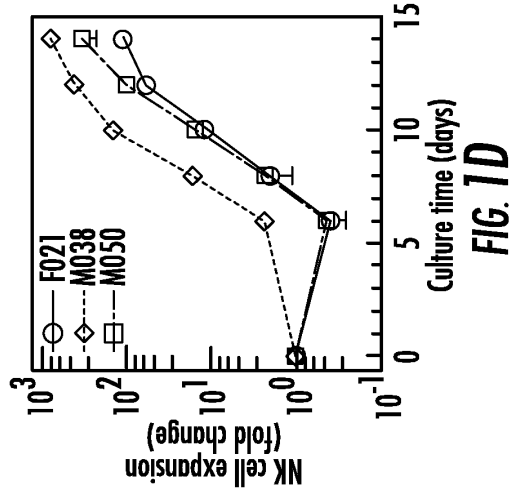


FIG. 1D

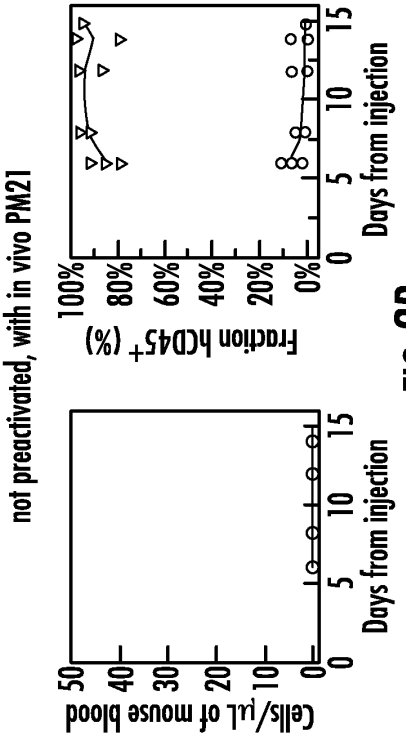


FIG. 2B

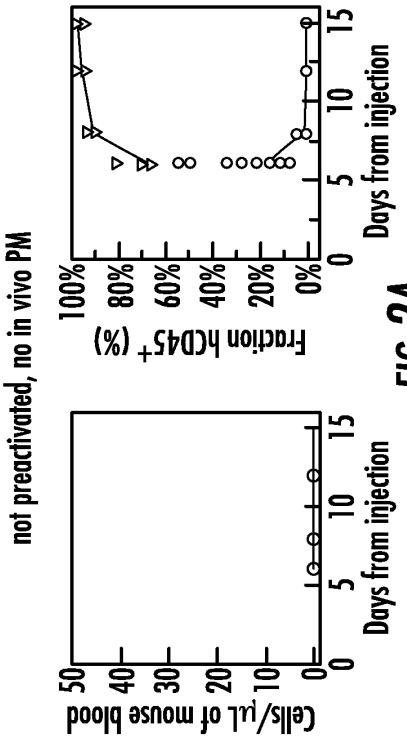


FIG. 2A

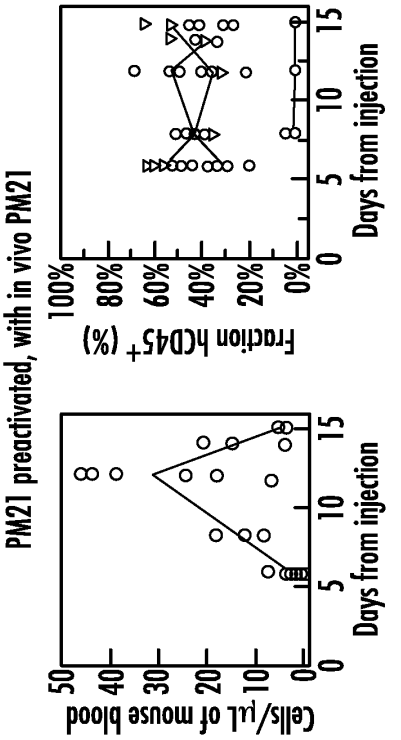


FIG. 2D

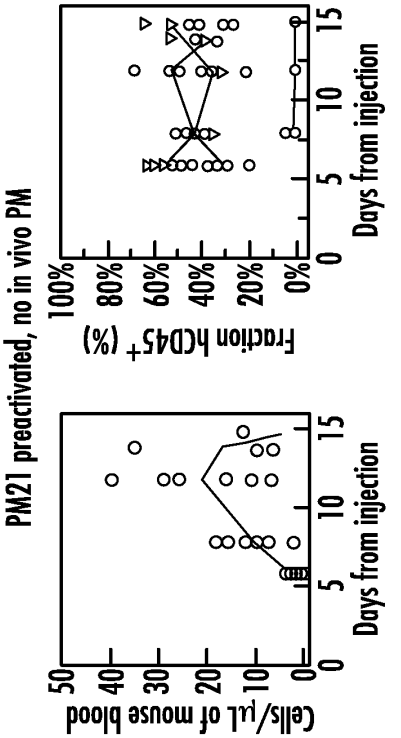


FIG. 2C

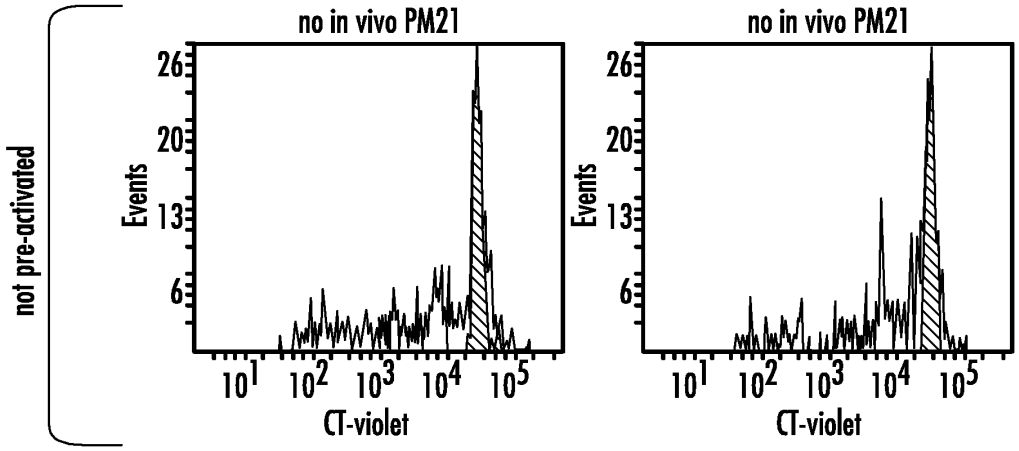


