

Figure 1A

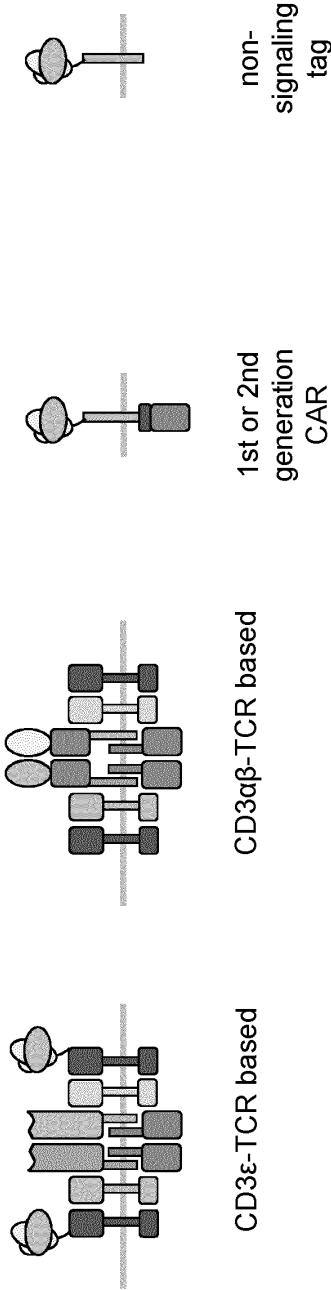
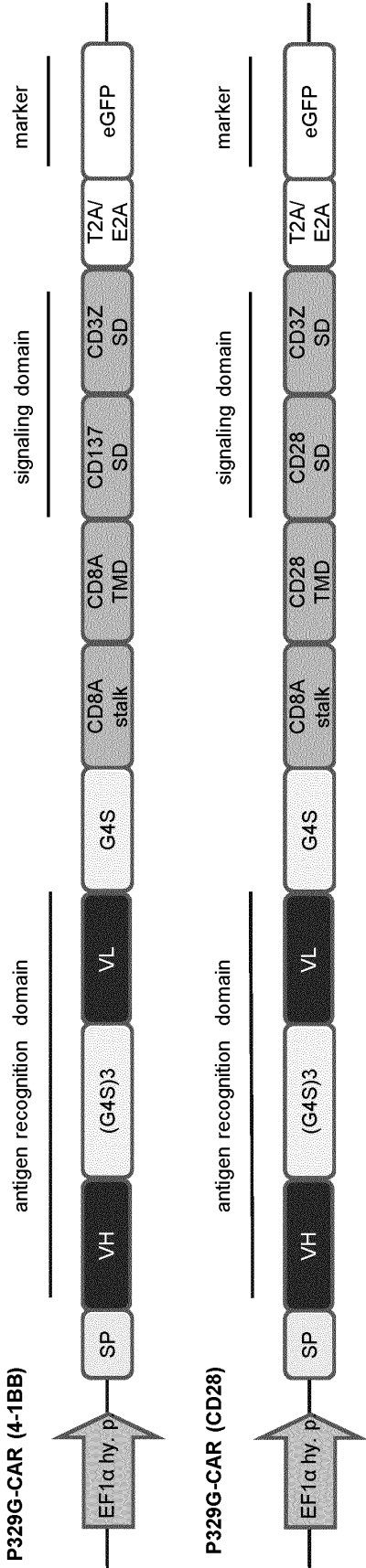


Figure 1B



EF1 α hy. p. = EF1 α hybrid promoter
SP = signal peptide
VH = variable heavy chain
VL = variable light chain
TMD = transmembrane domain
ECD = extracellular domain
ICD = intracellular domain
SD = signaling domain

Figure 1C

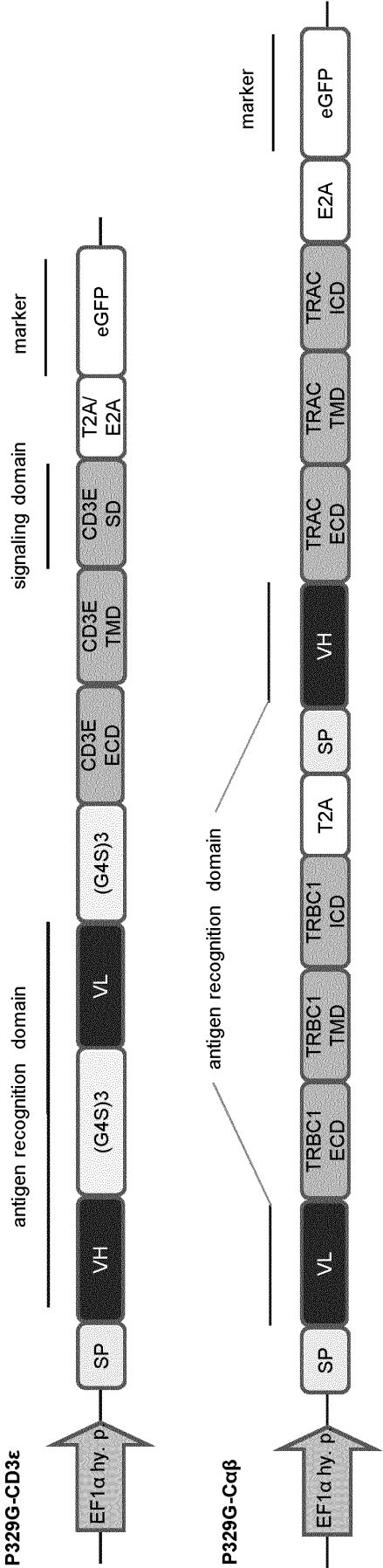
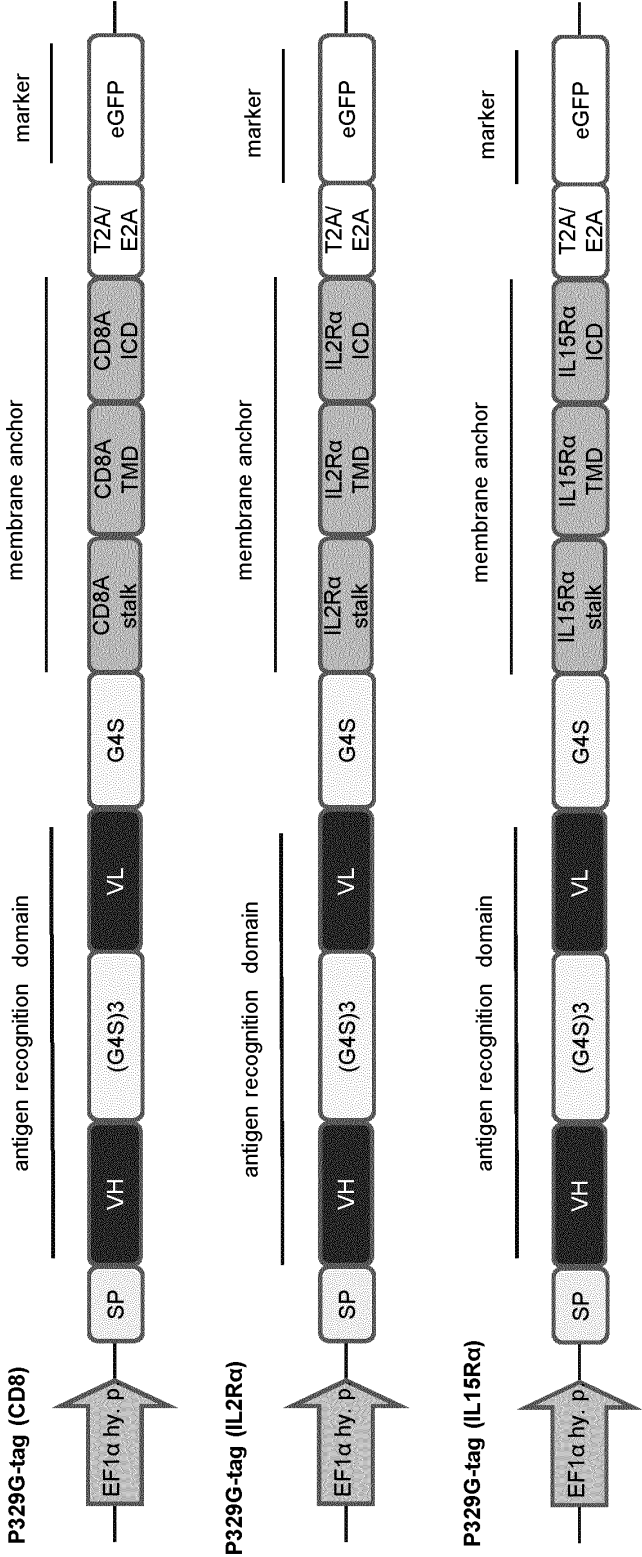


Figure 1D



EF1α hy. p. = EF1α hybrid promotor
SP = signal peptide
VH = variable heavy chain
VL = variable light chain
TMD = transmembrane domain
ECD = extracellular domain
ICD = intracellular domain
SD = signaling domain

Figure 2

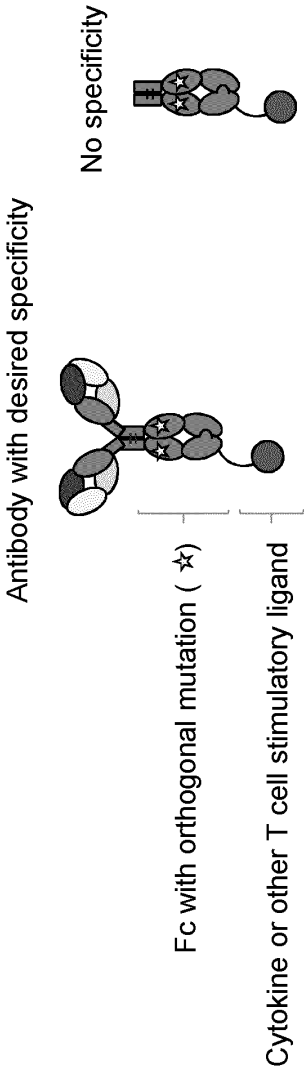


Figure 3

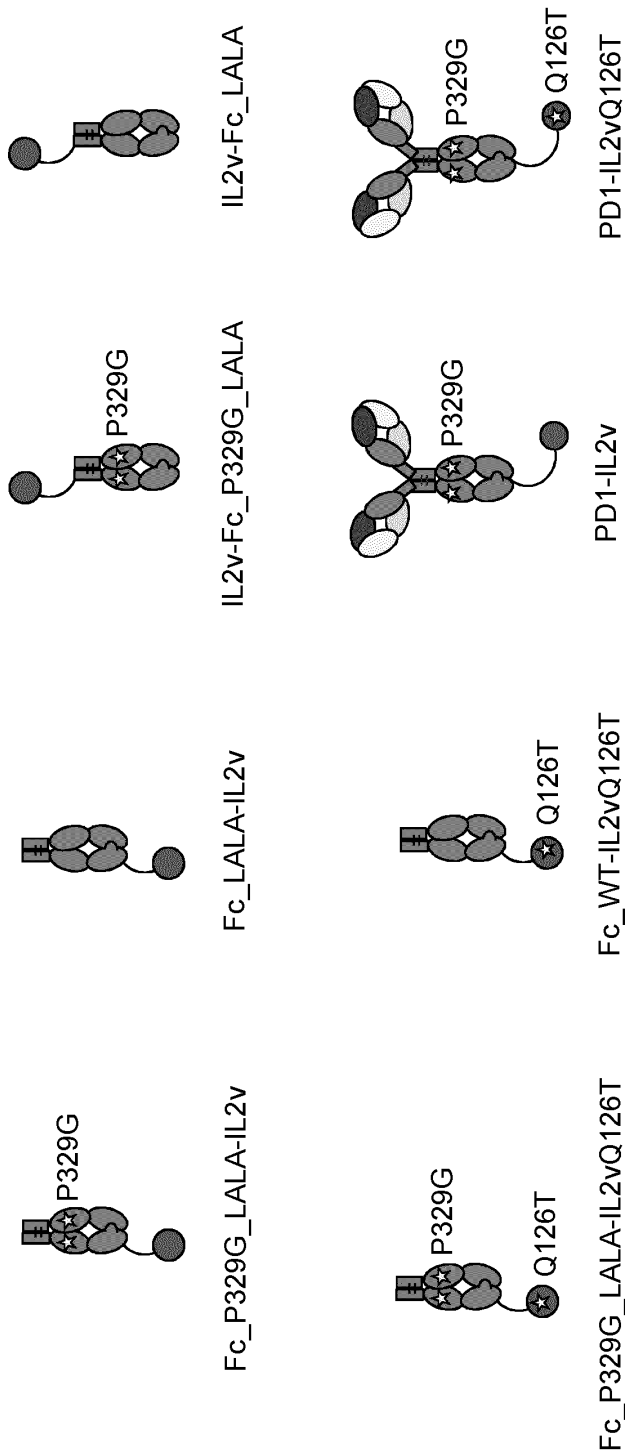


Figure 4A

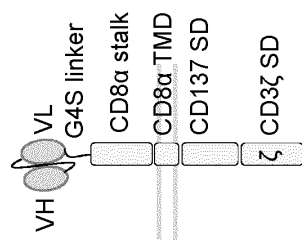
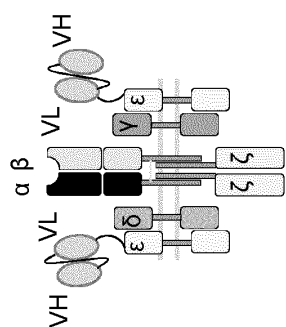
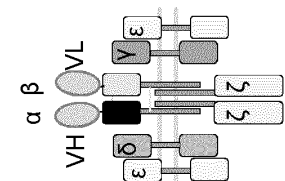


Figure 4B



VH = variable heavy
VL = variable light chain
TMD = transmembrane domain
SD = signaling domain

Figure 4C



**P329G-Cαβ TCR
complex**

Figure 5A

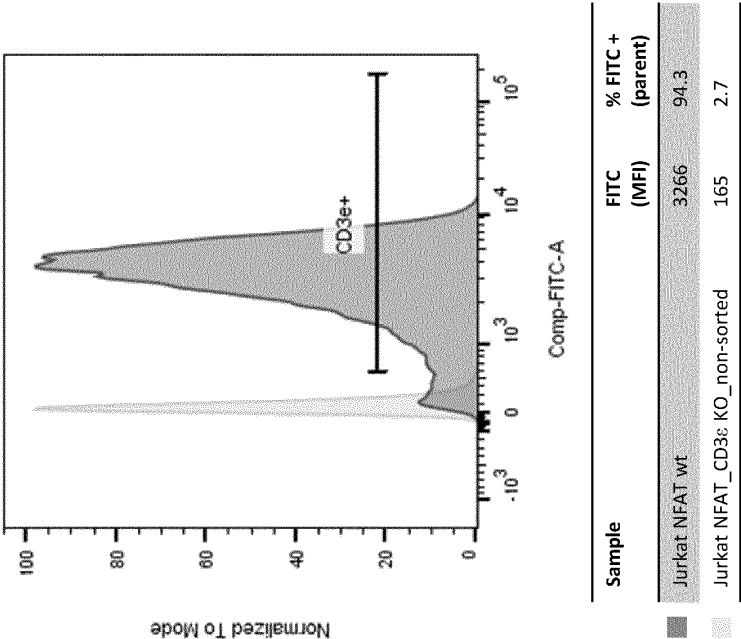


Figure 5B

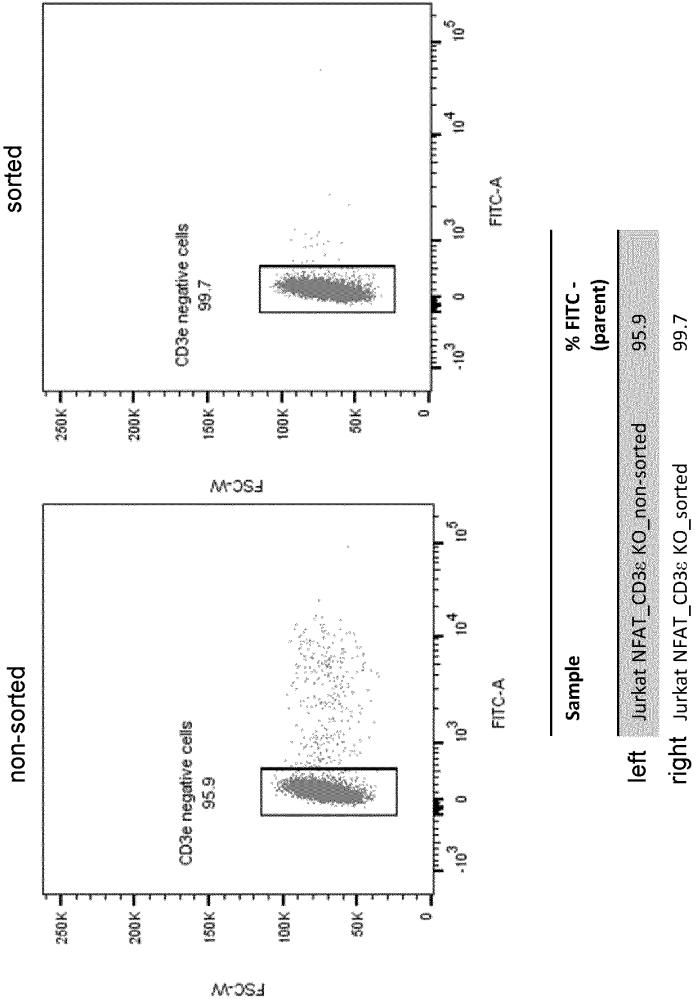
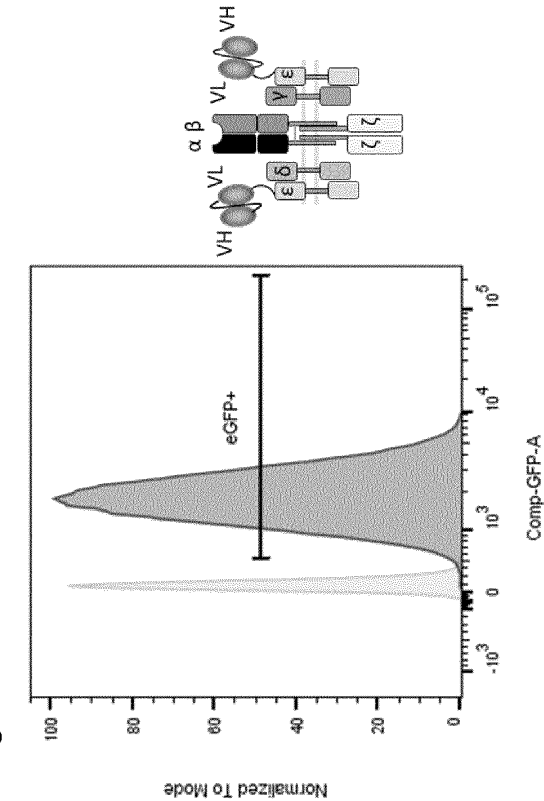
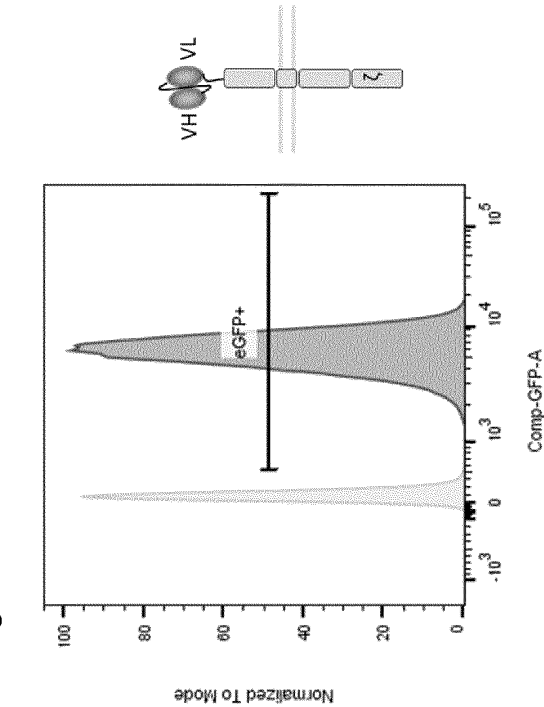