FIG. 3A

FIG. 3B

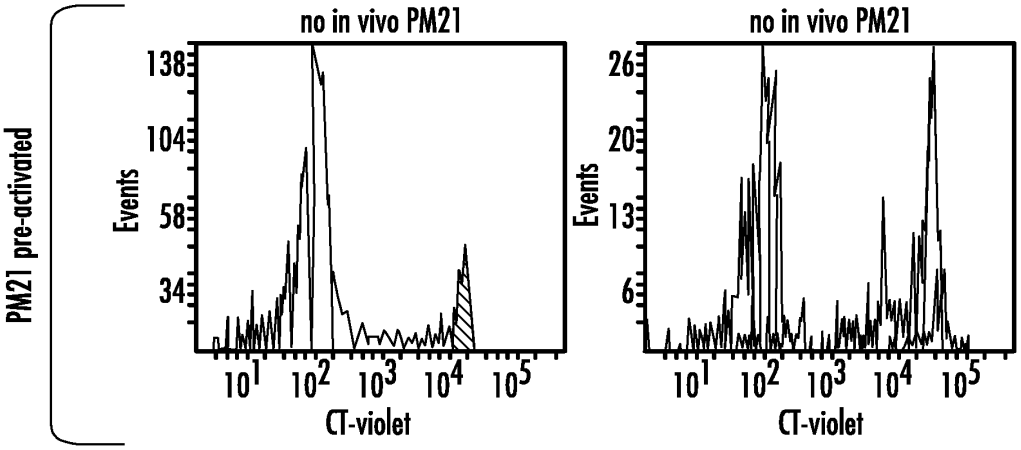


FIG. 3C

FIG. 3D

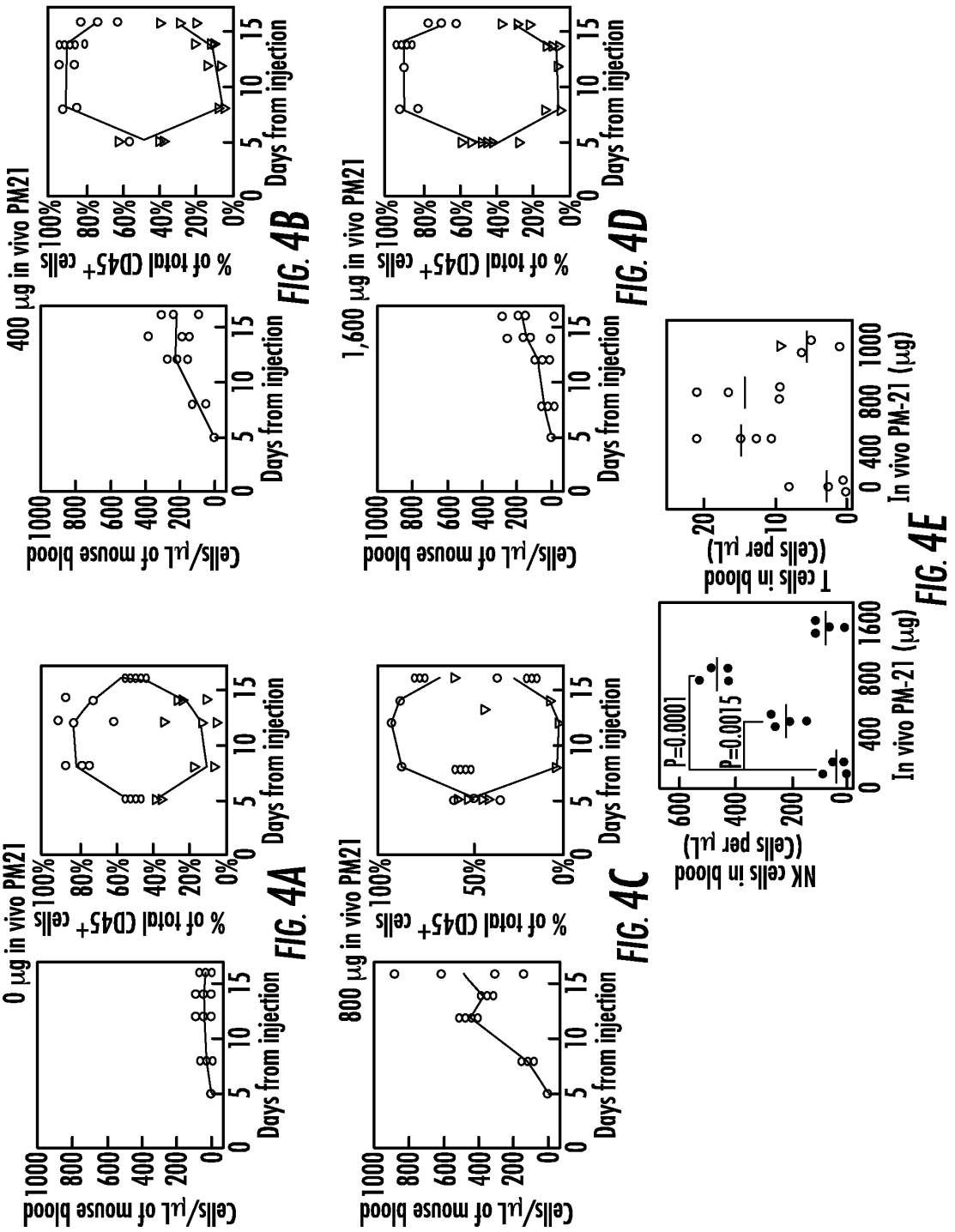


FIG. 4A FIG. 4B FIG. 4C FIG. 4D FIG. 4E

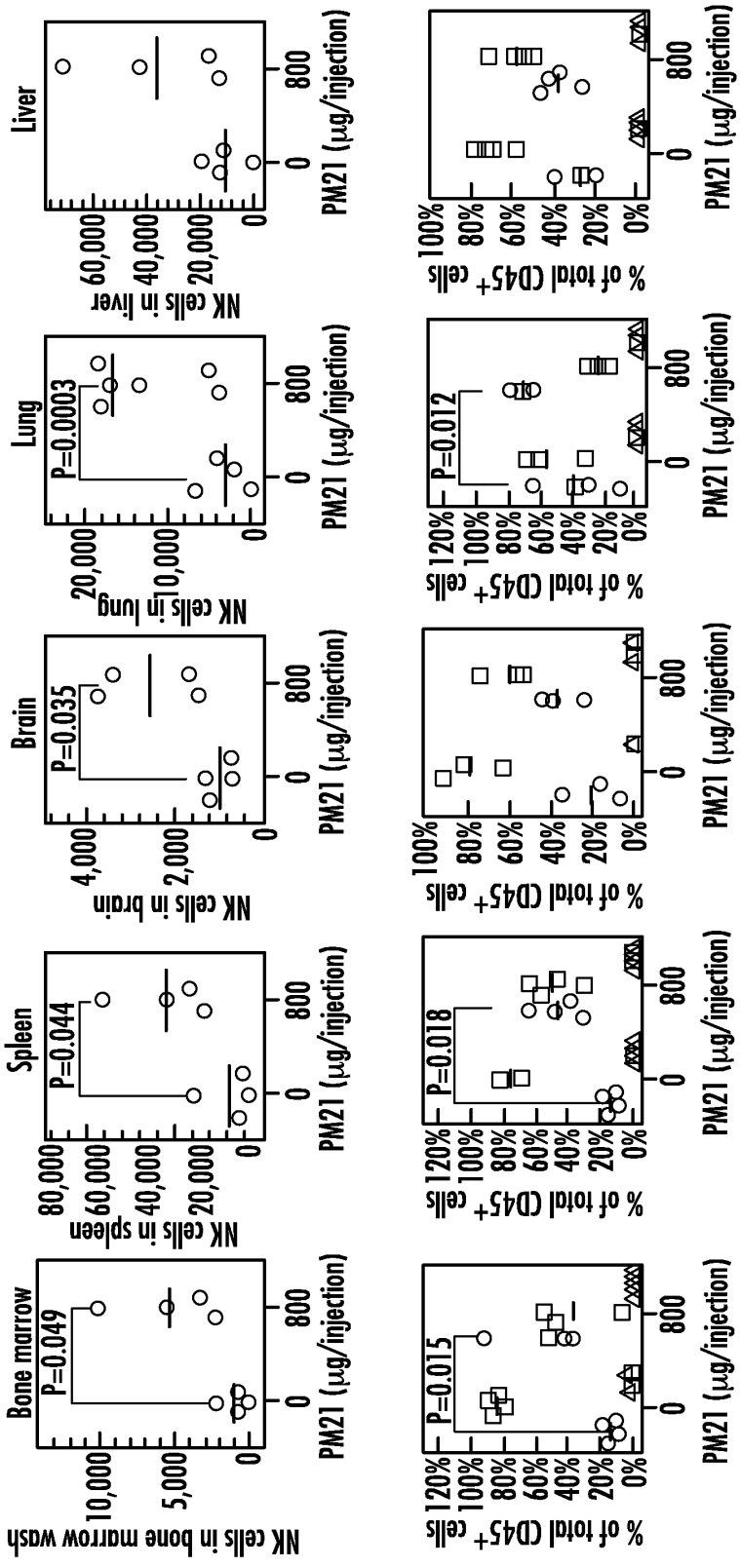

NK cells in bone marrow wash
Bone marrow
P=0.049
NK cells in spleen
Spleen
P=0.044
NK cells in brain
Brain
P=0.035
NK cells in lung
Lung
P=0.0003
NK cells in liver
Liver
% of total CD45+ cells
P=0.015
P=0.018
P=0.012
PM21 (µg/injection)
0
800

FIG. 5

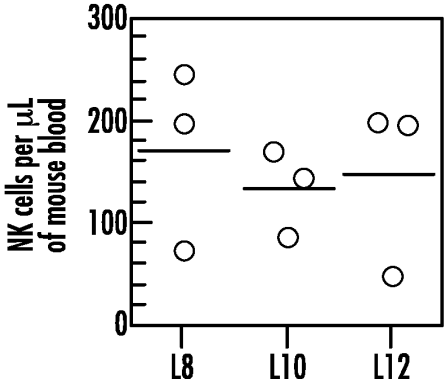


FIG. 6A

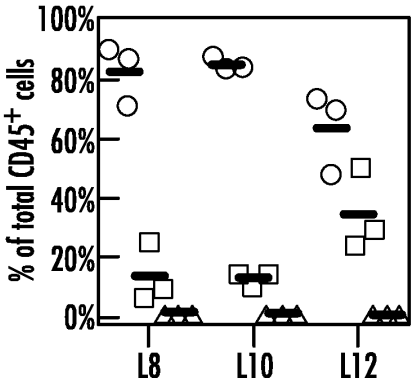


FIG. 6B