Figure 6A



Sample	eGFP (MFI)
Jurkat NFAT_CD3ε KO_P329G-CD3ε	1801
Jurkat NFAT_CD3ε KO_Mock transduced	187

Figure 6B



Sample	eGFP (MFI)
Jurkat NFAT_CD3ε KO_P329G-CAR	5774
Jurkat NFAT_CD3ε KO_Mock transduced	187

Figure 7A

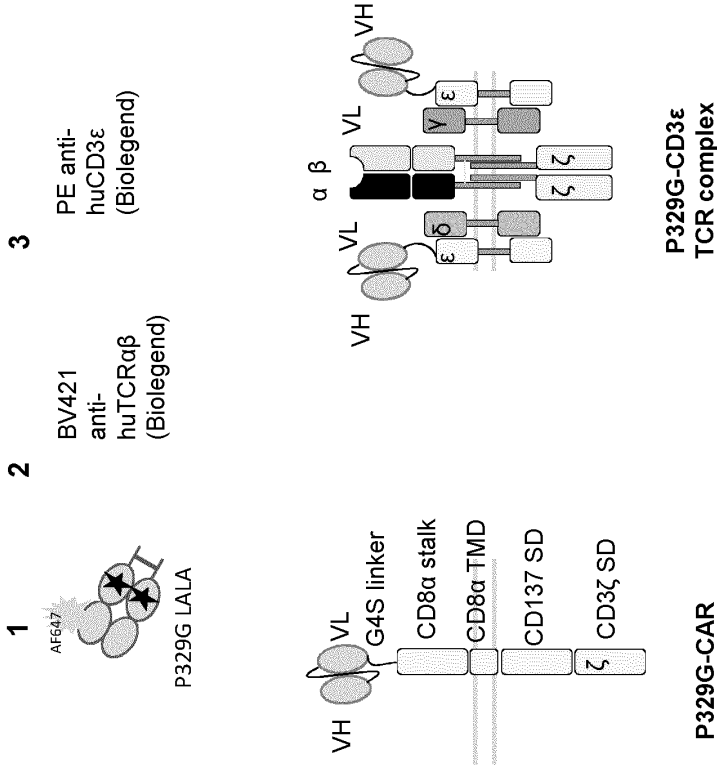


Figure 7B

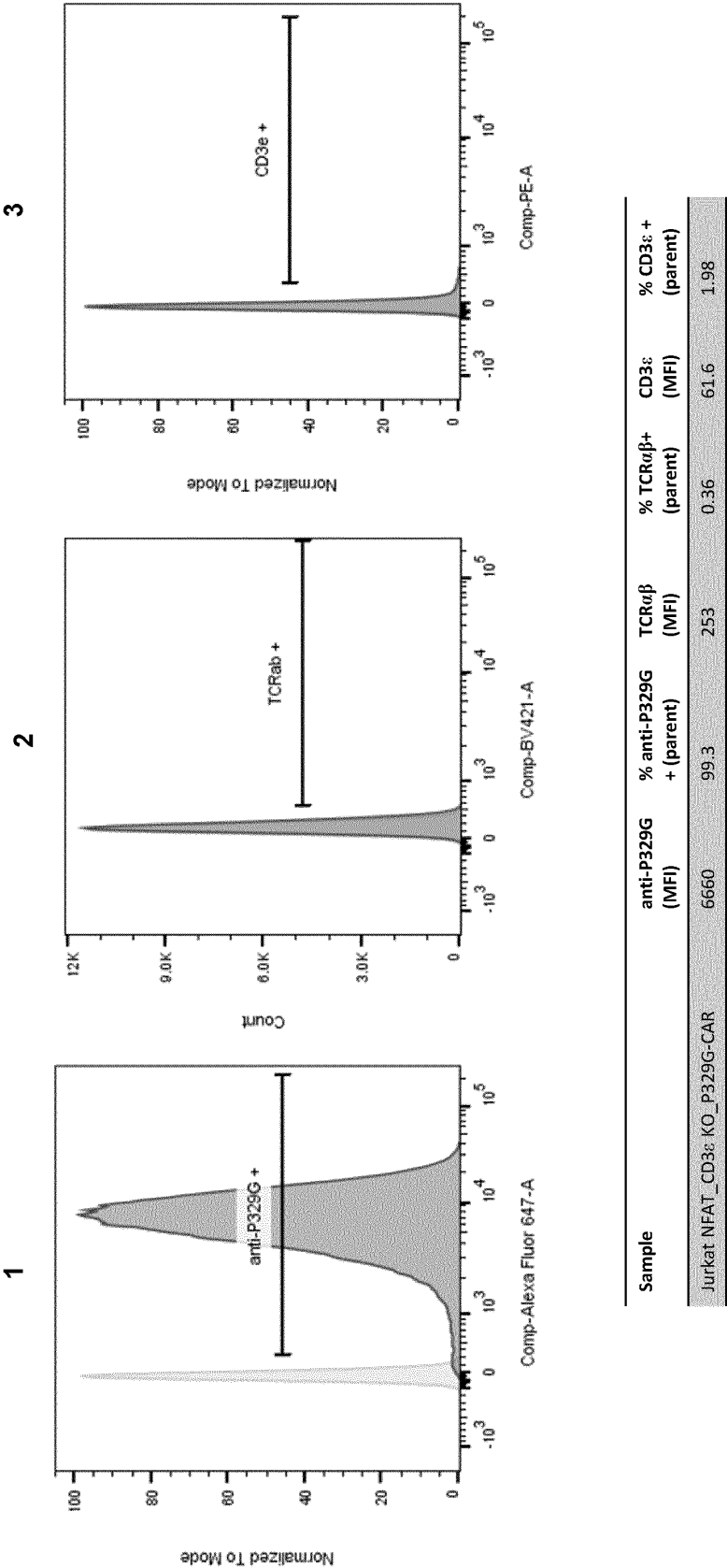


Figure 7C

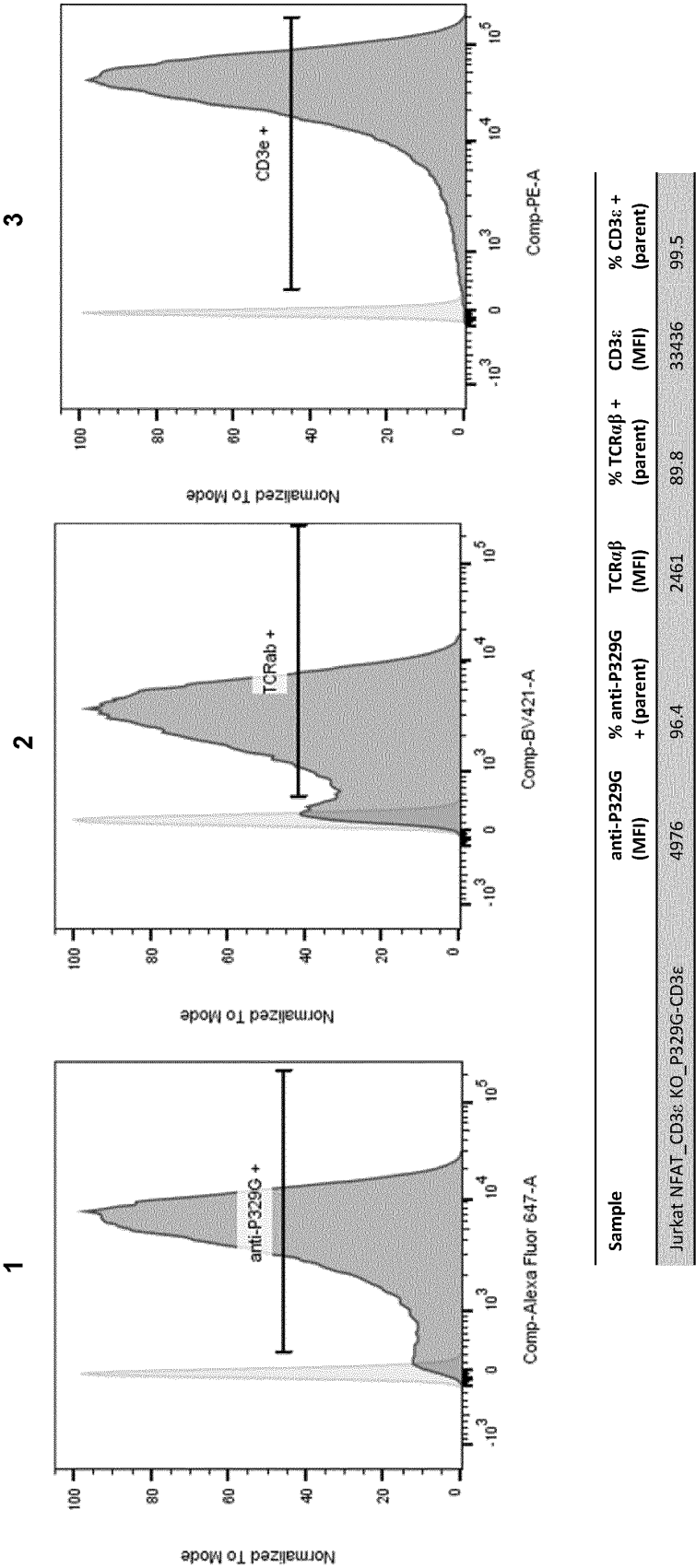


Figure 8A

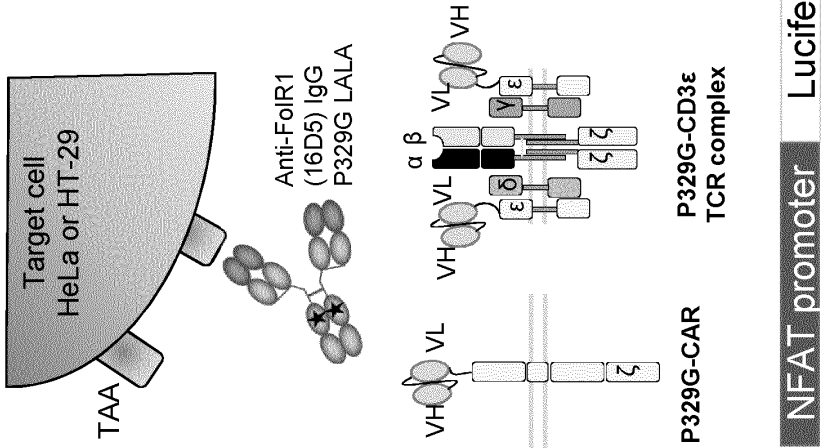


Figure 8B

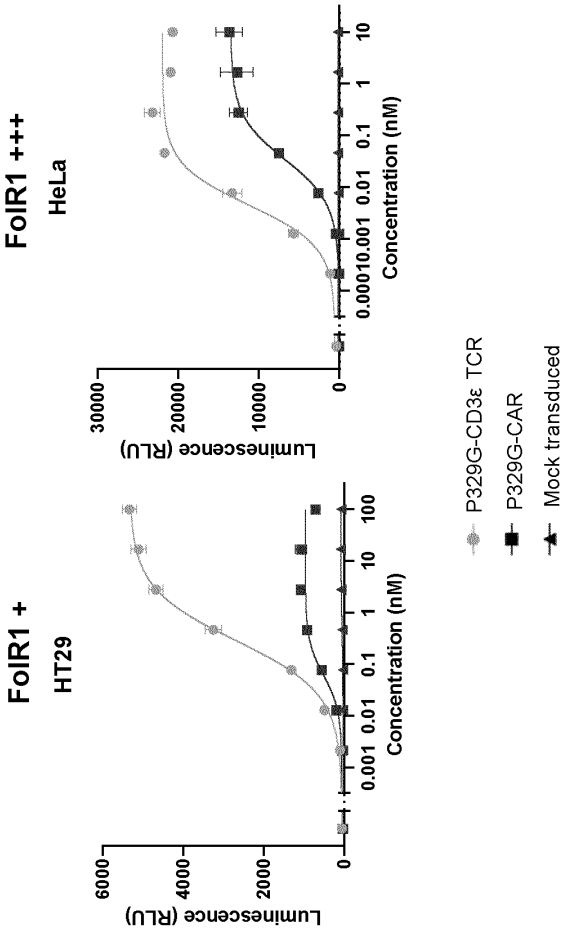


Figure 9A

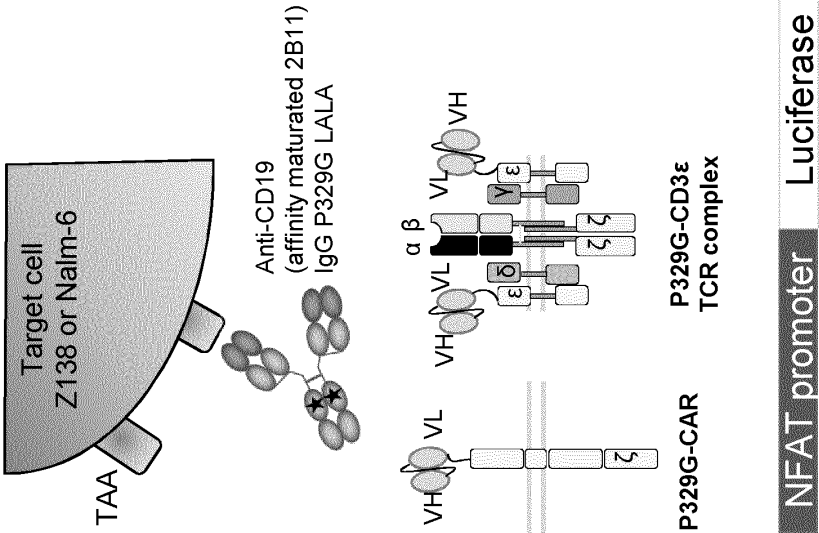


Figure 9B

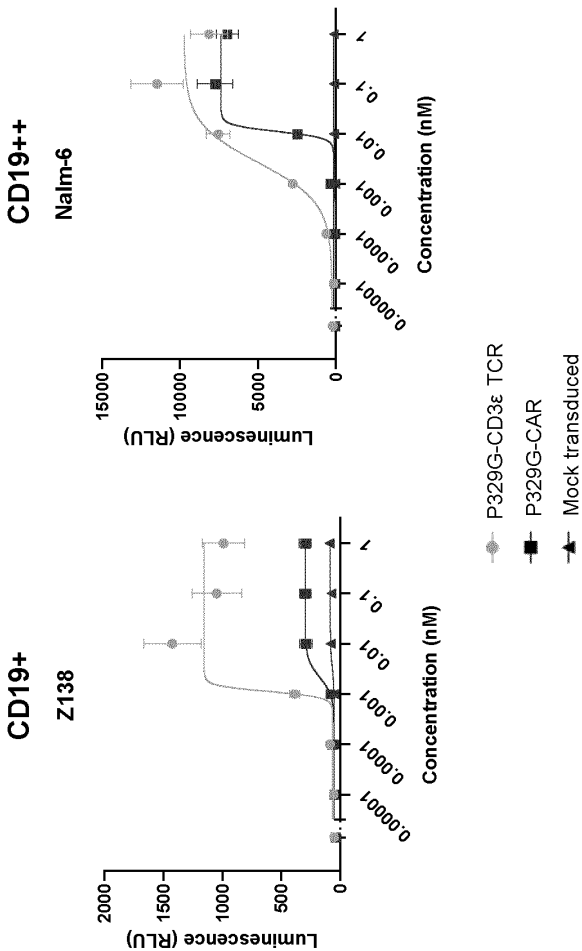
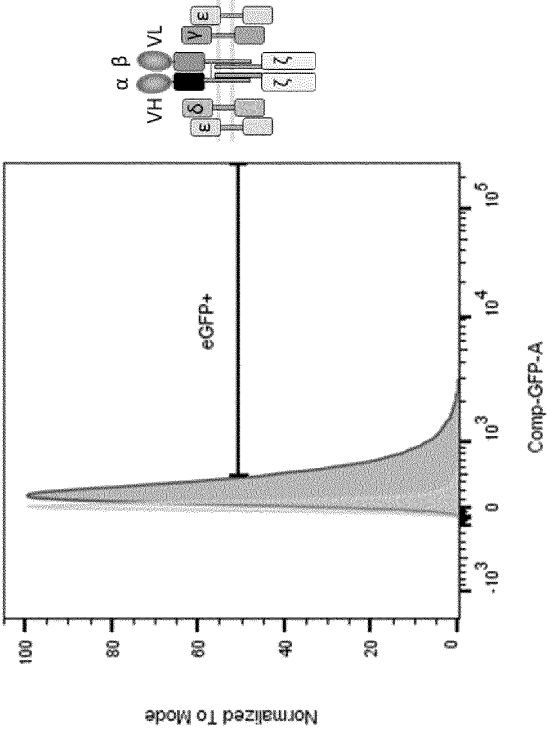
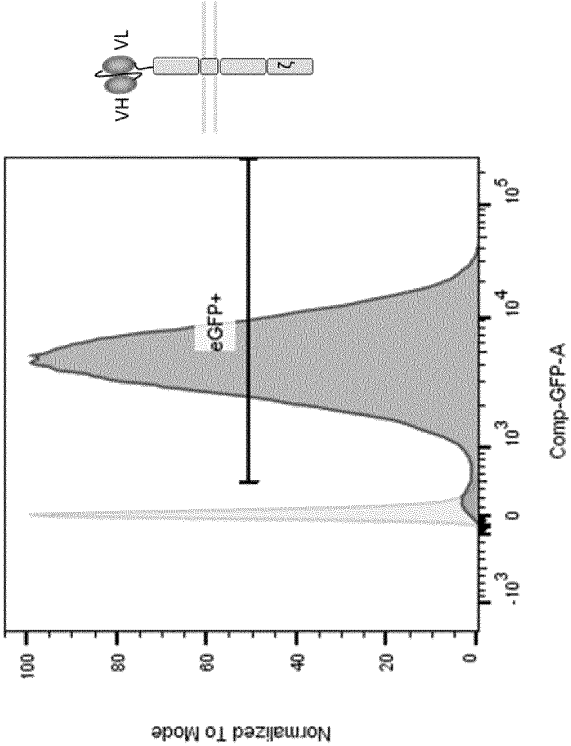


Figure 10A



Sample	eGFP (MFI)
Jurkat TCRαβ KO CD4+ _P329G-Cαβ TCR	329
Jurkat TCRαβ KO CD4+ _Mock transduced	122

Figure 10B



Sample	eGFP (MFI)
Jurkat TCRαβ KO CD4+ _P329G-CAR	4389
Jurkat TCRαβ KO CD4+ _Mock transduced	122