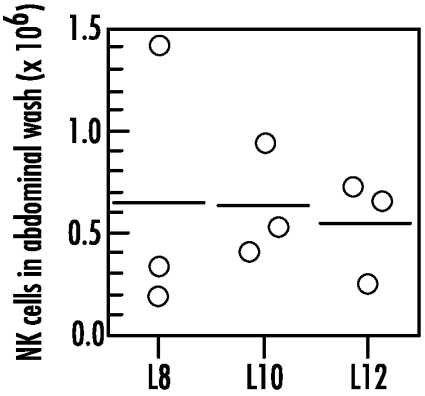


FIG. 6C

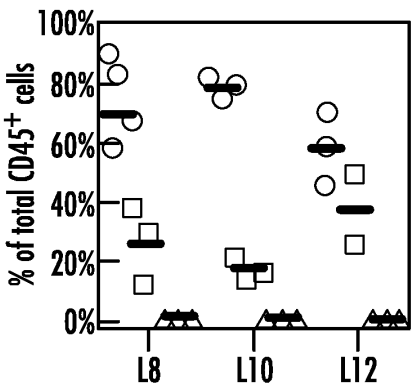


FIG. 6D

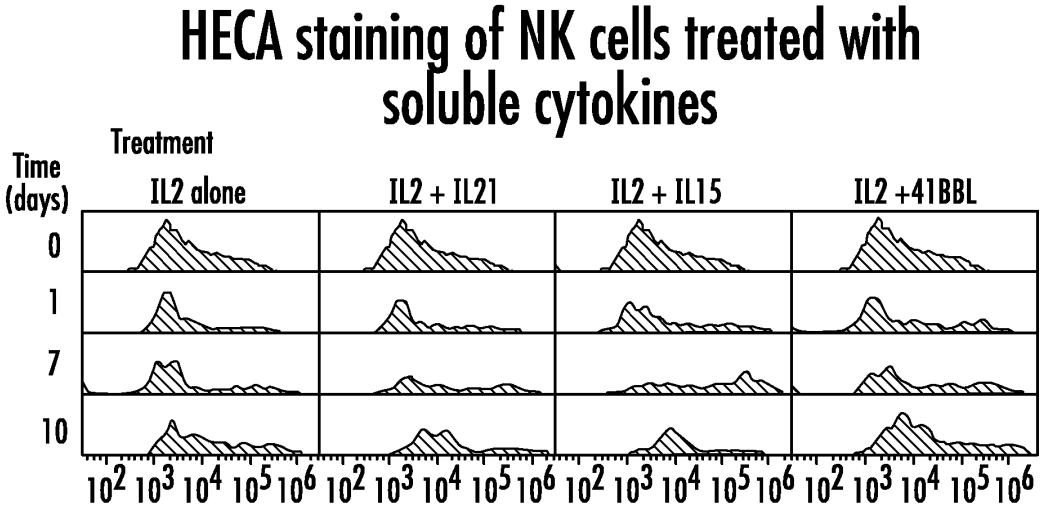

HECA staining of NK cells treated with soluble cytokines
Treatment
Time (days)
IL2 alone
IL2 + IL21
IL2 + IL15
IL2 +41BBL
0
1
7
10
10^2 10^3 10^4 10^5 10^6

FIG. 7

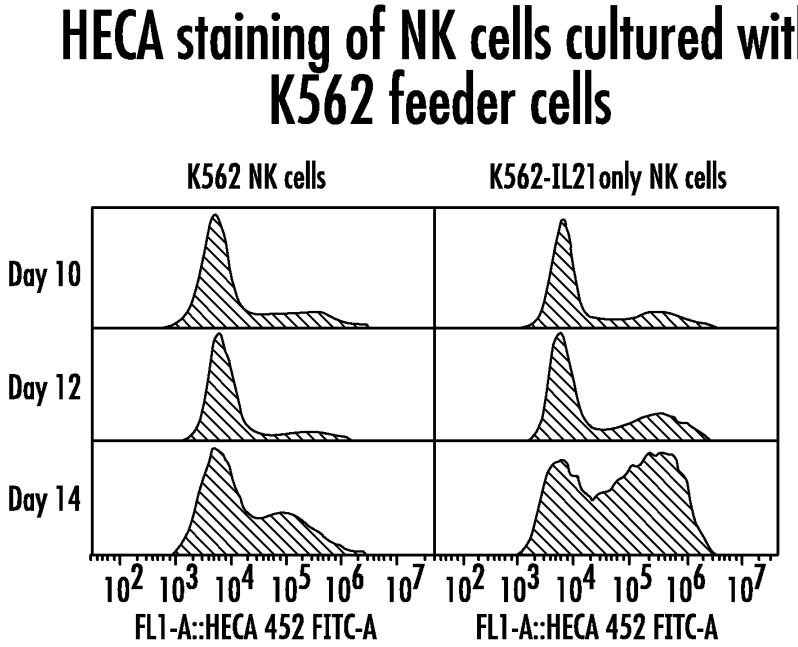

HECA staining of NK cells cultured with K562 feeder cells
K562 NK cells
K562-IL21only NK cells
Day 10
Day 12
Day 14
10^2 10^3 10^4 10^5 10^6 10^7
FL1-A::HECA 452 FITC-A
FL1-A::HECA 452 FITC-A

FIG. 8

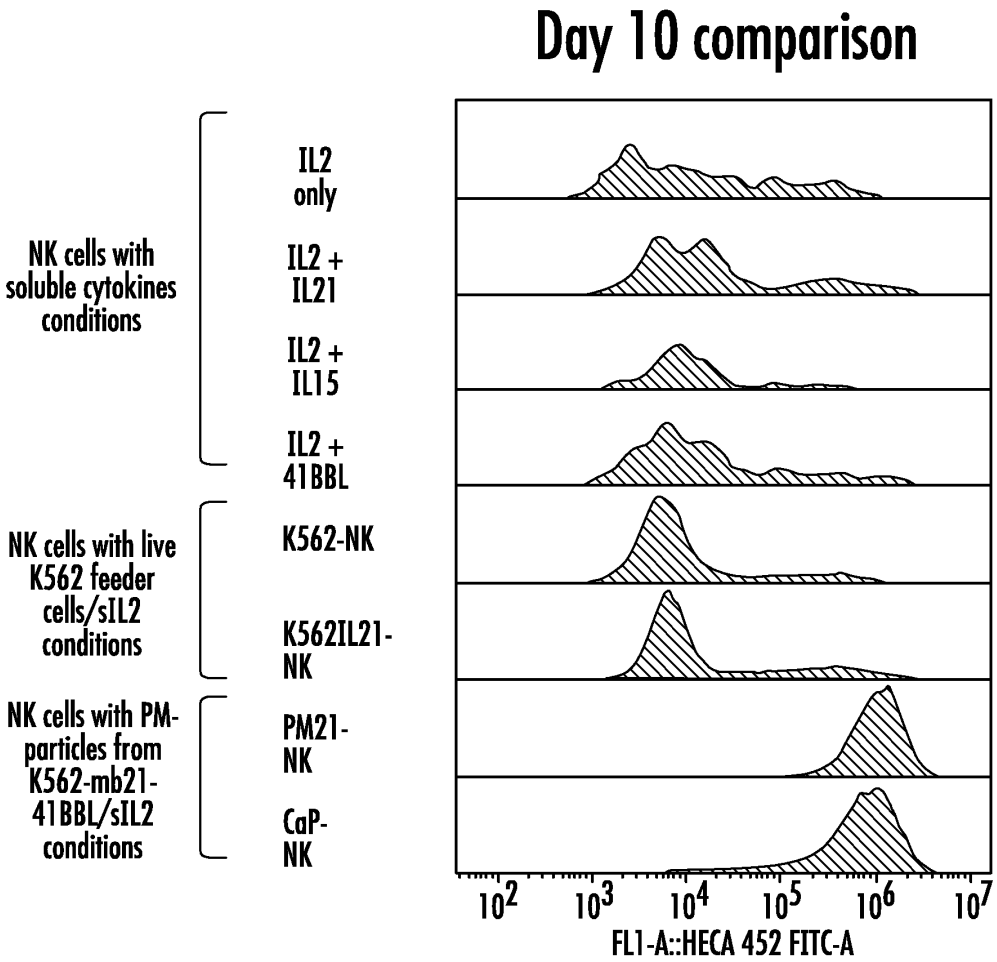

Day 10 comparison
NK cells with soluble cytokines conditions
IL2 only
IL2 + IL21
IL2 + IL15
IL2 + 41BBL
NK cells with live K562 feeder cells/sIL2 conditions
K562-NK
K562IL21-NK
NK cells with PM-particles from K562-mb21-41BBL/sIL2 conditions
PM21-NK
CaP-NK
10^2 10^3 10^4 10^5 10^6 10^7
FL1-A::HECA 452 FITC-A