Figure 11A

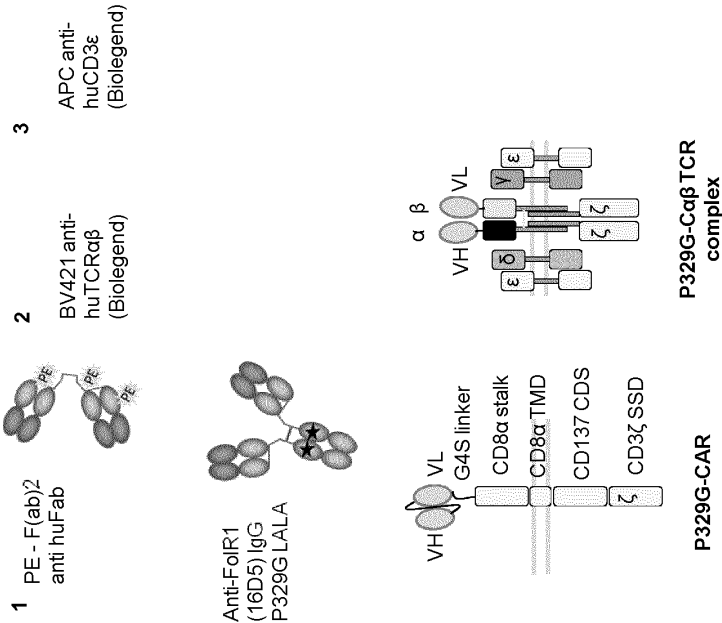
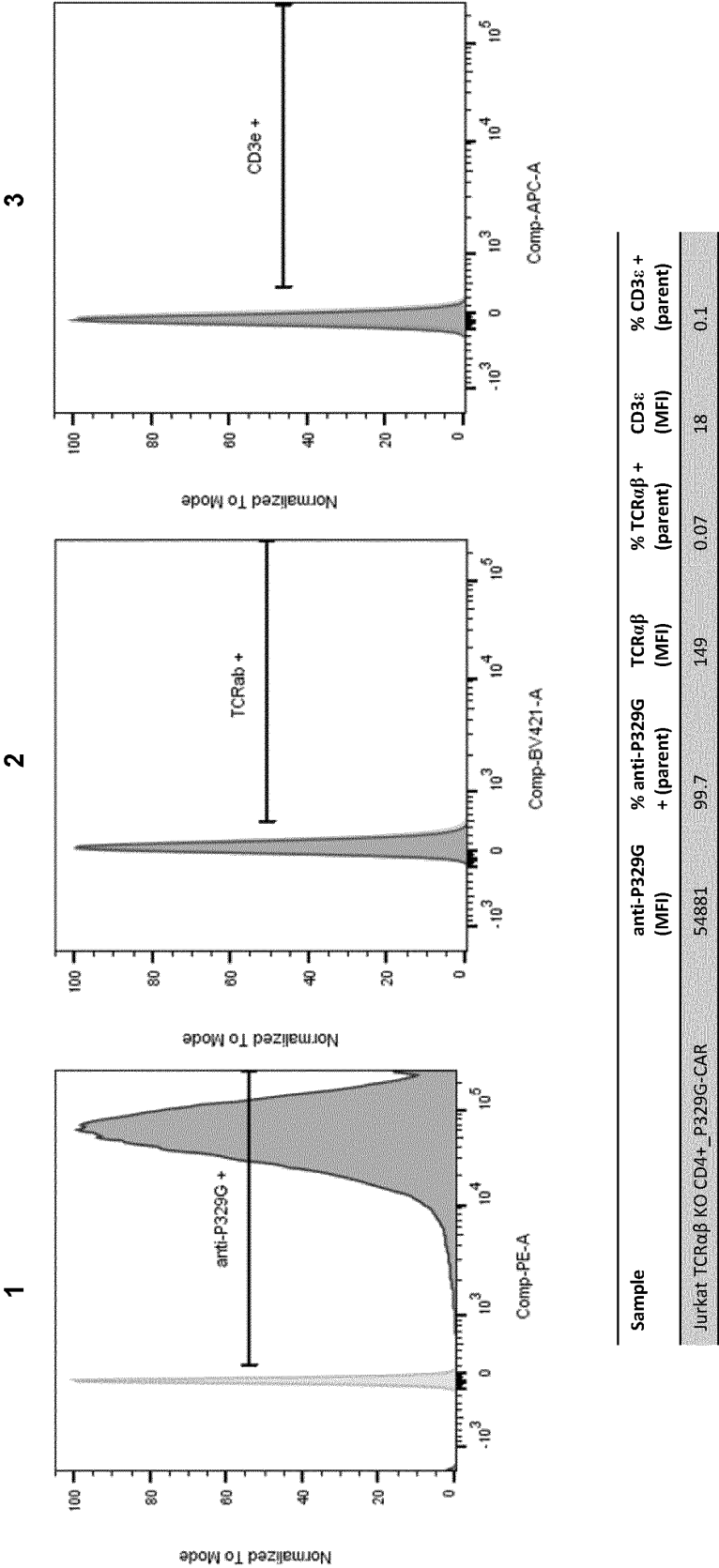


Figure 11B



Normalized To Mode

Figure 11C

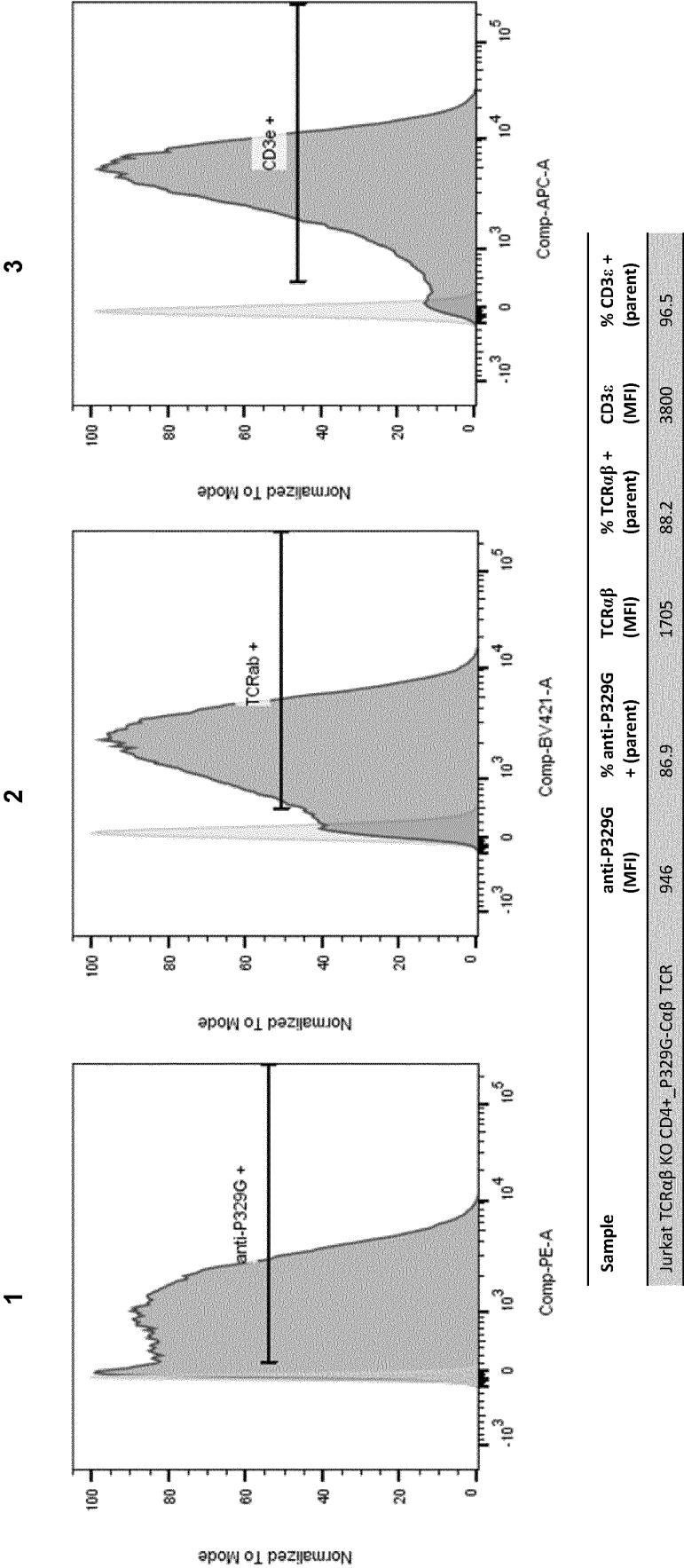


Figure 12B

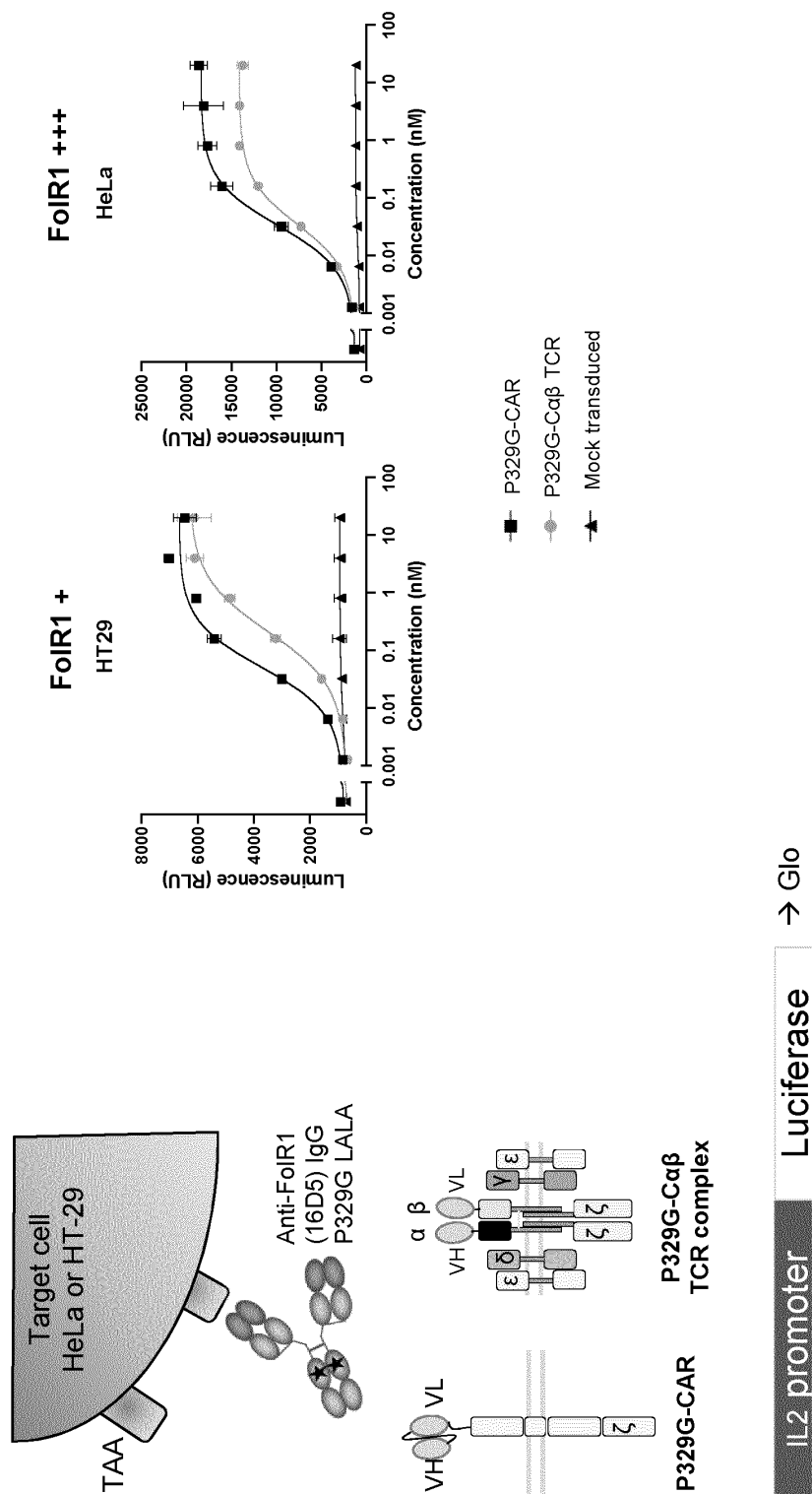


Figure 13A

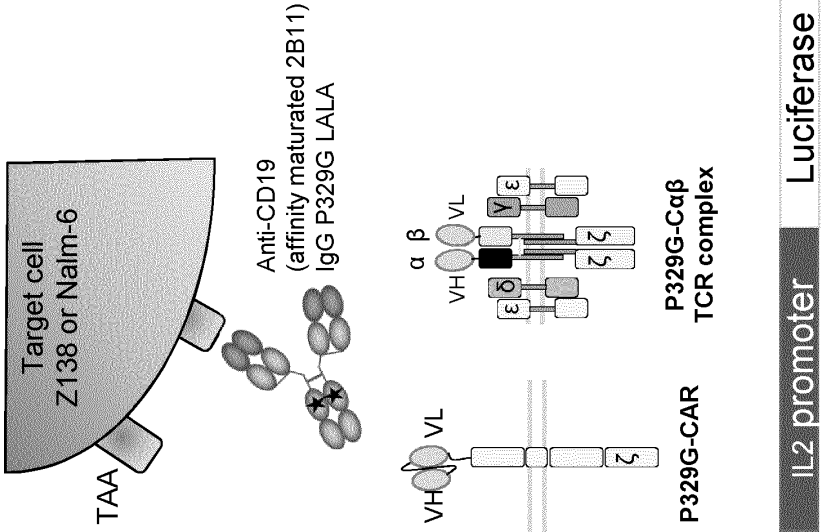


Figure 13B

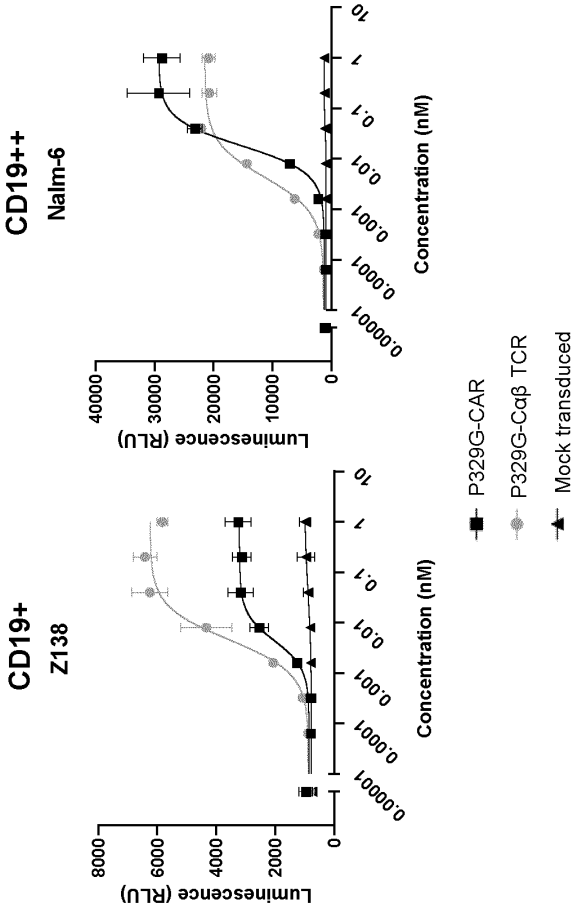
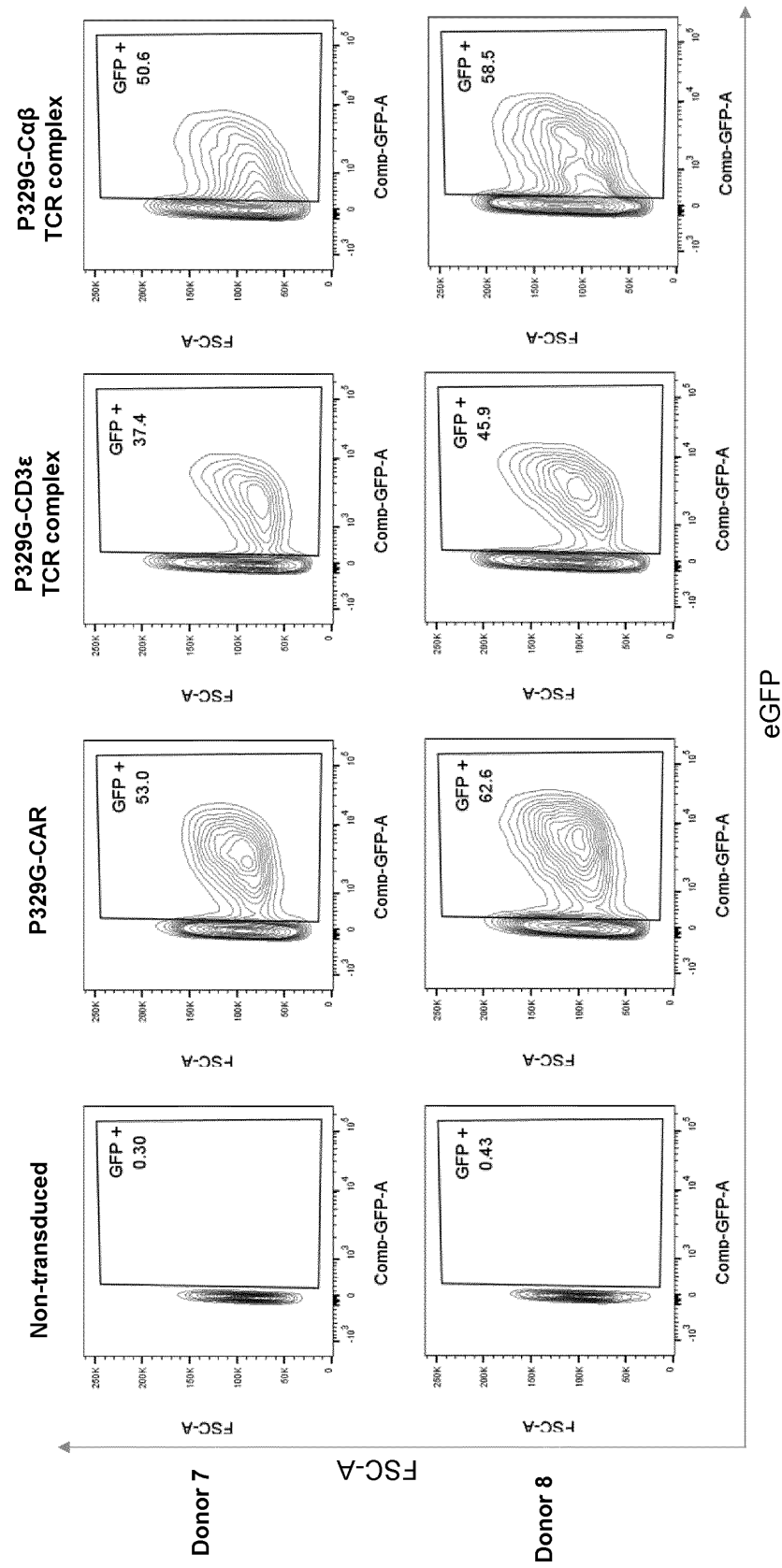