FIG. 9

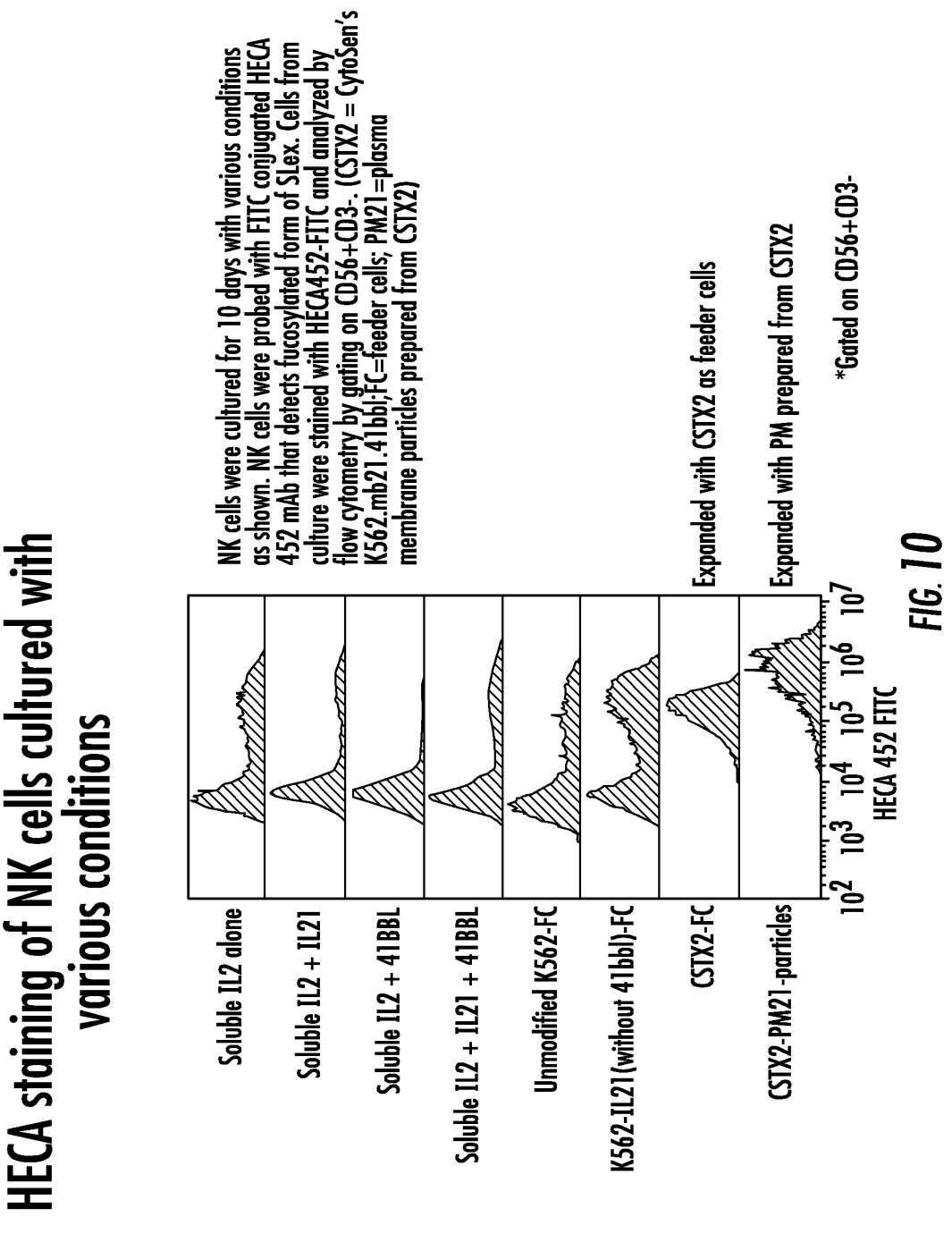

HECA staining of NK cells cultured with various conditions
NK cells were cultured for 10 days with various conditions as shown. NK cells were probed with FITC conjugated HECA 452 mAb that detects fucosylated form of SLex. Cells from culture were stained with HECA452-FITC and analyzed by flow cytometry by gating on CD56+CD3-. (CSTX2 = CytoSen's K562.mb21.41bbl;FC=feeder cells; PM21=plasma membrane particles prepared from CSTX2)
Soluble IL2 alone
Soluble IL2 + IL21
Soluble IL2 + 41BBL
Soluble IL2 + IL21 + 41BBL
Unmodified K562-FC
K562-IL21(without 41bbl)-FC
CSTX2-FC
Expanded with CSTX2 as feeder cells
CSTX2-PM21-particles
Expanded with PM prepared from CSTX2
10^2 10^3 10^4 10^5 10^6 10^7
HECA 452 FITC
*Gated on CD56+CD3-