Figure 14A



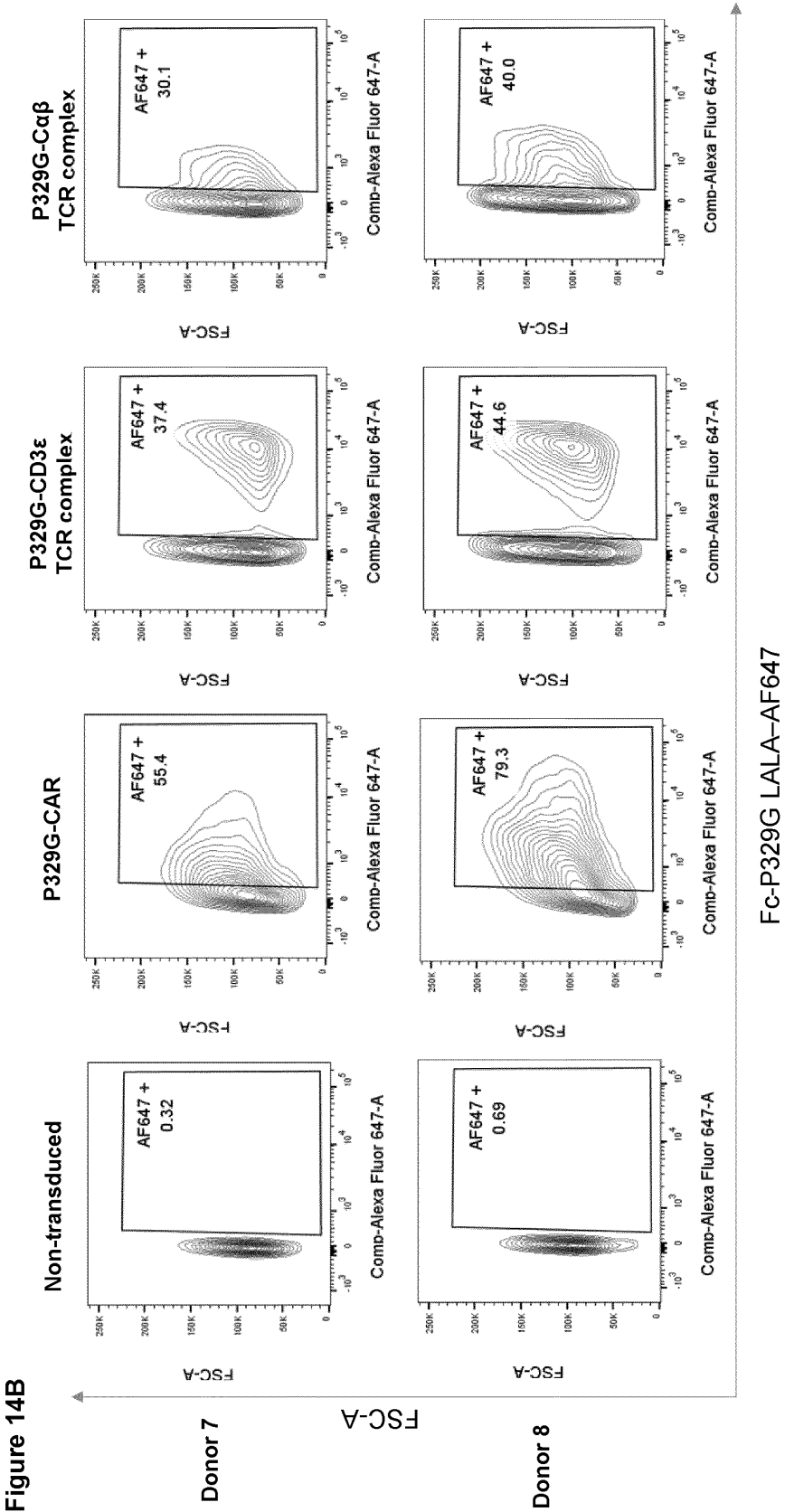


Figure 14C

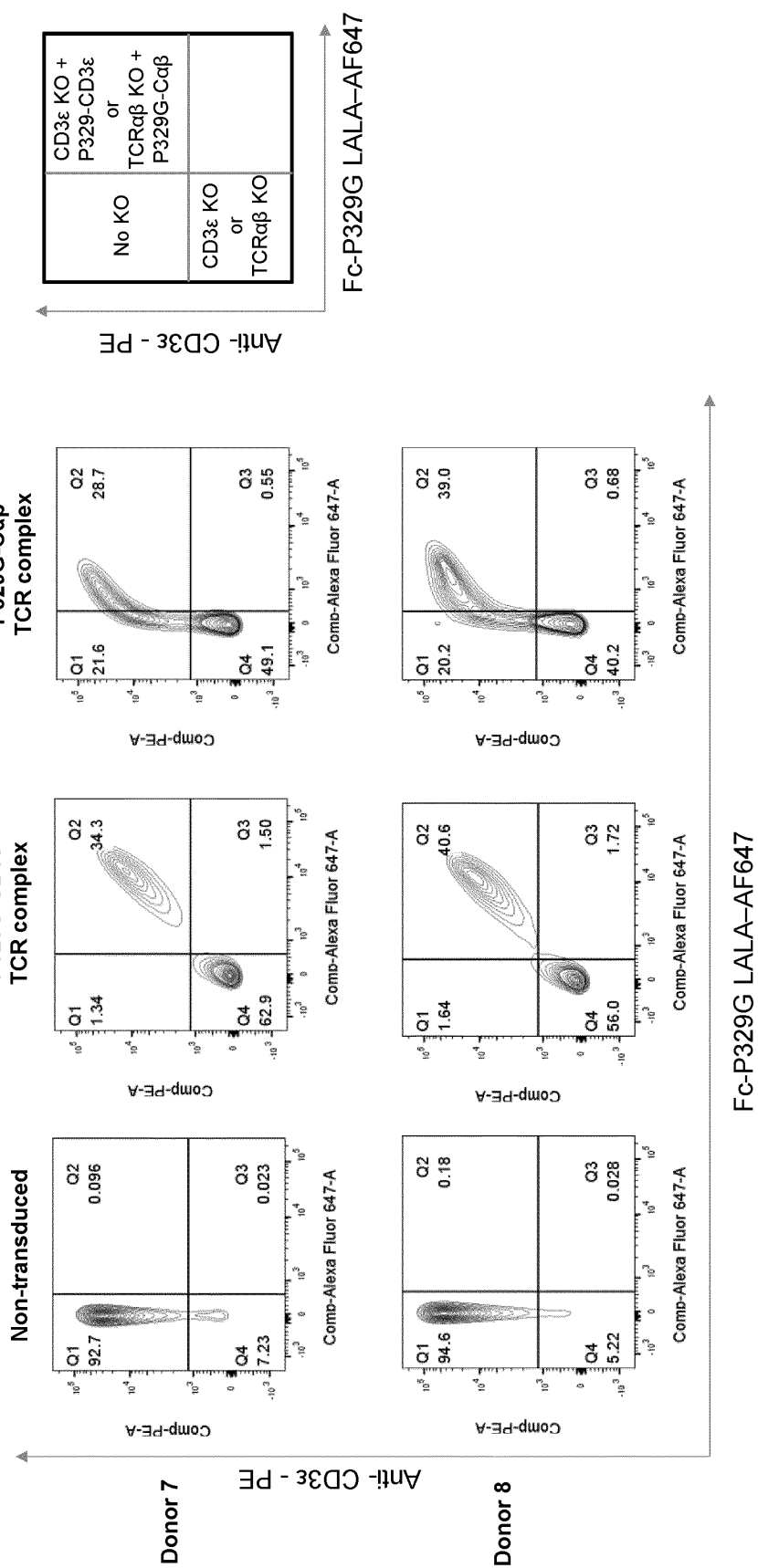


Figure 15

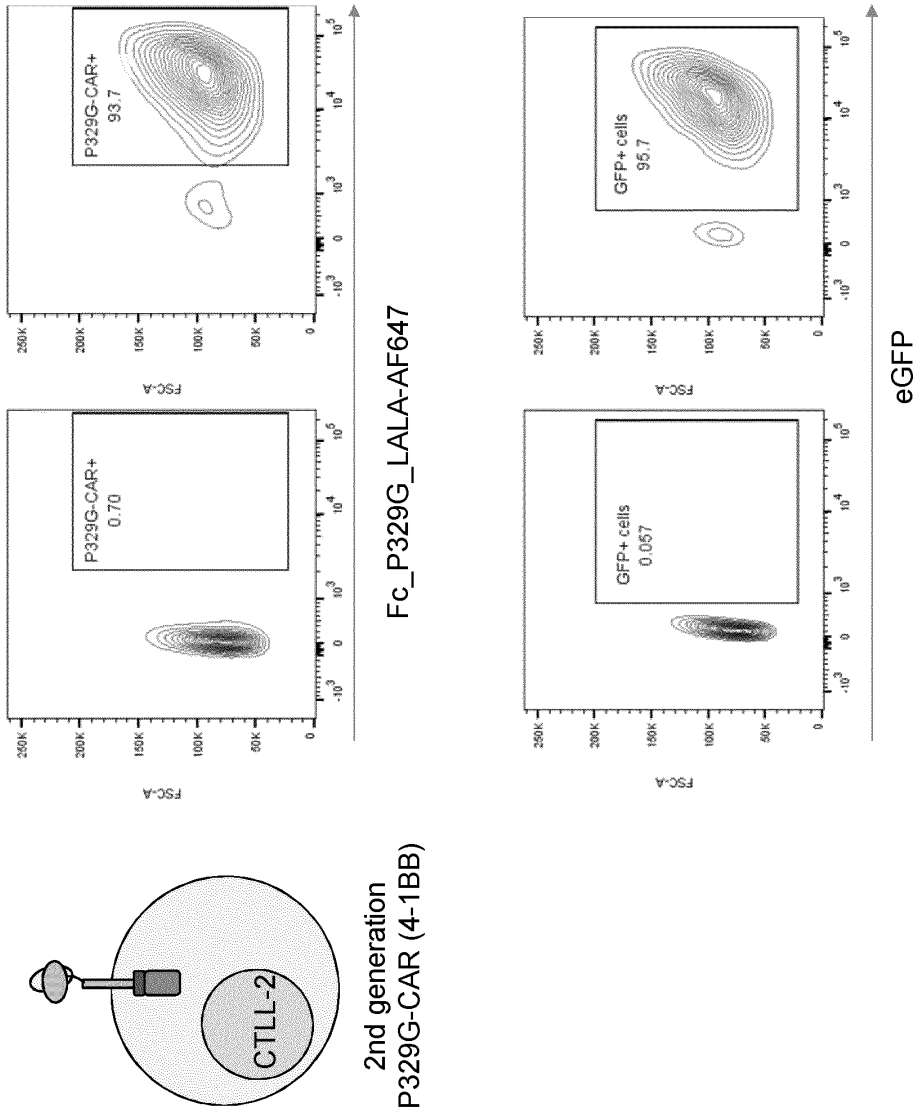


Figure 16

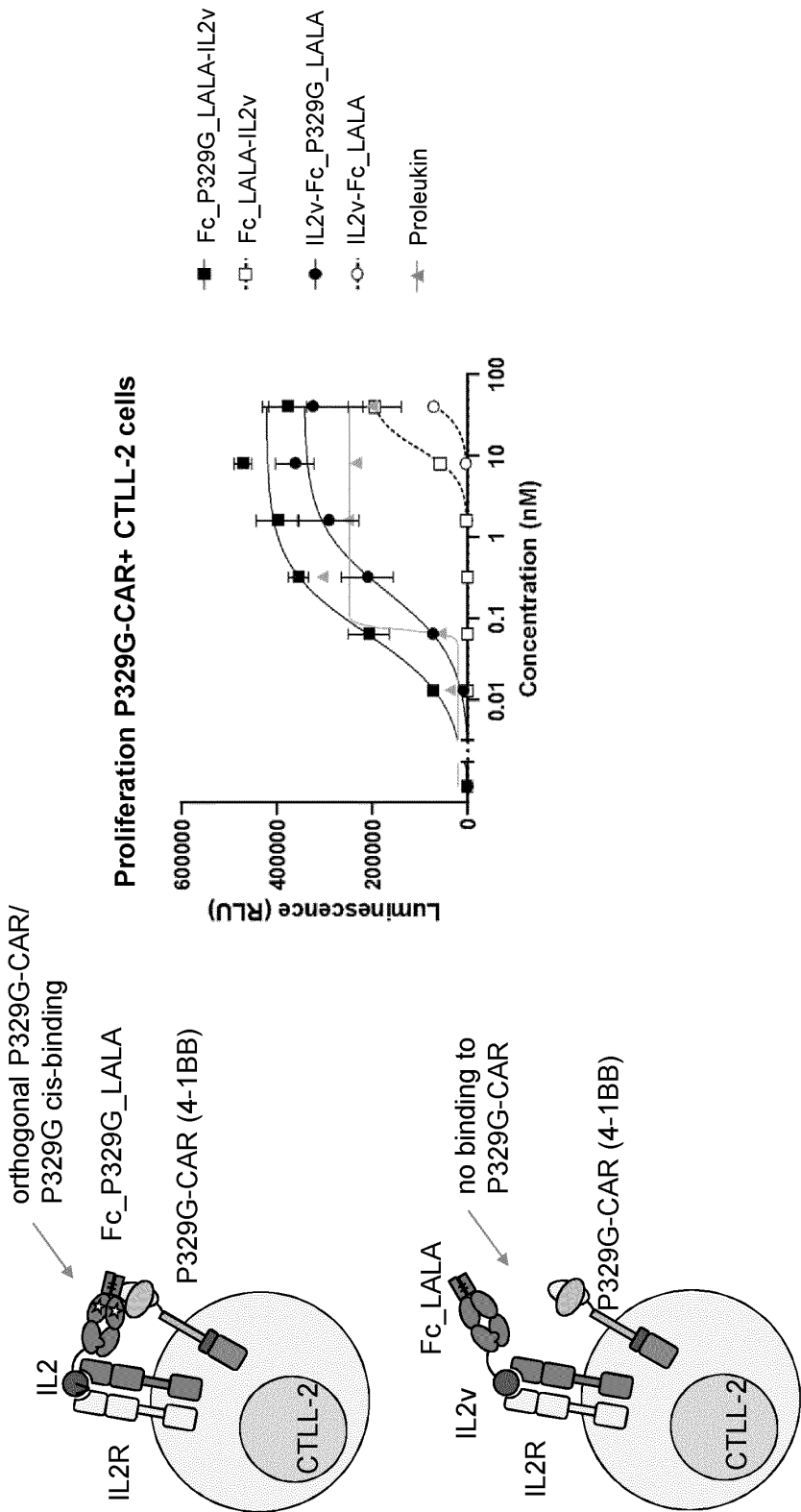


Figure 17

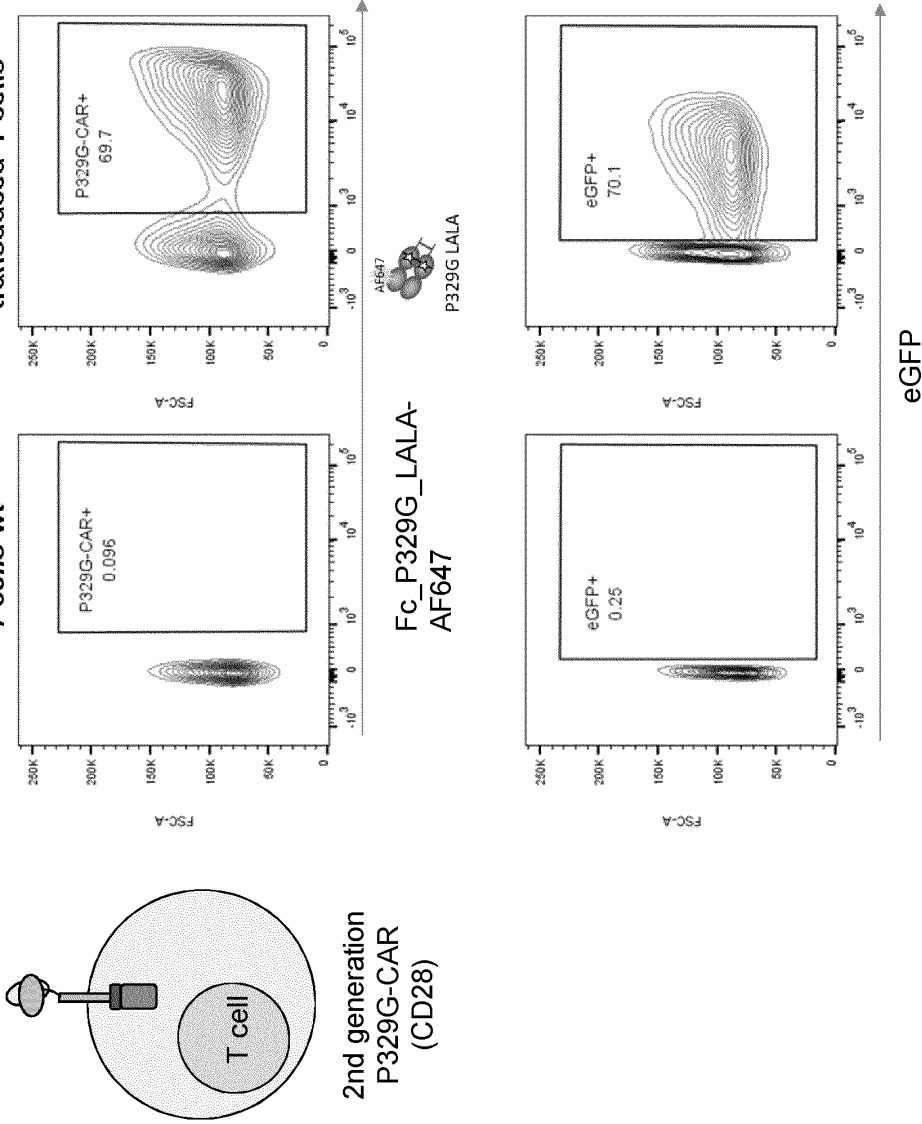
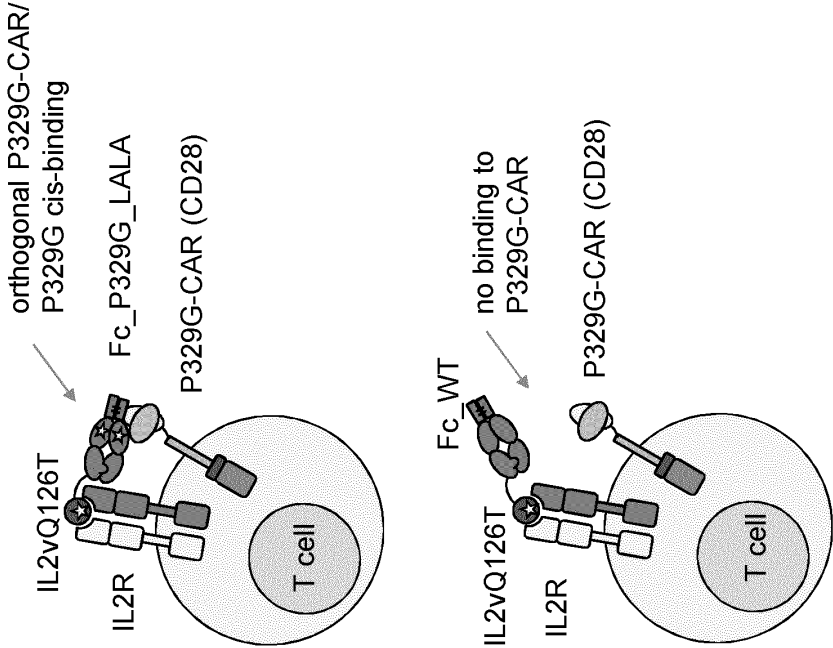
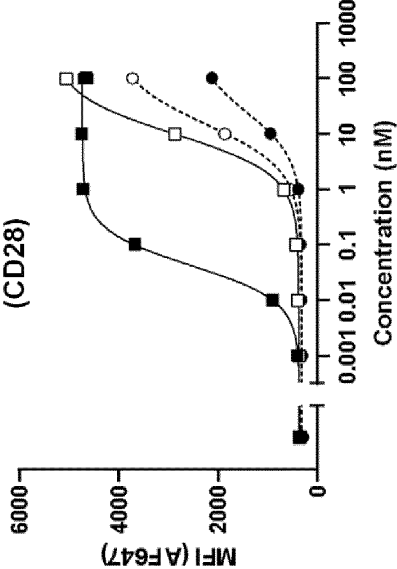


Figure 18



STAT5 phosphorylation in primary T cells transduced with P329G-CAR



- Fc_P329G_LALA-IL2vQ126T - GFP+
- Fc_WT-IL2vQ126T - GFP+
- Fc_P329G_LALA-IL2vQ126T - GFP-
- Fc_WT-IL2vQ126T - GFP-

Molecule	EC50 (nM)
Fc_P329G_LALA-IL2vQ126T - GFP+	0.04274
Fc_WT-IL2vQ126T - GFP+	9.94
Fc_P329G_LALA-IL2vQ126T - GFP-	23.77
Fc_WT-IL2vQ126T - GFP-	14.68

230x

Figure 19

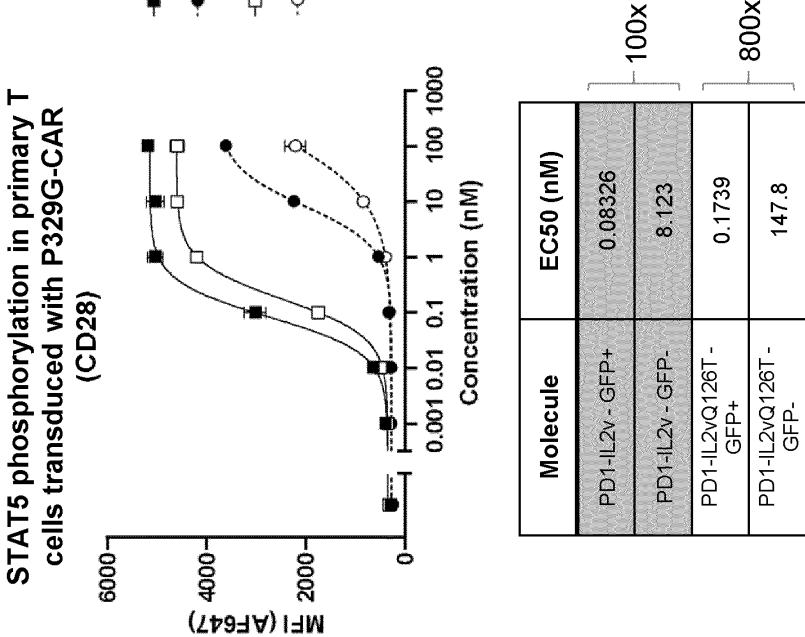
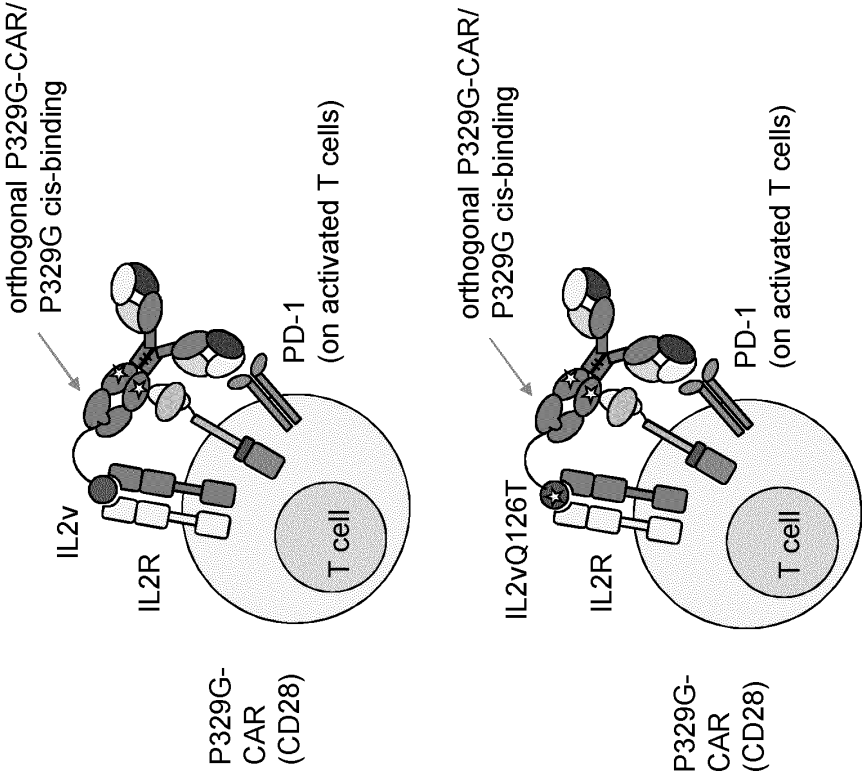
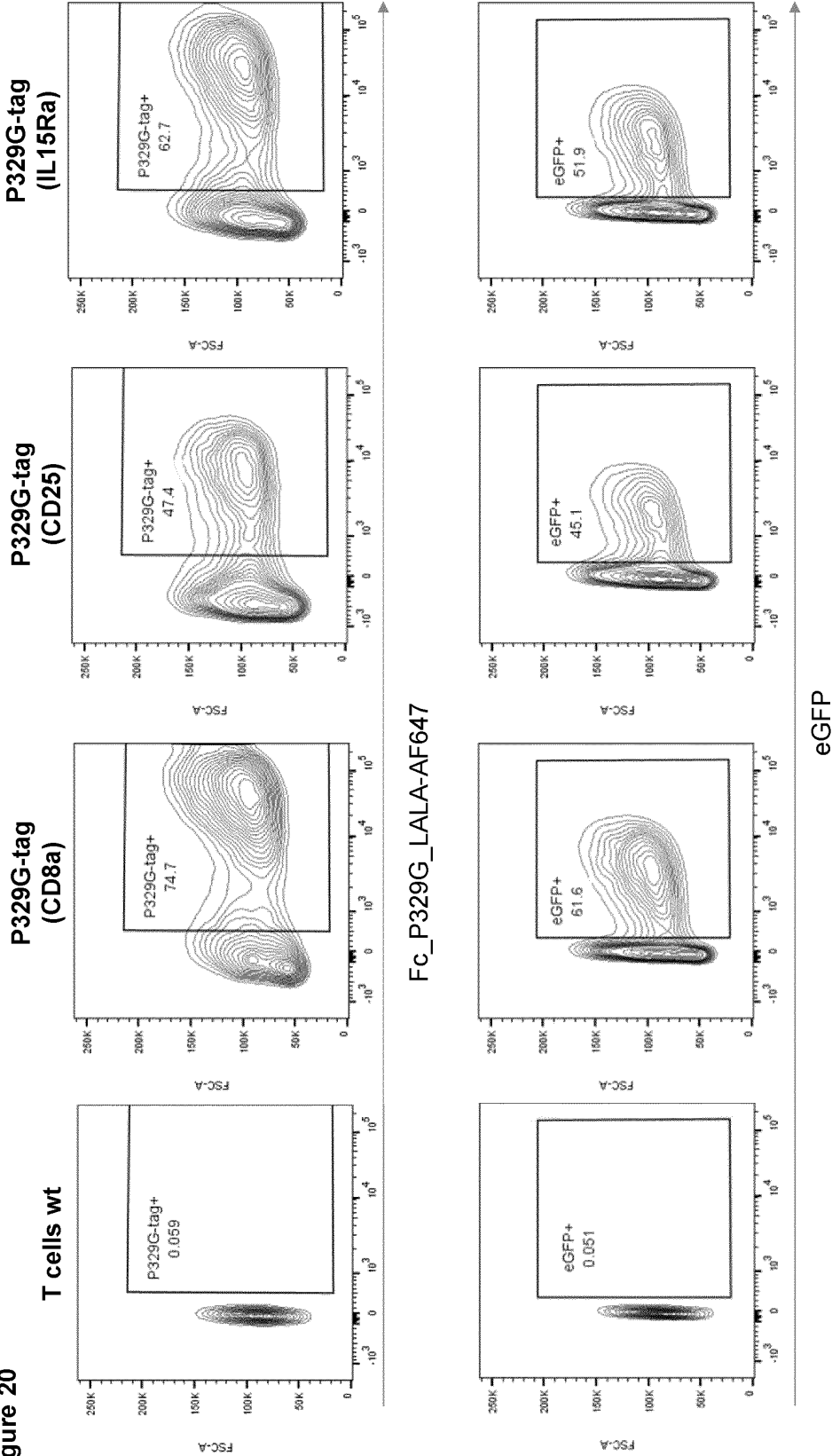
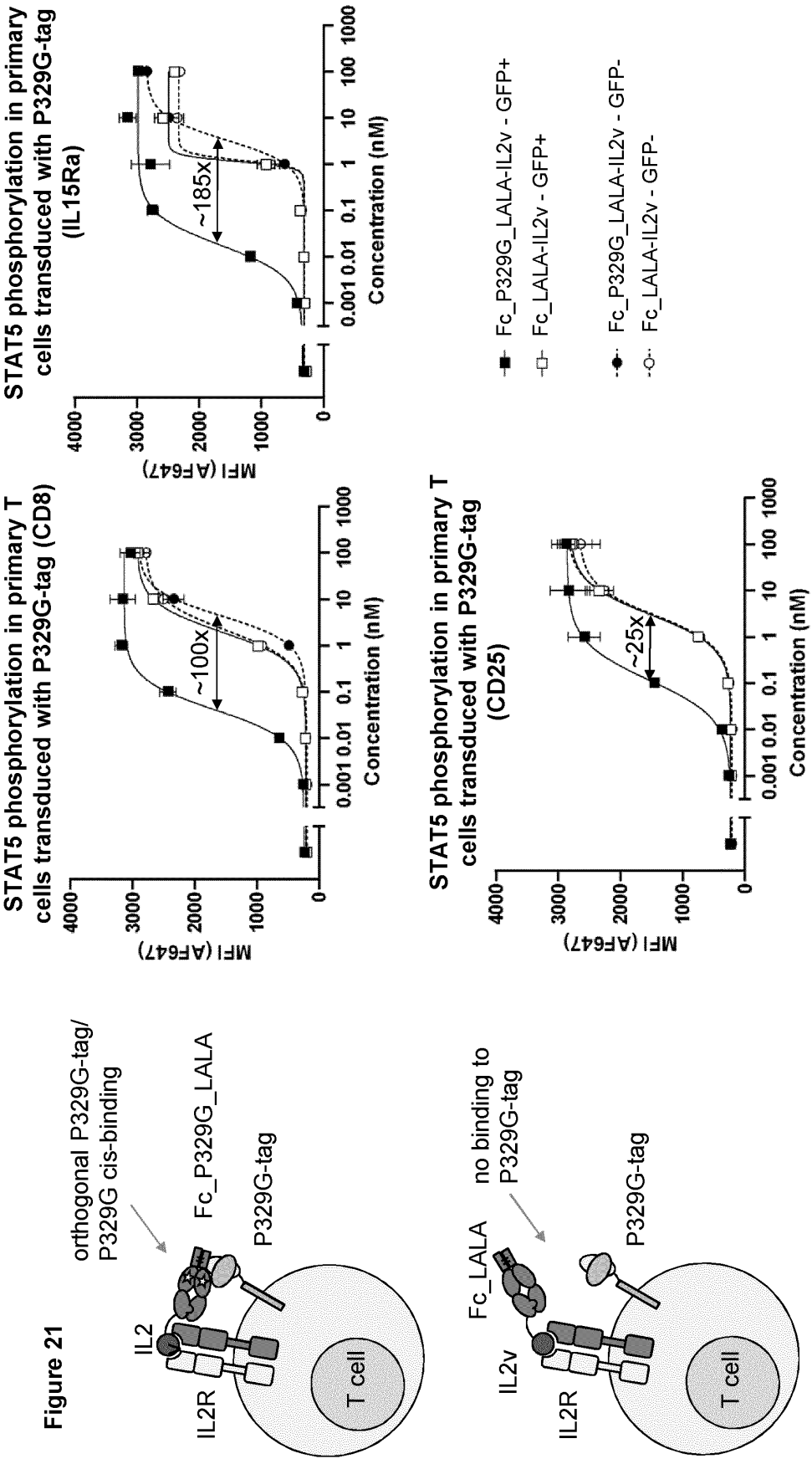
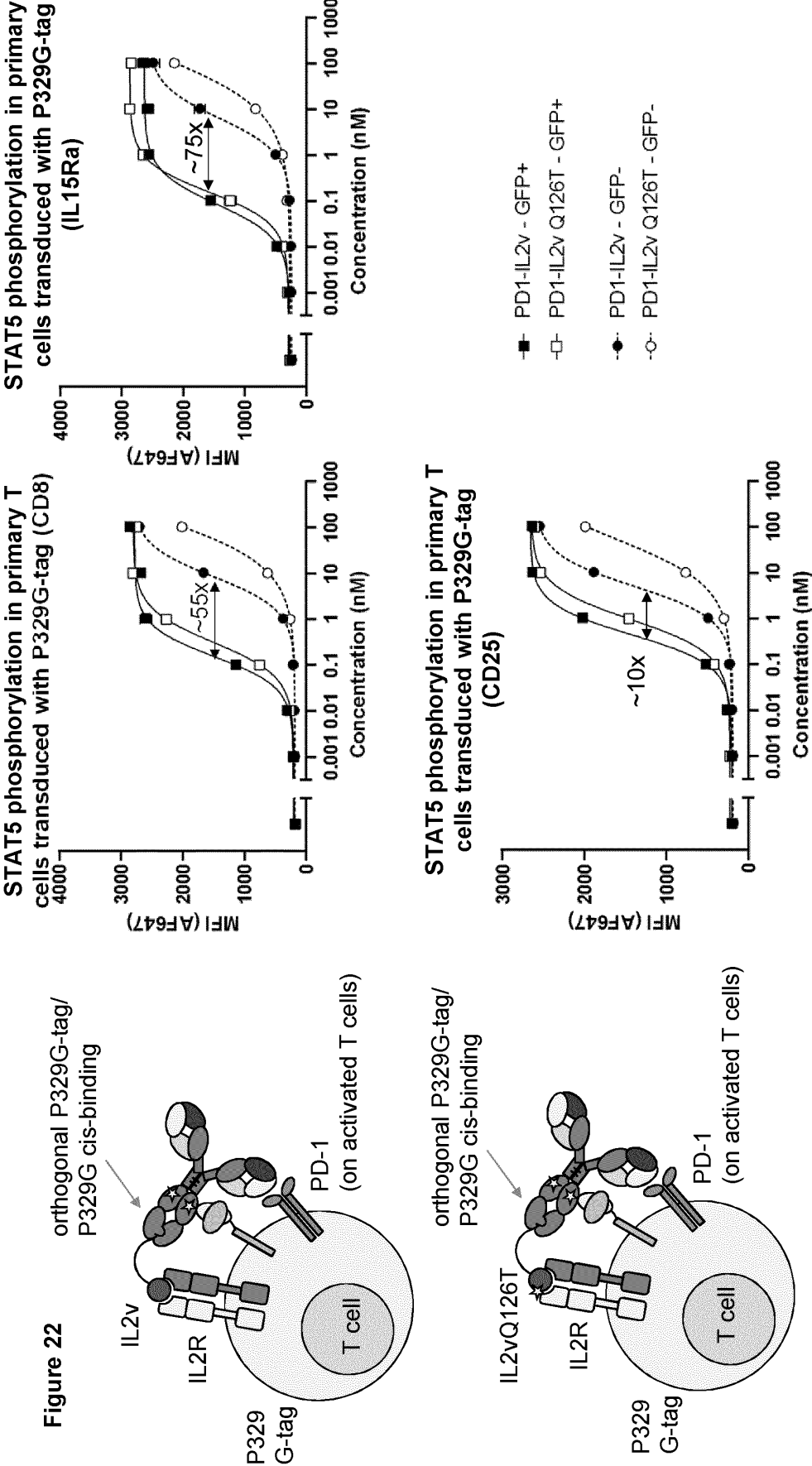