FIG. 10

HECA staining retained on NK cells after 3 days of rest without any stimulation following 10 day expansion

NK cells were cultured for 10 days with CSTX2-PM21-particles (top) and then "rested" in culture for 3 days after removing PM21-particles (bottom). NK cells were probed with FITC conjugated HECA452 mAb that detects fucosylated form of SLex. Cells from culture were stained with HECA452-FITC and analyzed by flow cytometry by gating on CD56+CD3-. (CSTX2 = CytoSen's K562.mb21.41bbl;FC=feeder cells; PM21=plasma membrane particles prepared from CSTX2)

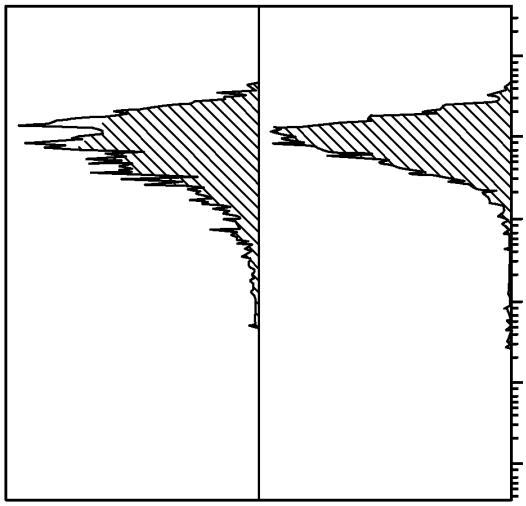


FIG. 11

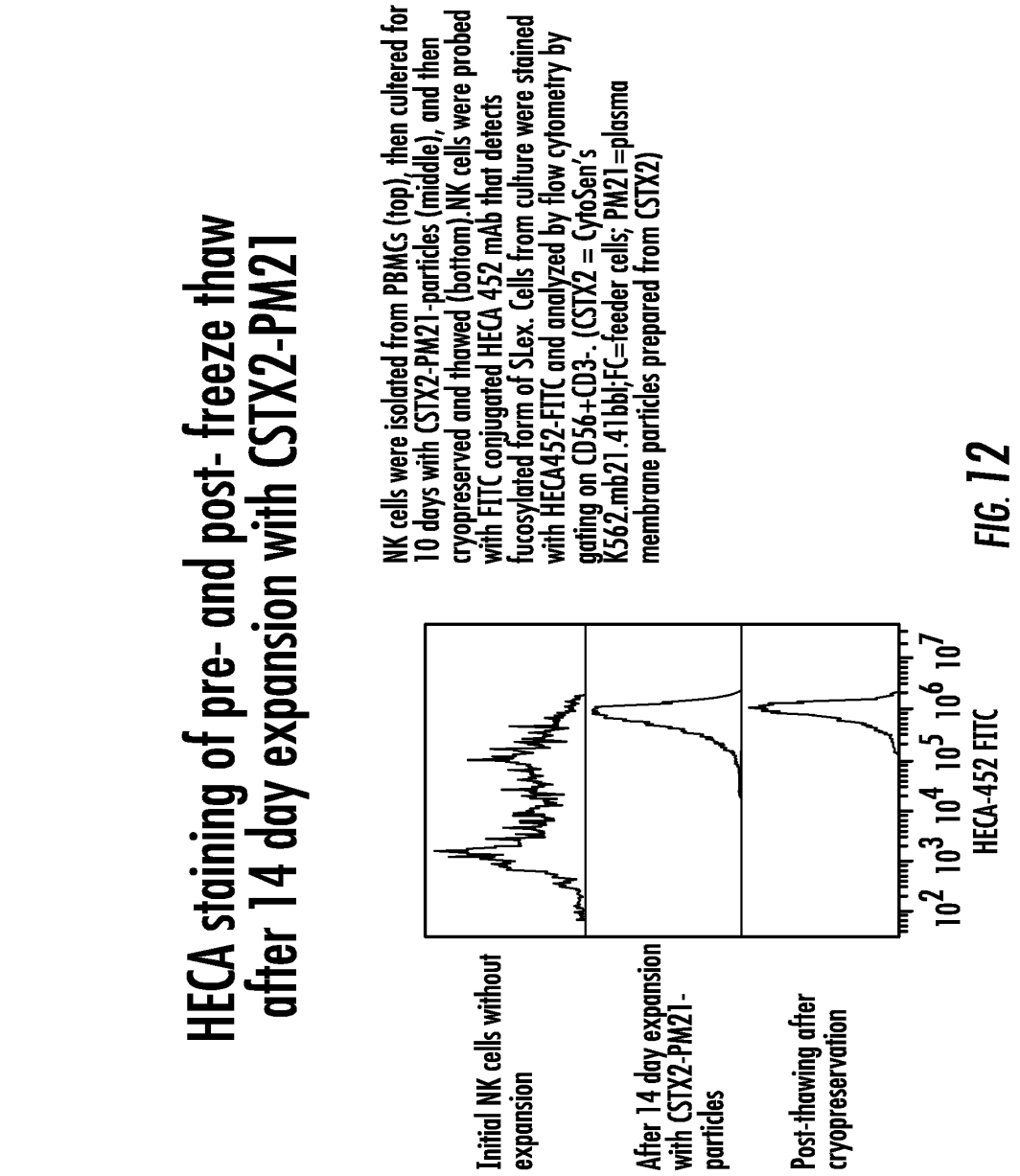

HECA staining of pre- and post- freeze thaw after 14 day expansion with CSTX2-PM21