Figure 20







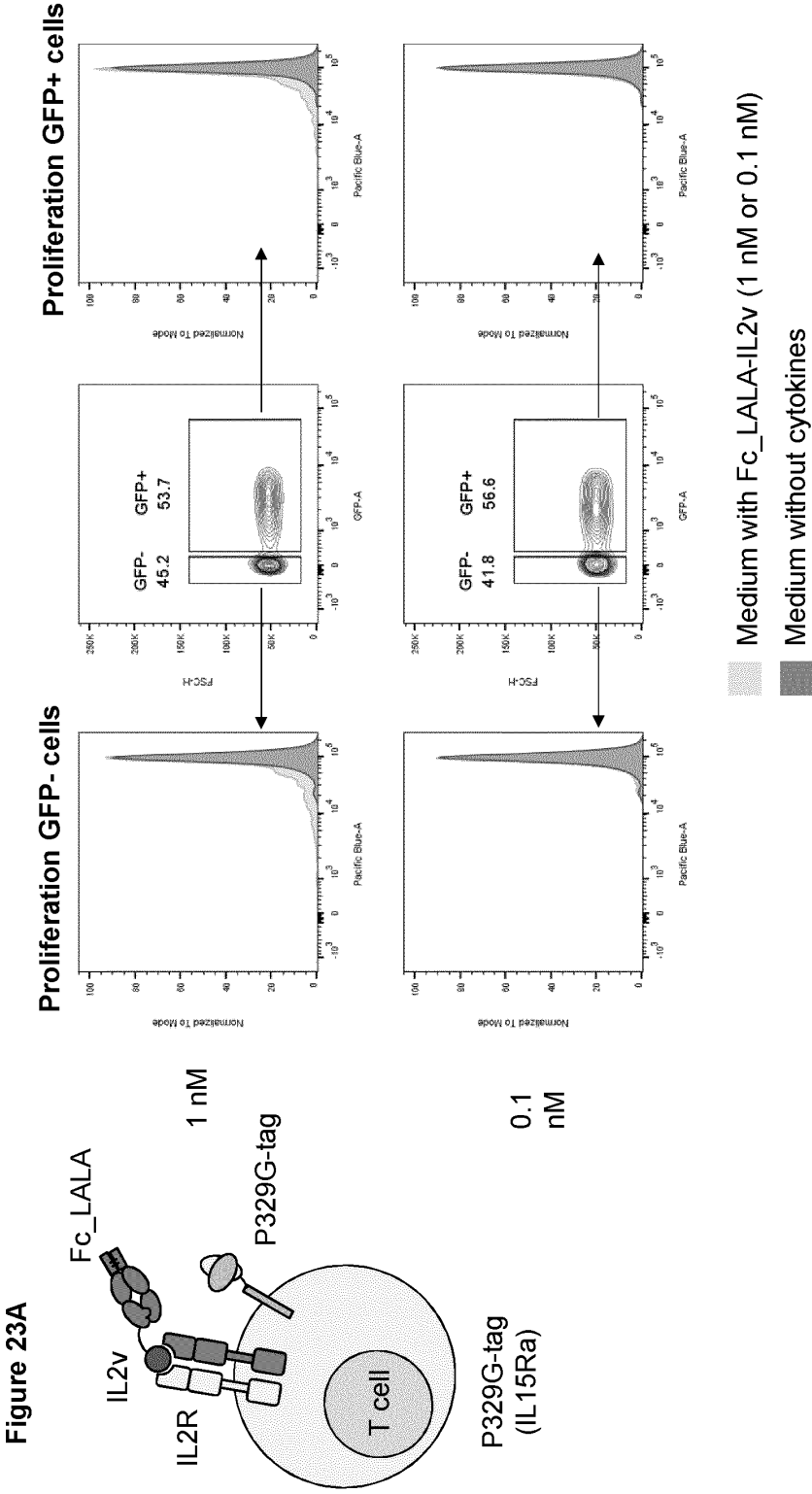
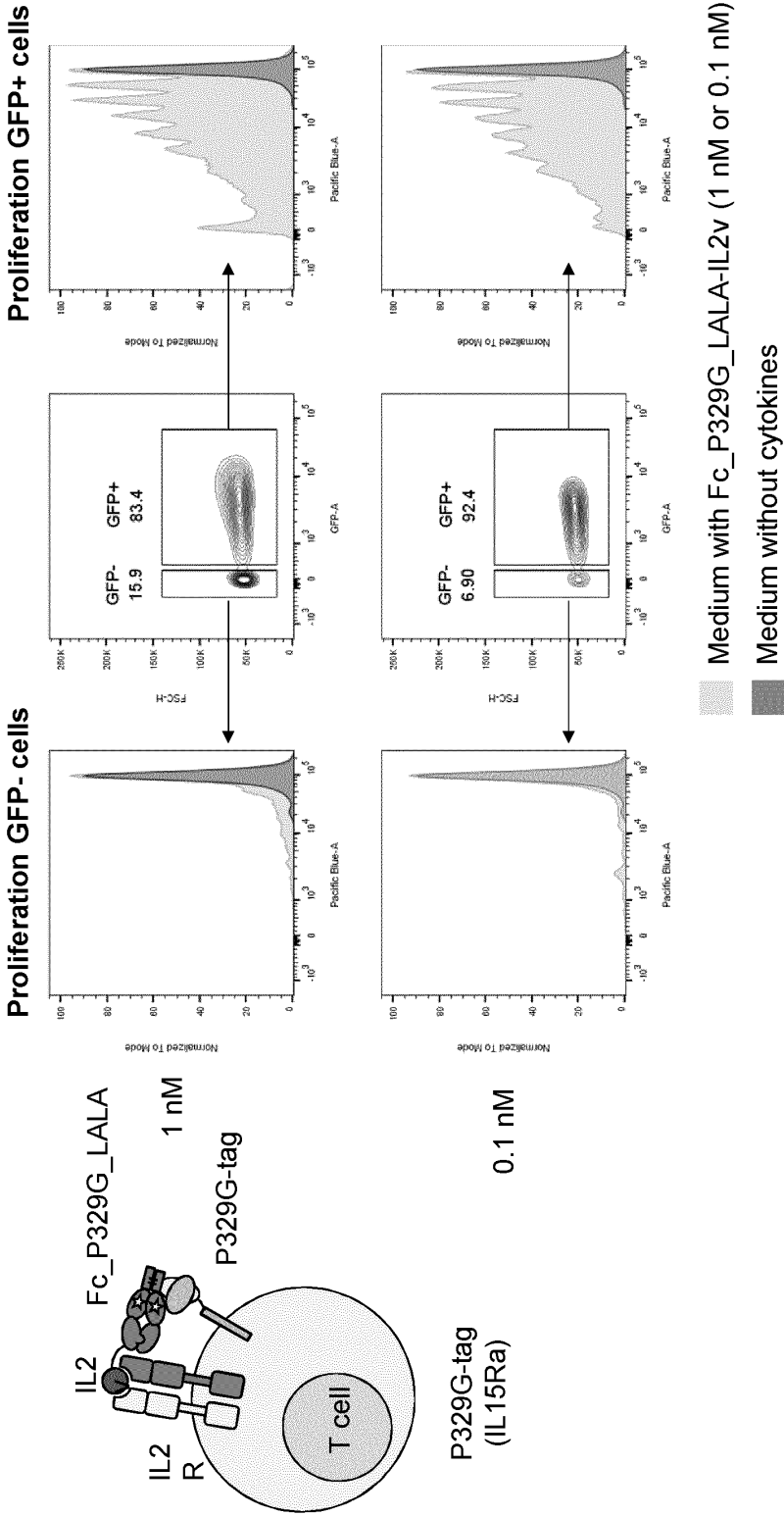
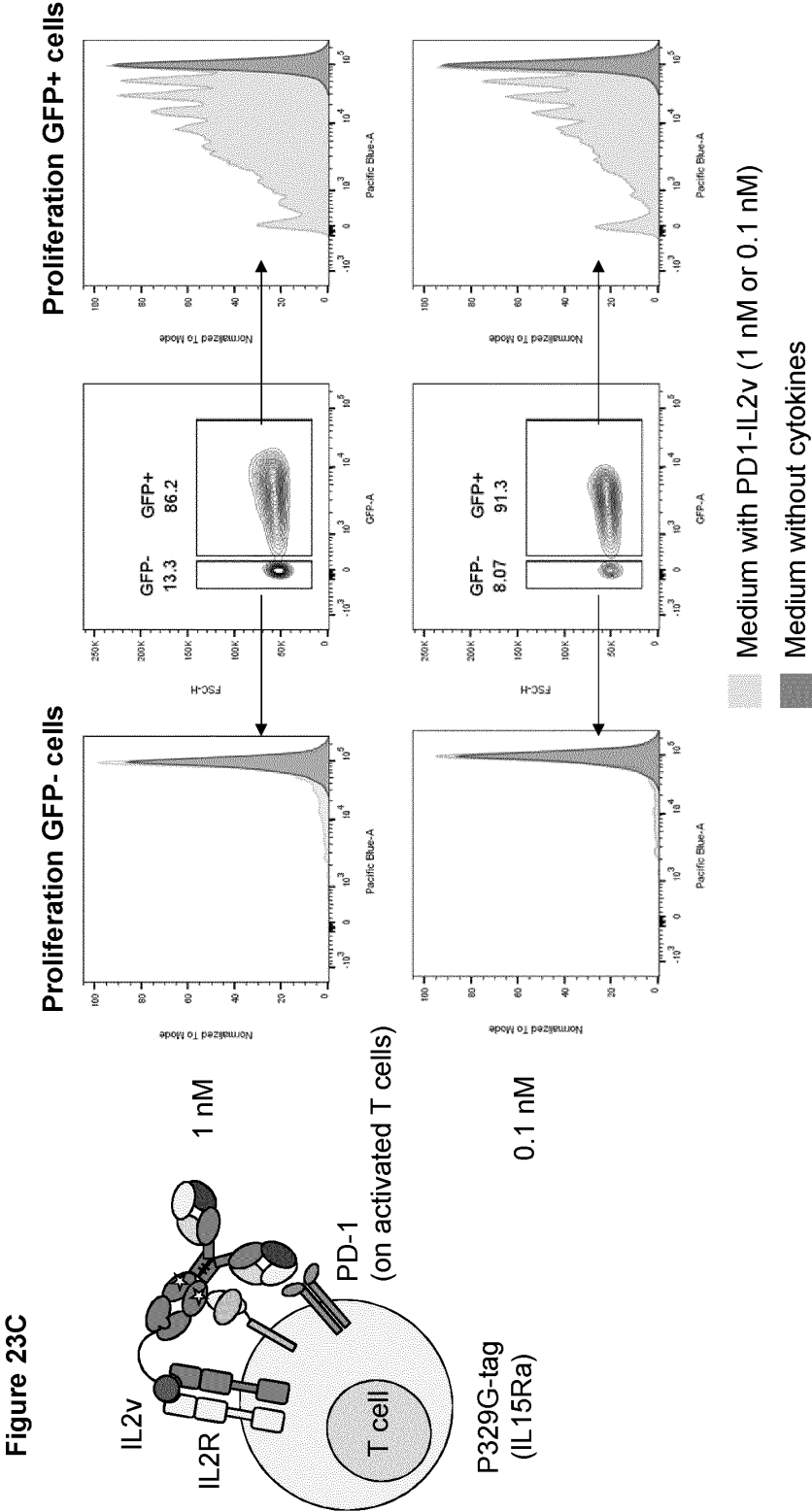
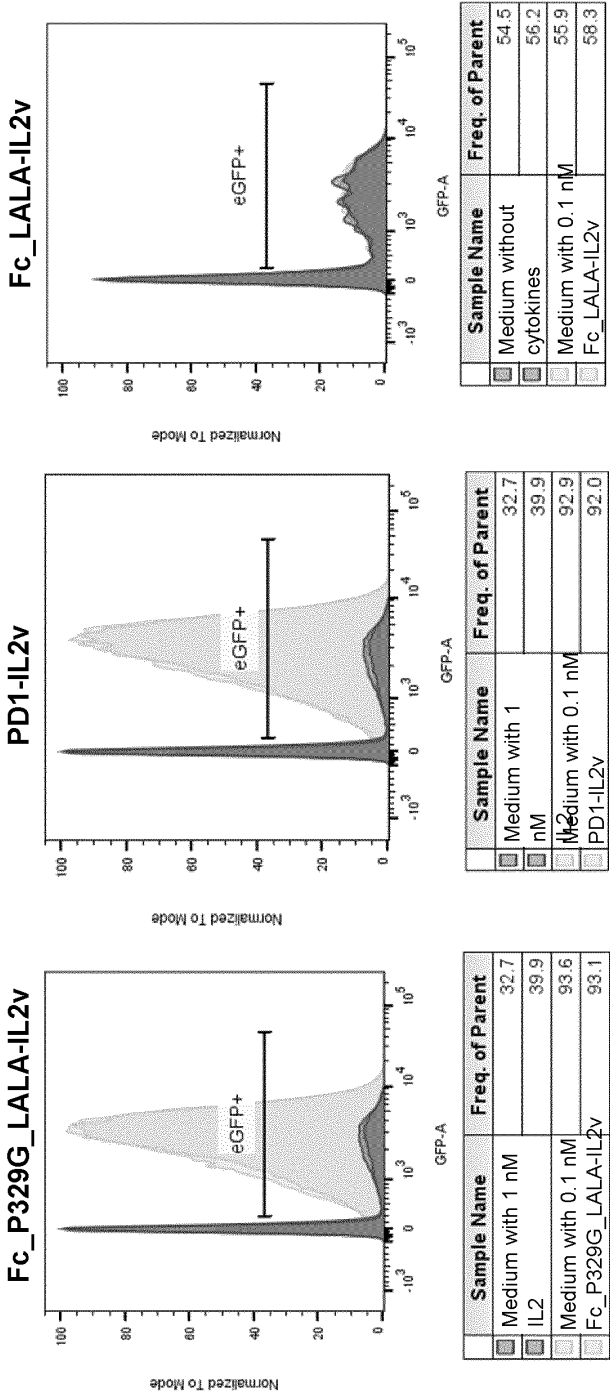
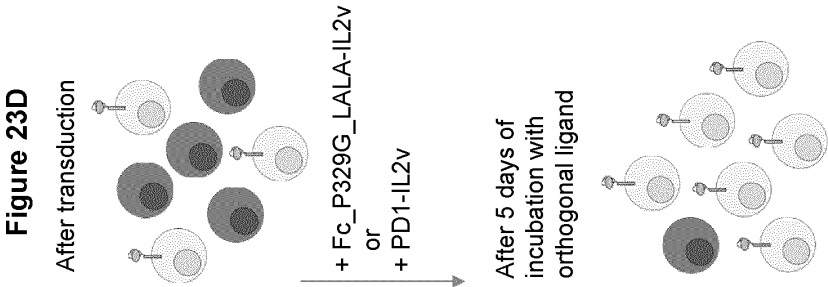


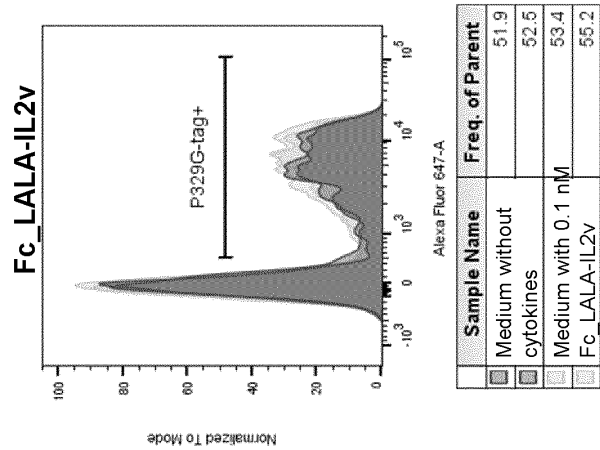
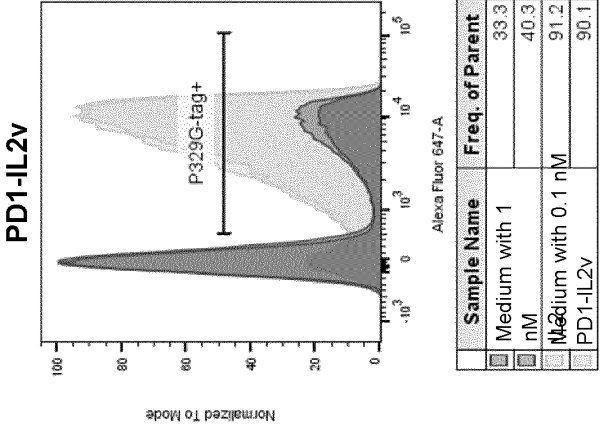
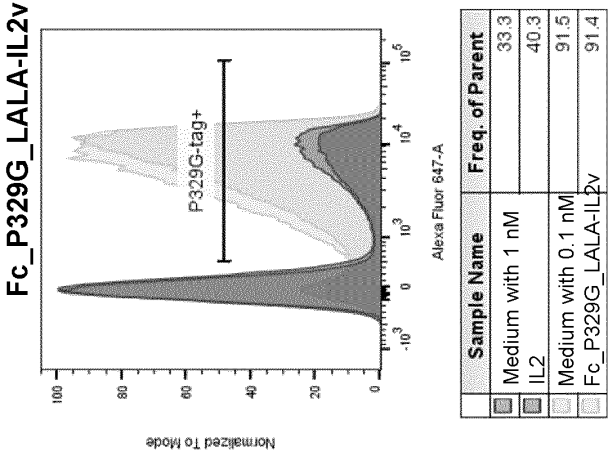
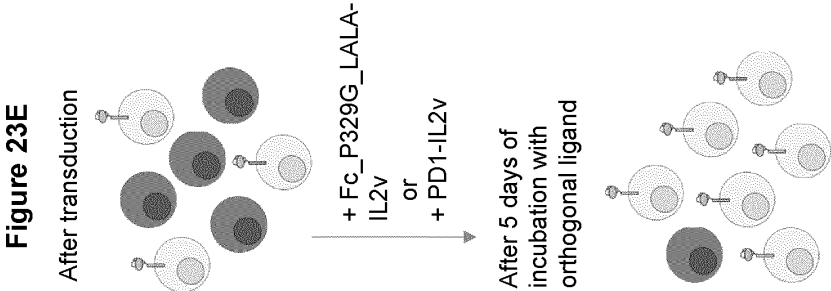
Figure 23B







eGFP



Fc_P329G_LALA-AF647

Figure 24

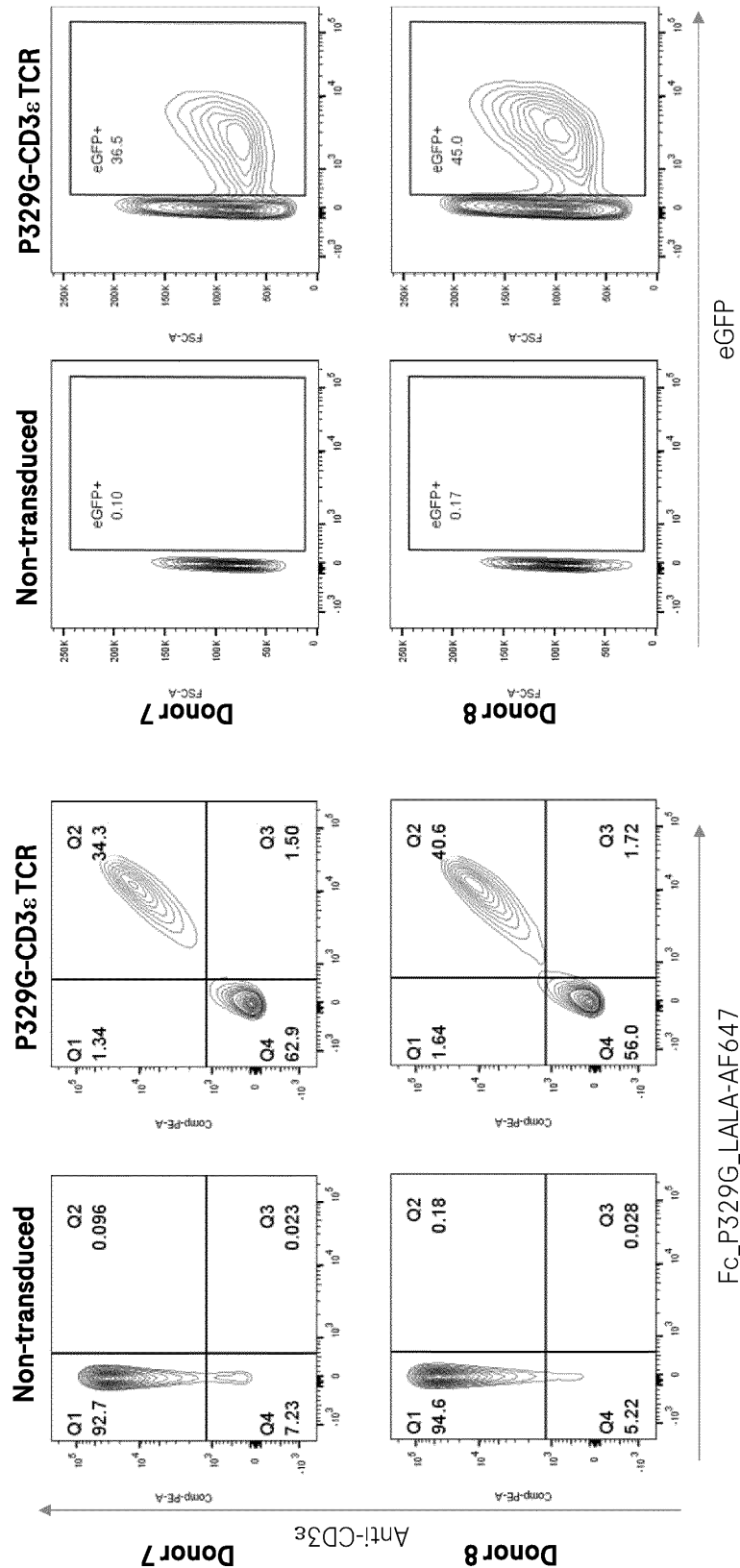


Figure 25

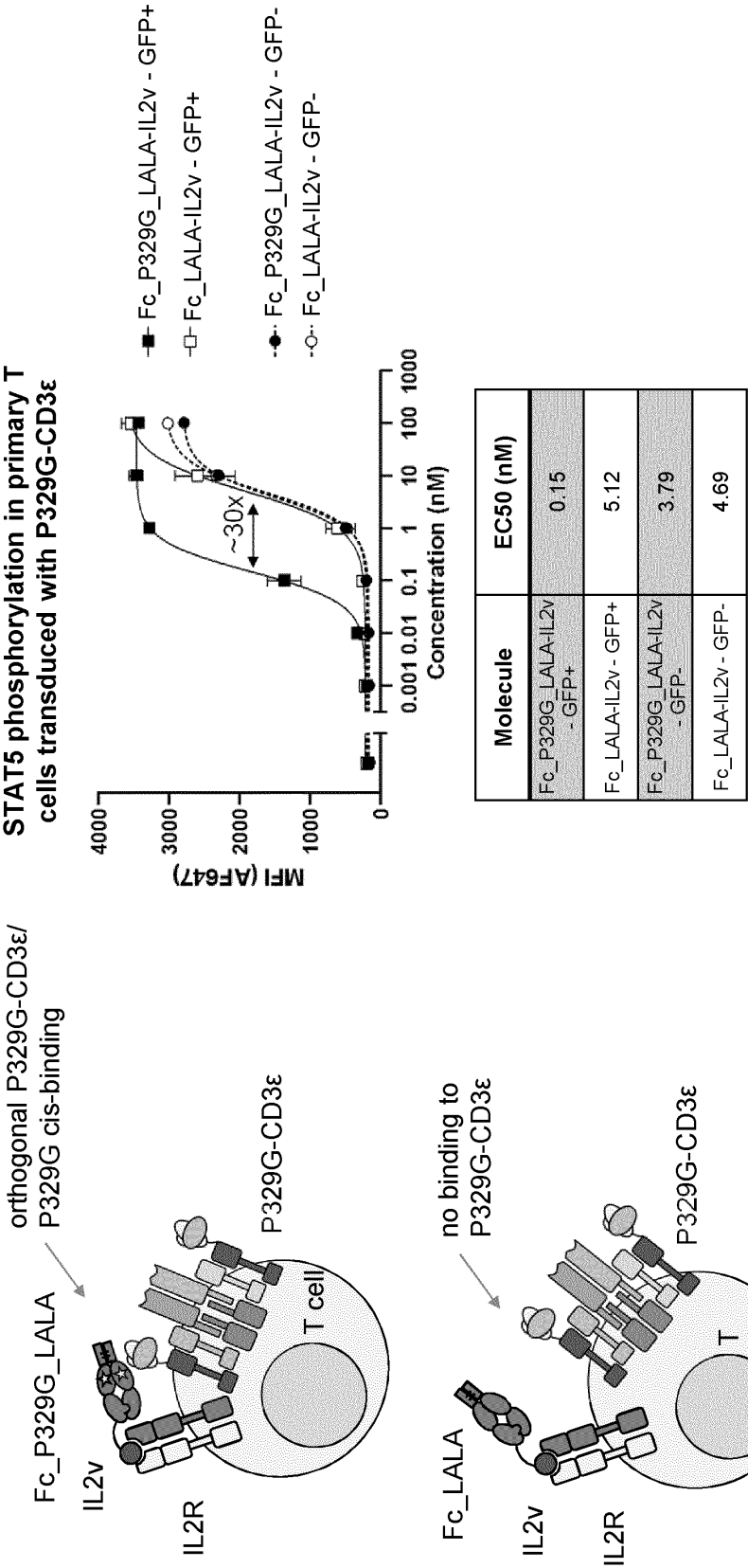
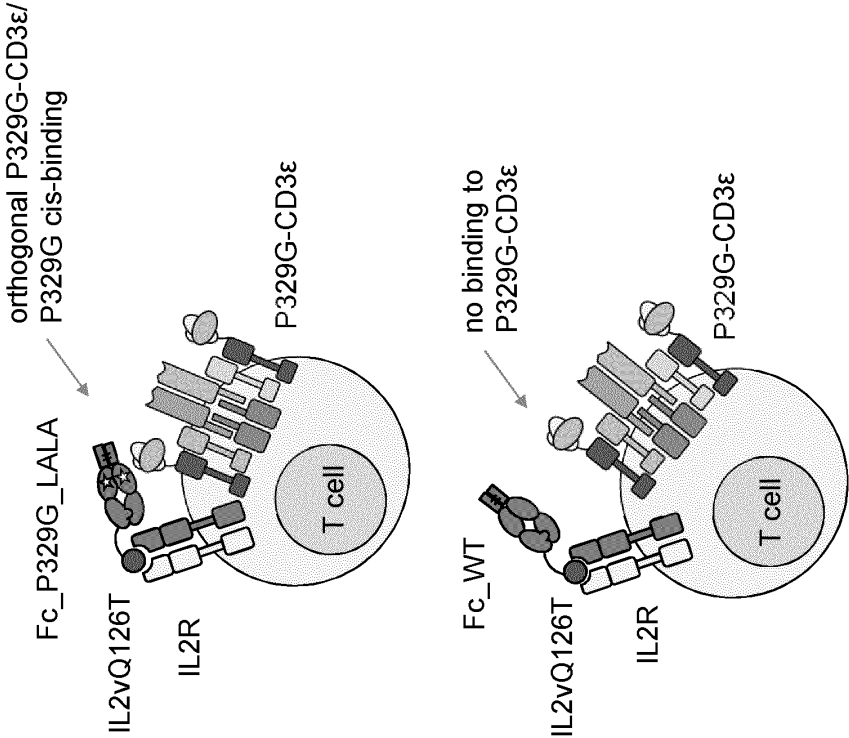
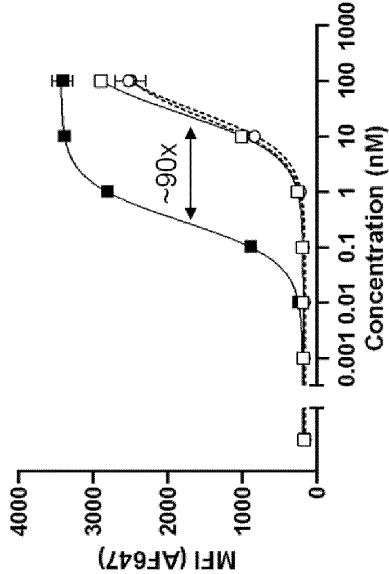