NK cells were isolated from PBMCs (top), then cultered for 10 days with CSTX2-PM21-particles (middle), and then cryopreserved and thawed (bottom).NK cells were probed with FITC conjugated HECA 452 mAb that detects fucosylated form of SLex. Cells from culture were stained with HECA452-FITC and analyzed by flow cytometry by gating on CD56+CD3-. (CSTX2 = CytoSen's K562.mb21.41bbl;FC=feeder cells; PM21=plasma membrane particles prepared from CSTX2)
Initial NK cells without expansion
After 14 day expansion with CSTX2-PM21-particles
Post-thawing after cryopreservation
10^2 10^3 10^4 10^5 10^6 10^7
HECA-452 FITC

FIG. 12

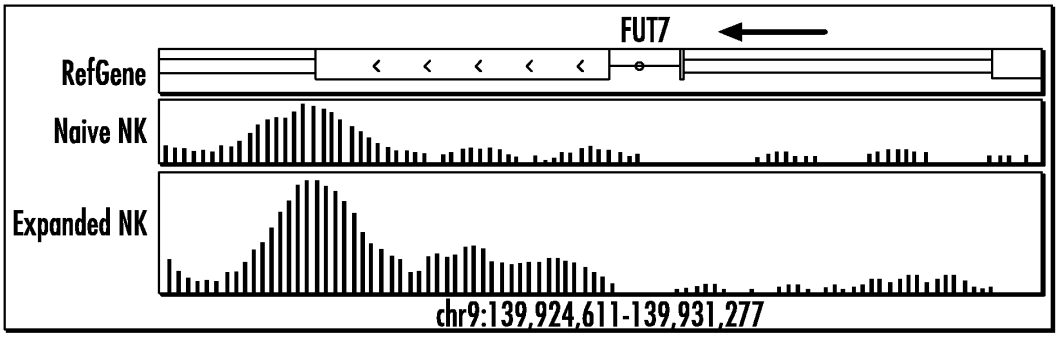


FIG. 13A

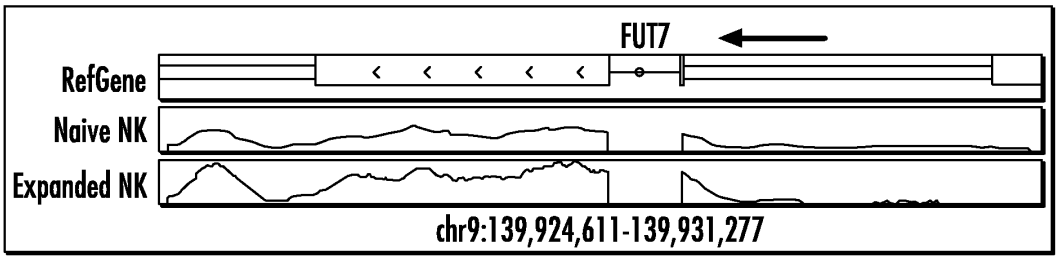


FIG. 13B

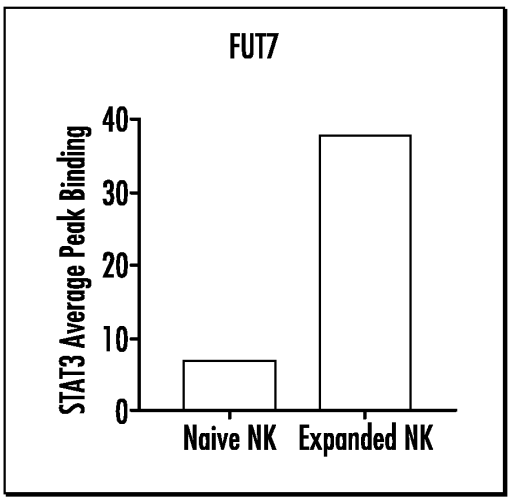


FIG. 13C

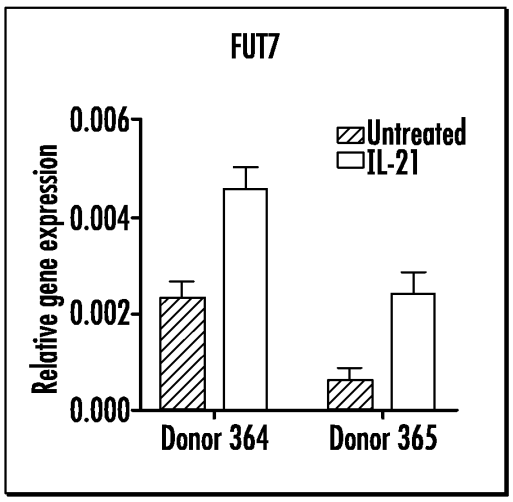


FIG. 13D