Figure 26

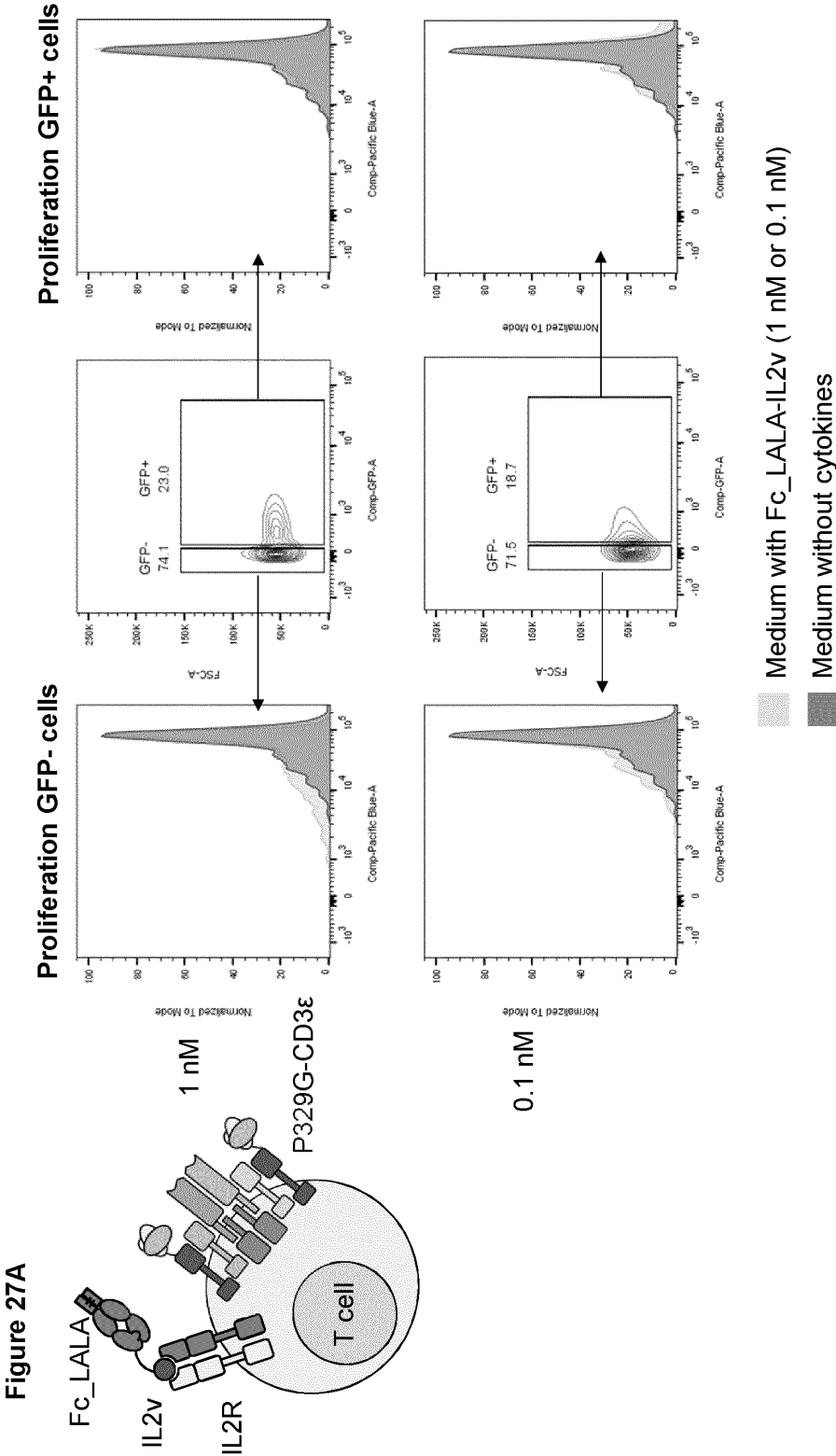


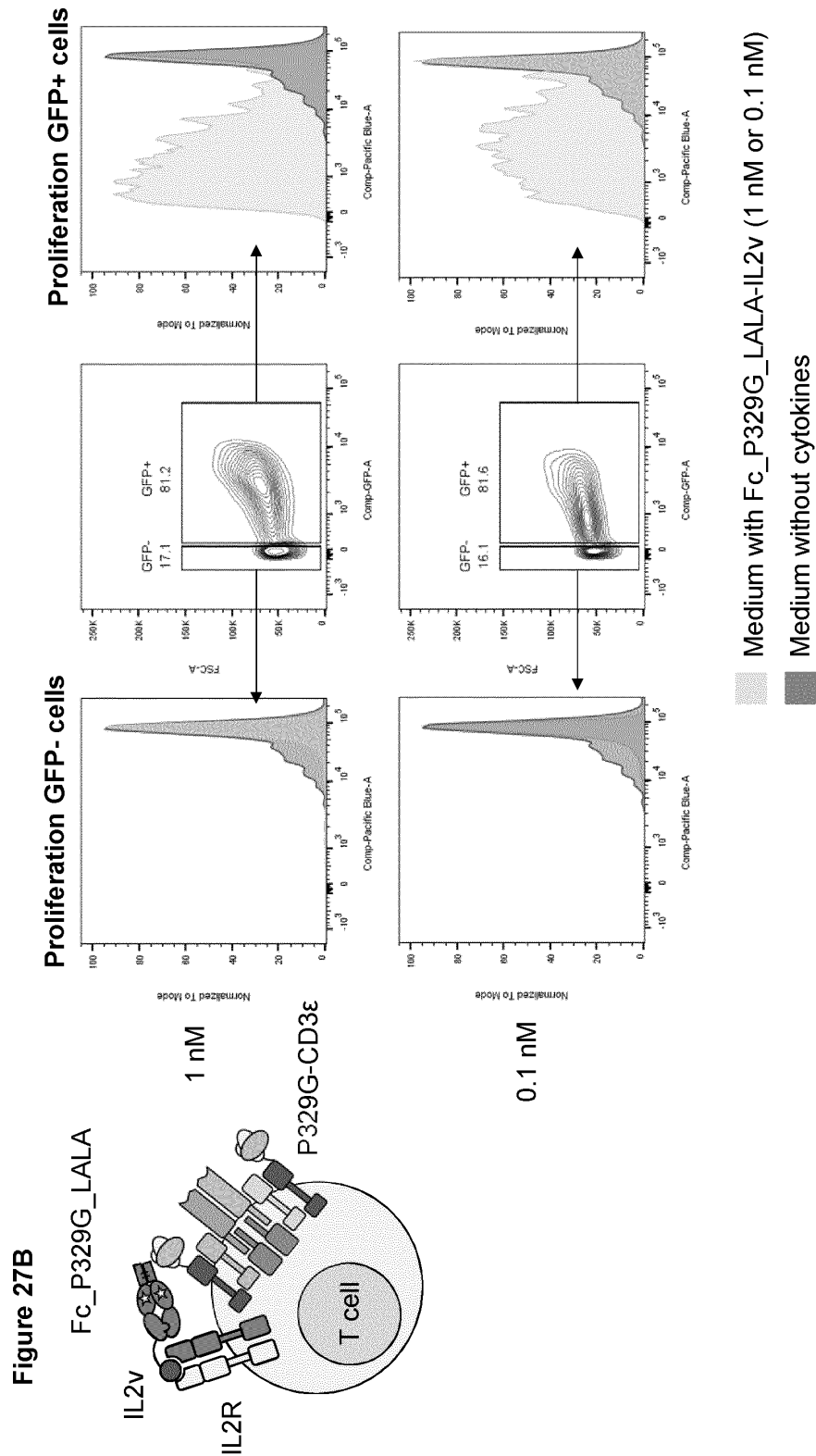
STAT5 phosphorylation in primary T cells transduced with P329G-CD3ε

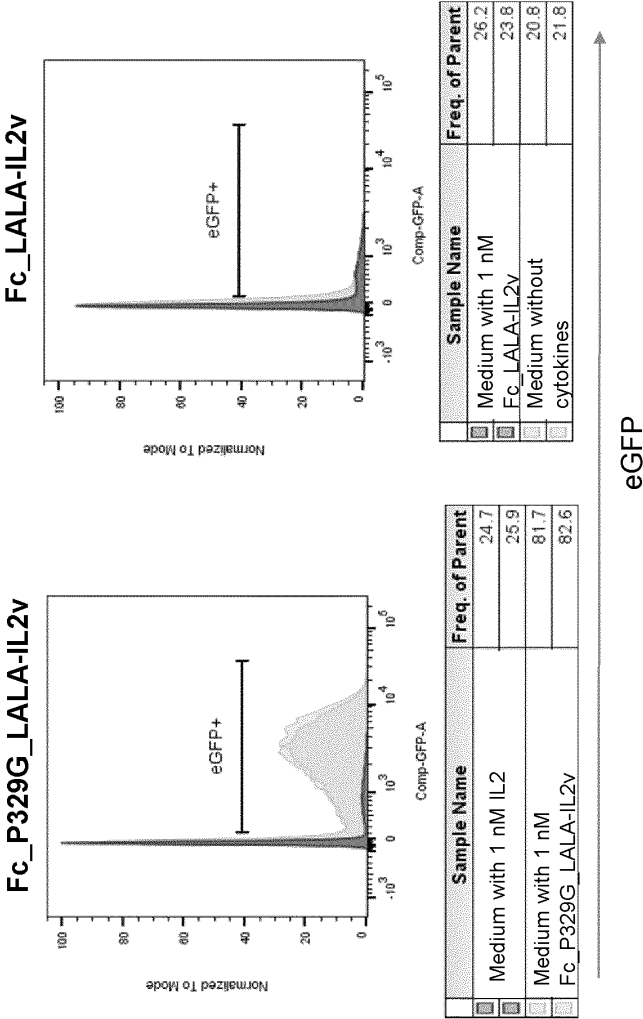
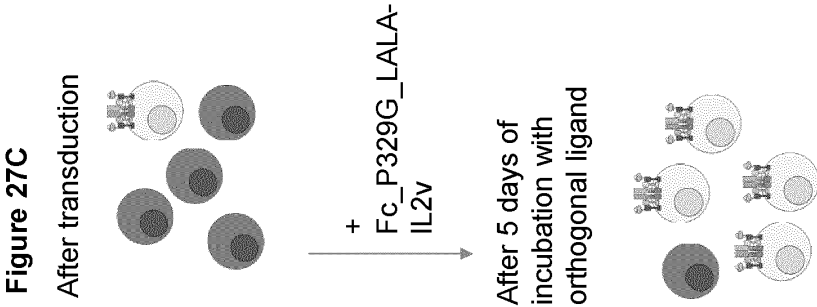


Molecule	EC50 (nM)
Fc_P329G_LALA-IL2vQ126T - GFP+	0.29
Fc_WT-IL2vQ126T - GFP+	26.00
Fc_P329G_LALA-IL2vQ126T - GFP-	21.01
Fc_WT-IL2vQ126T - GFP-	27.75

- Fc_P329G_LALA-IL2vQ126T - GFP+
- Fc_WT-IL2vQ126T - GFP+
- Fc_P329G_LALA-IL2vQ126T - GFP-
- Fc_WT-IL2vQ126T - GFP-







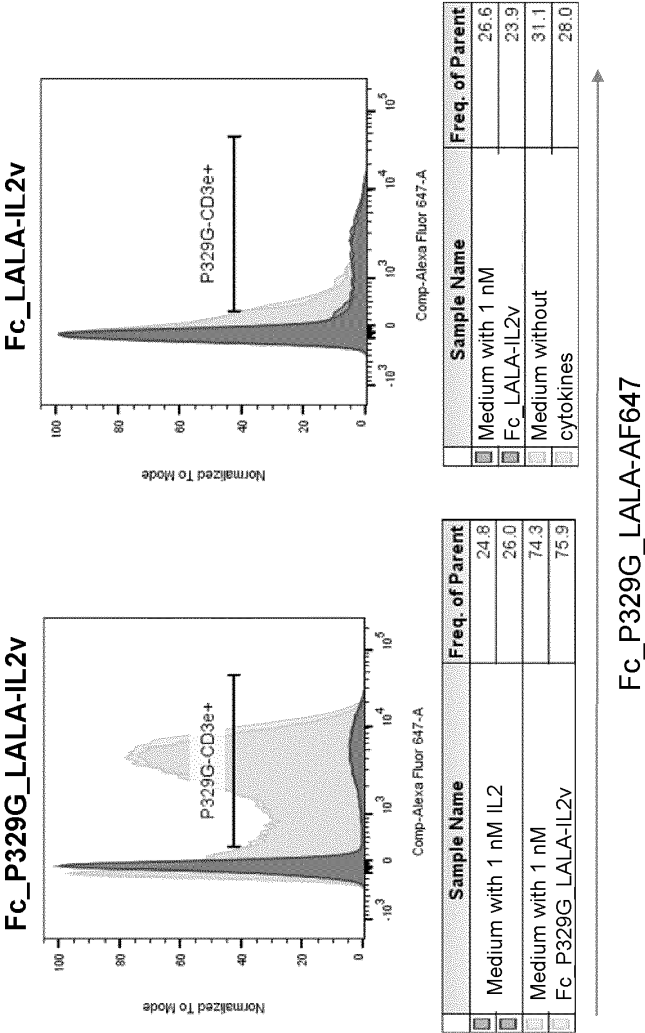
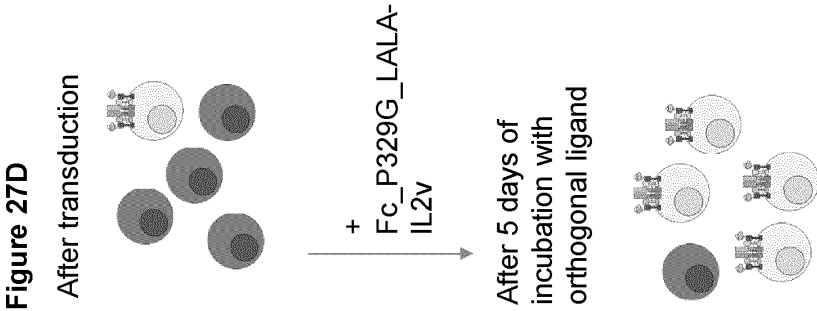


Figure 28A

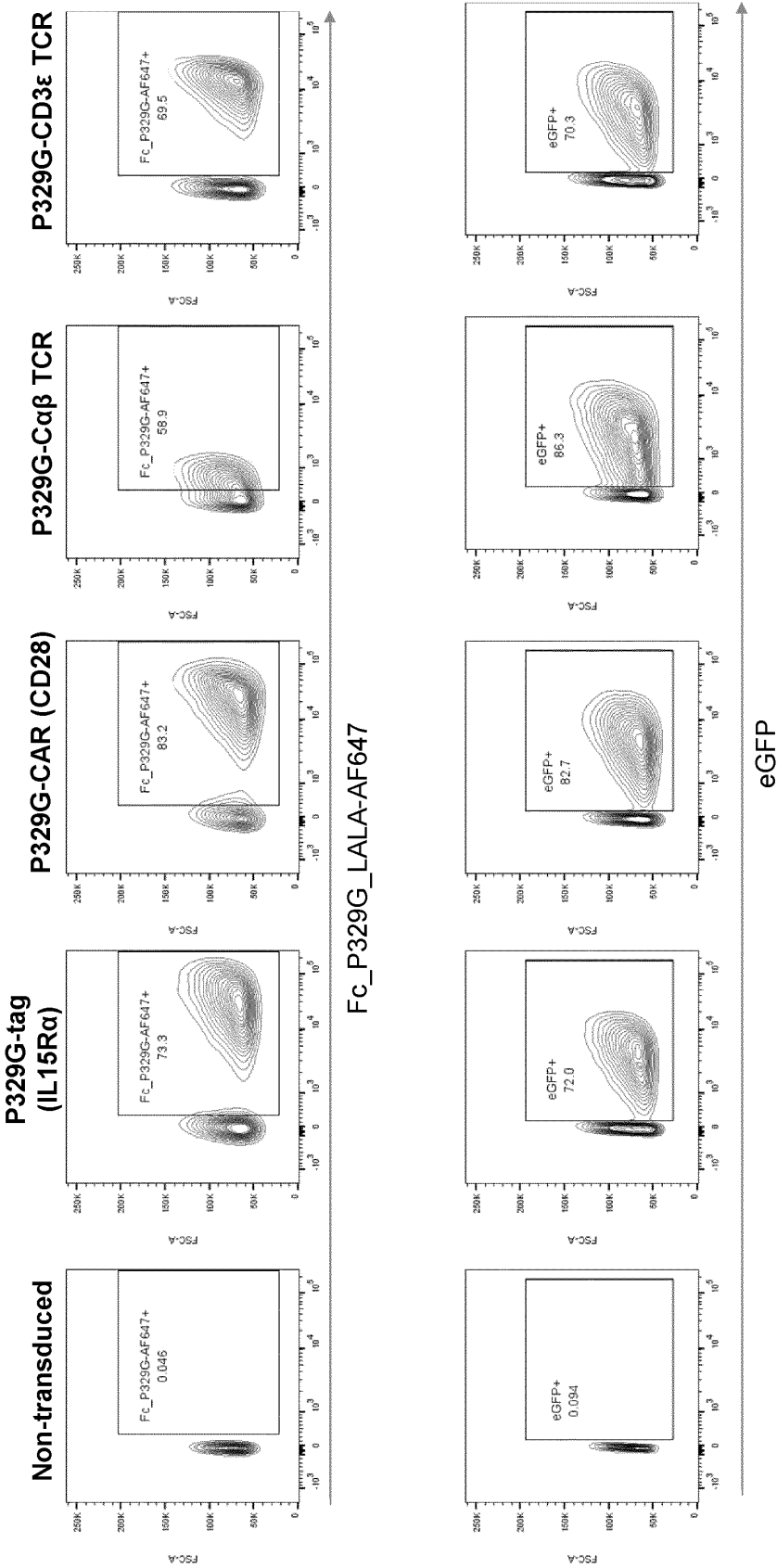


Figure 28B

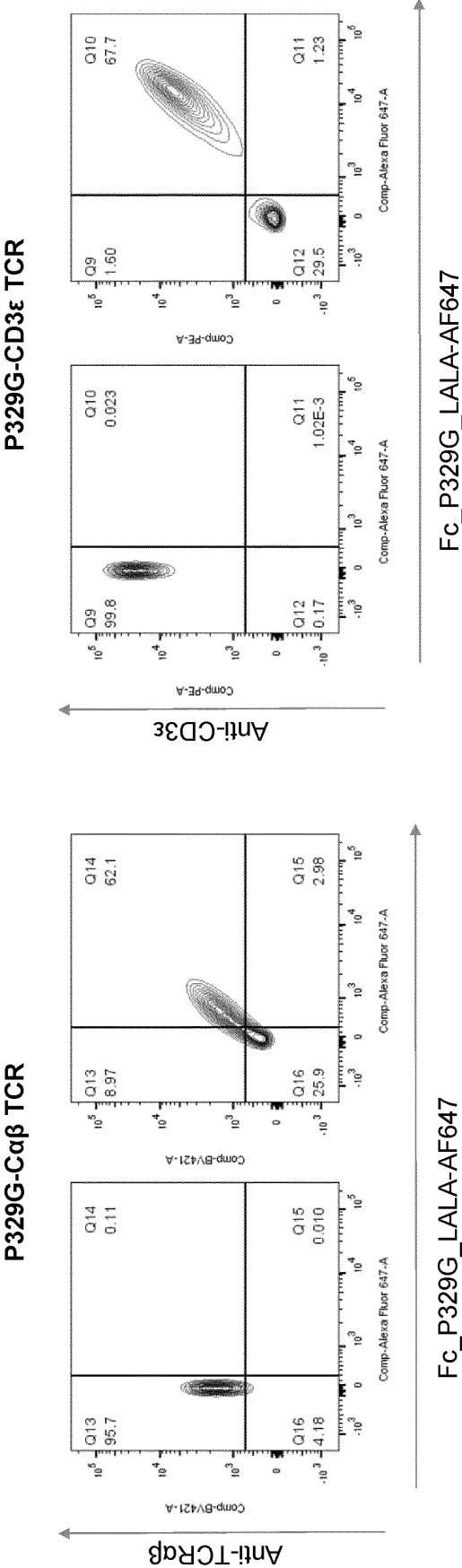
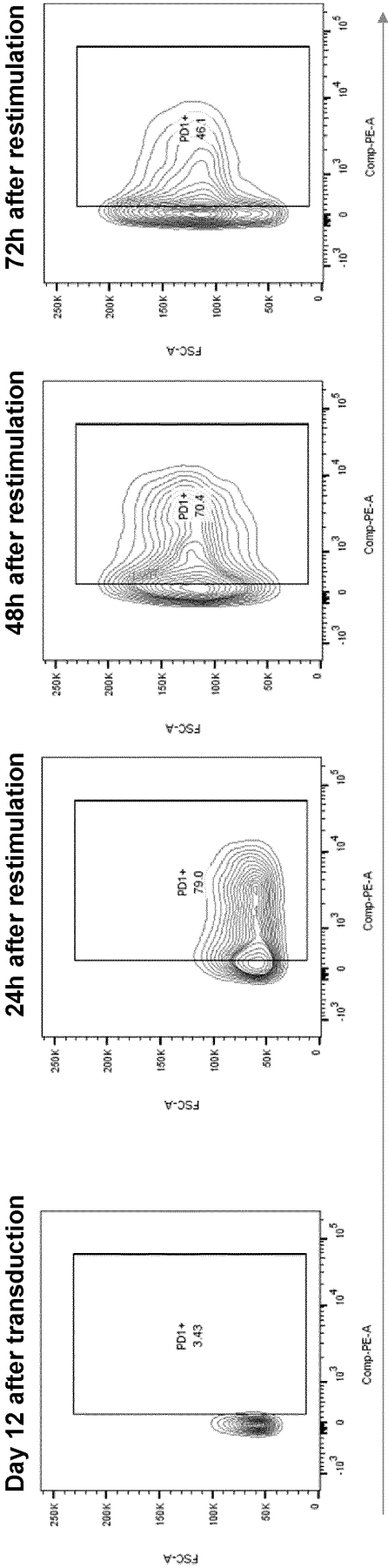


Figure 28D



Anti-PD1

Figure 29A

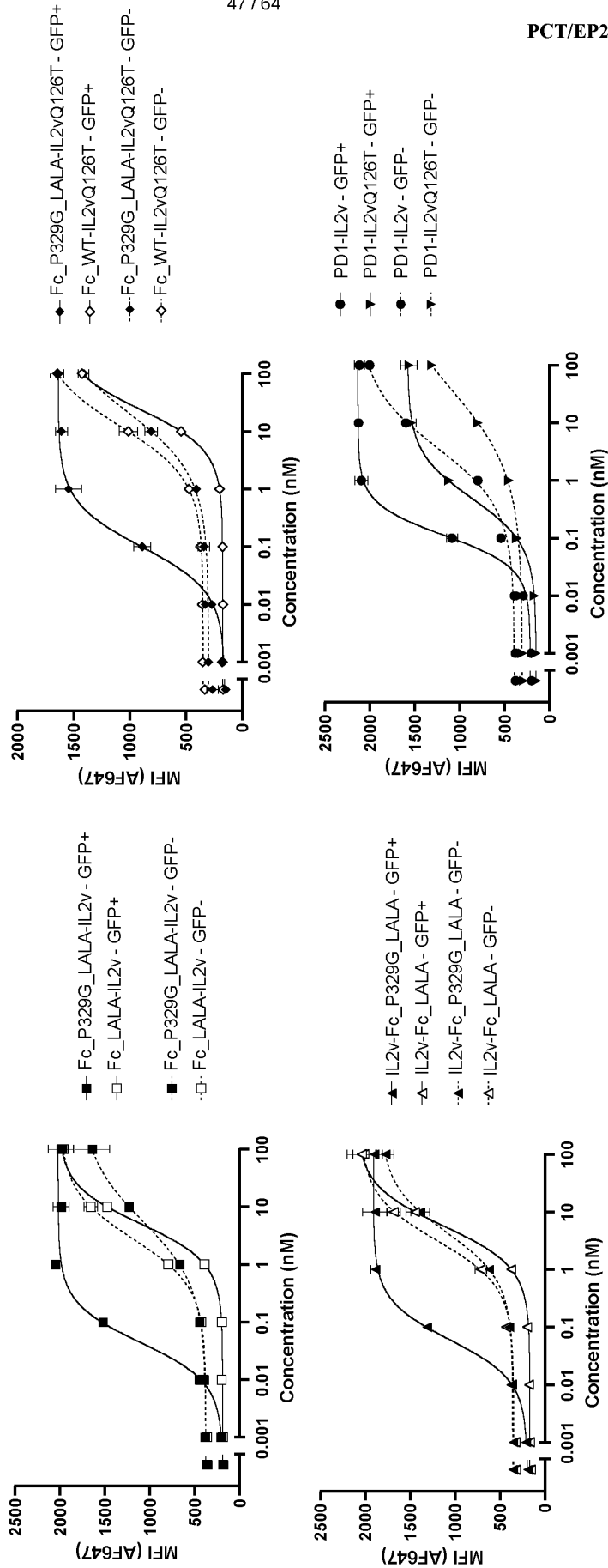


Figure 29B

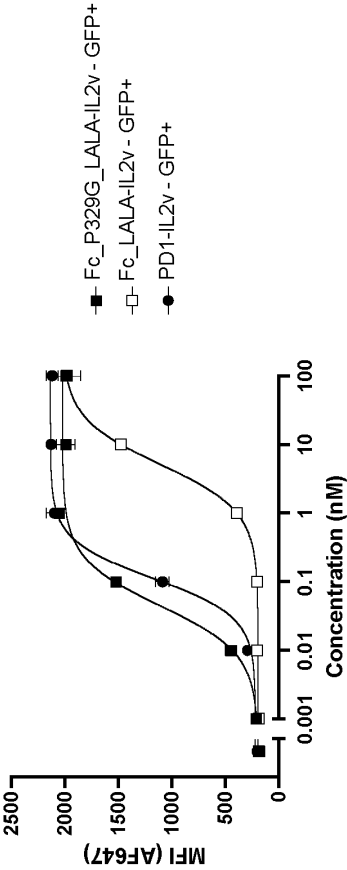
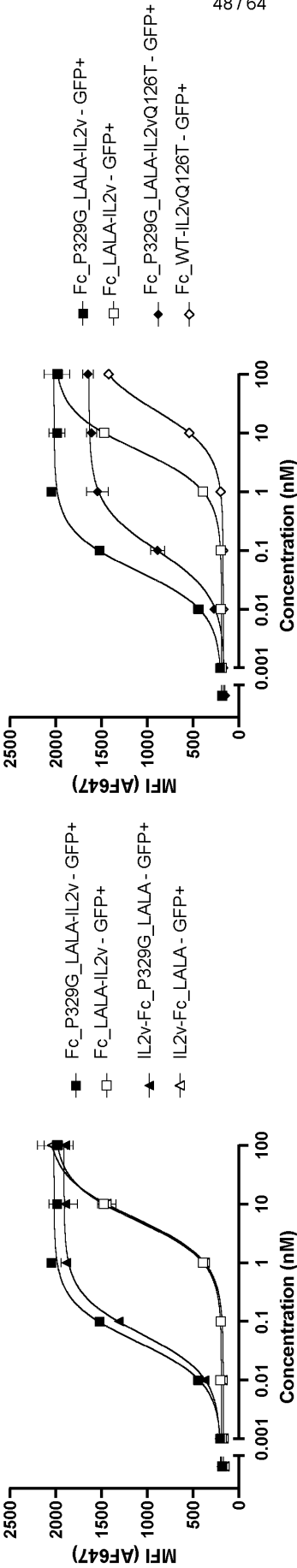


Figure 30A

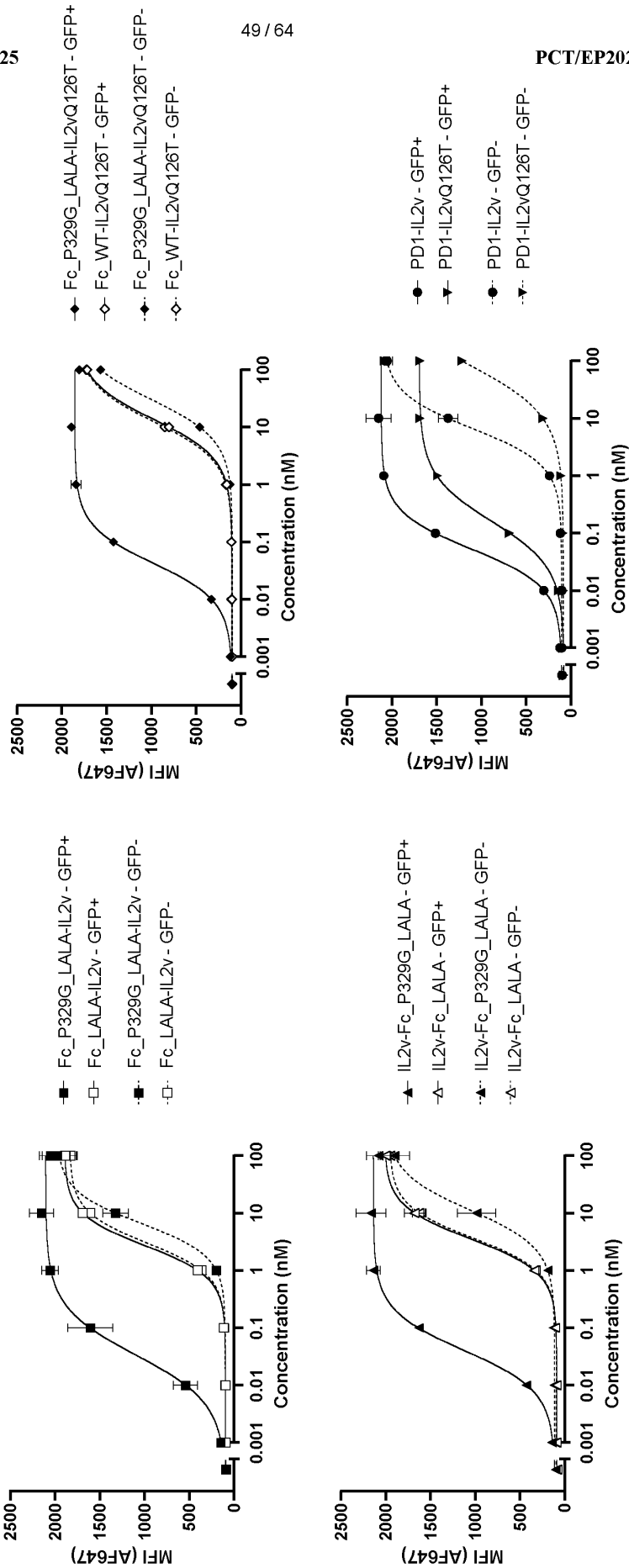


Figure 30B

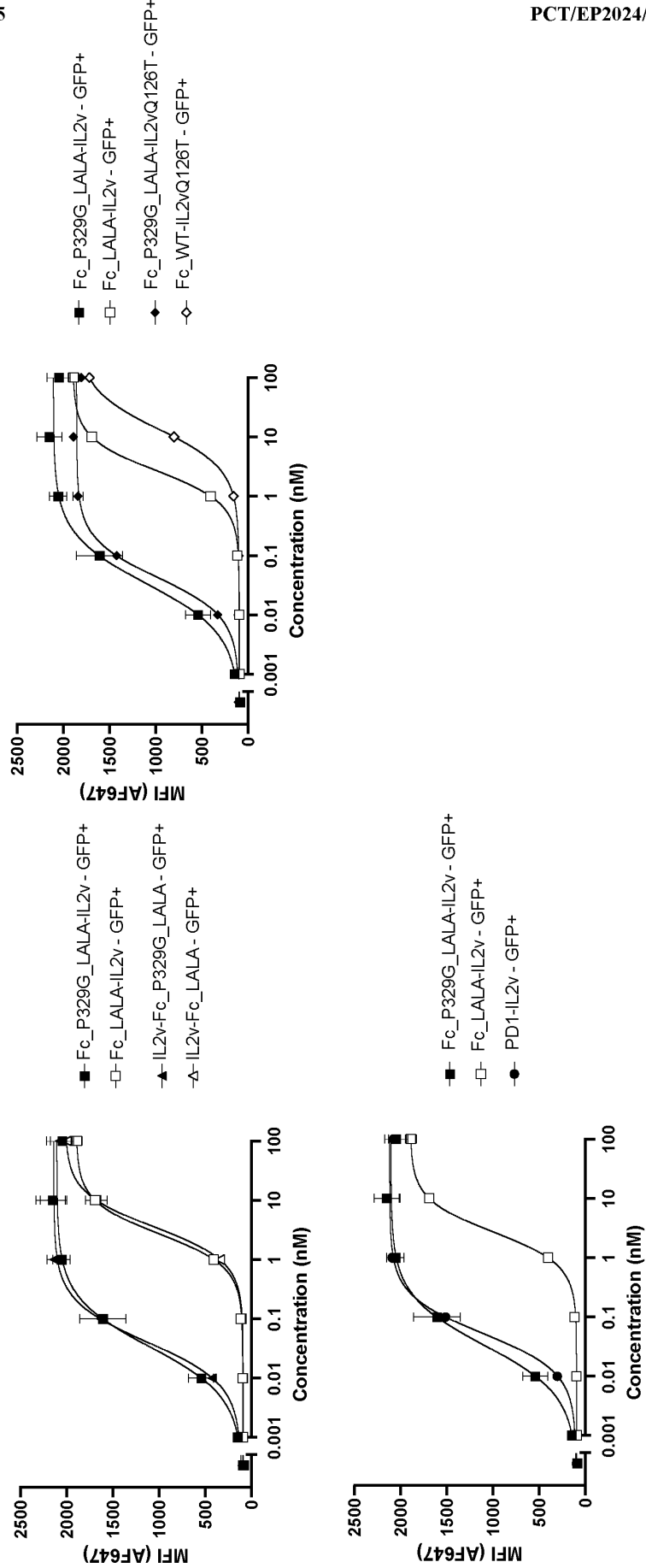


Figure 31A

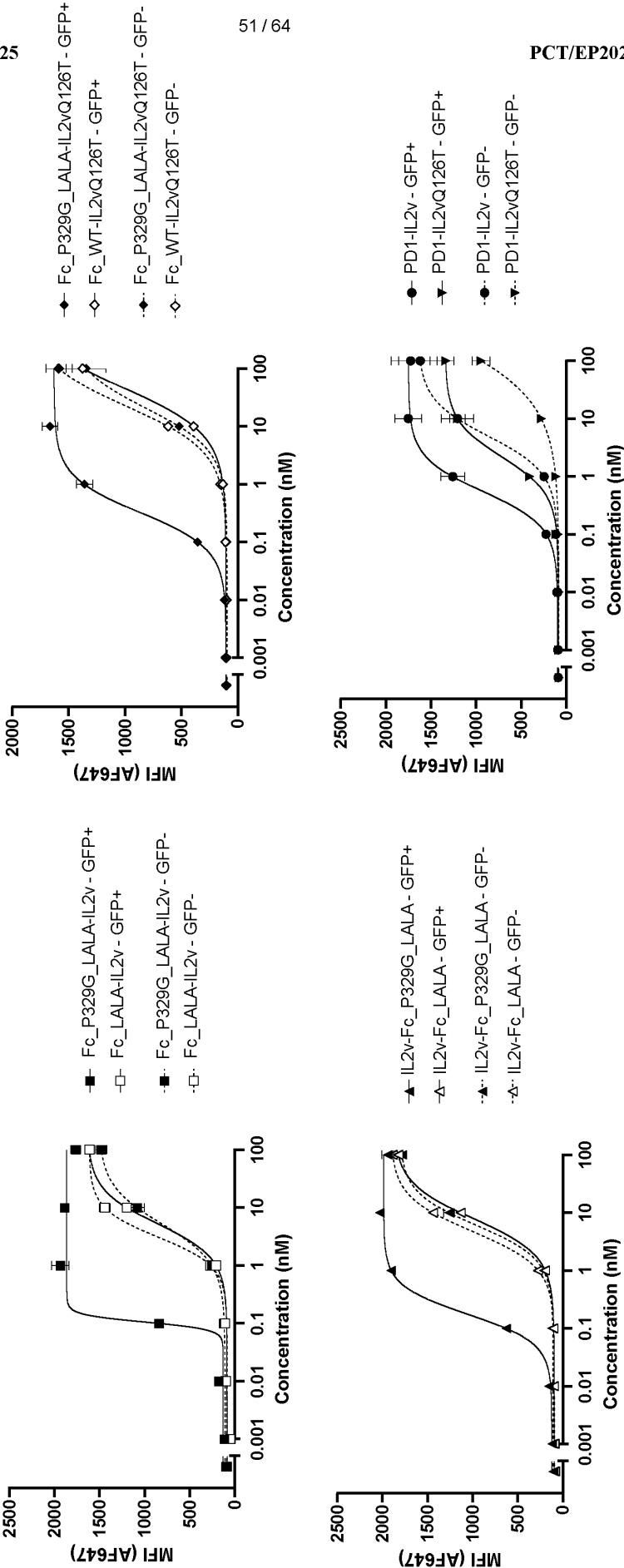


Figure 31B

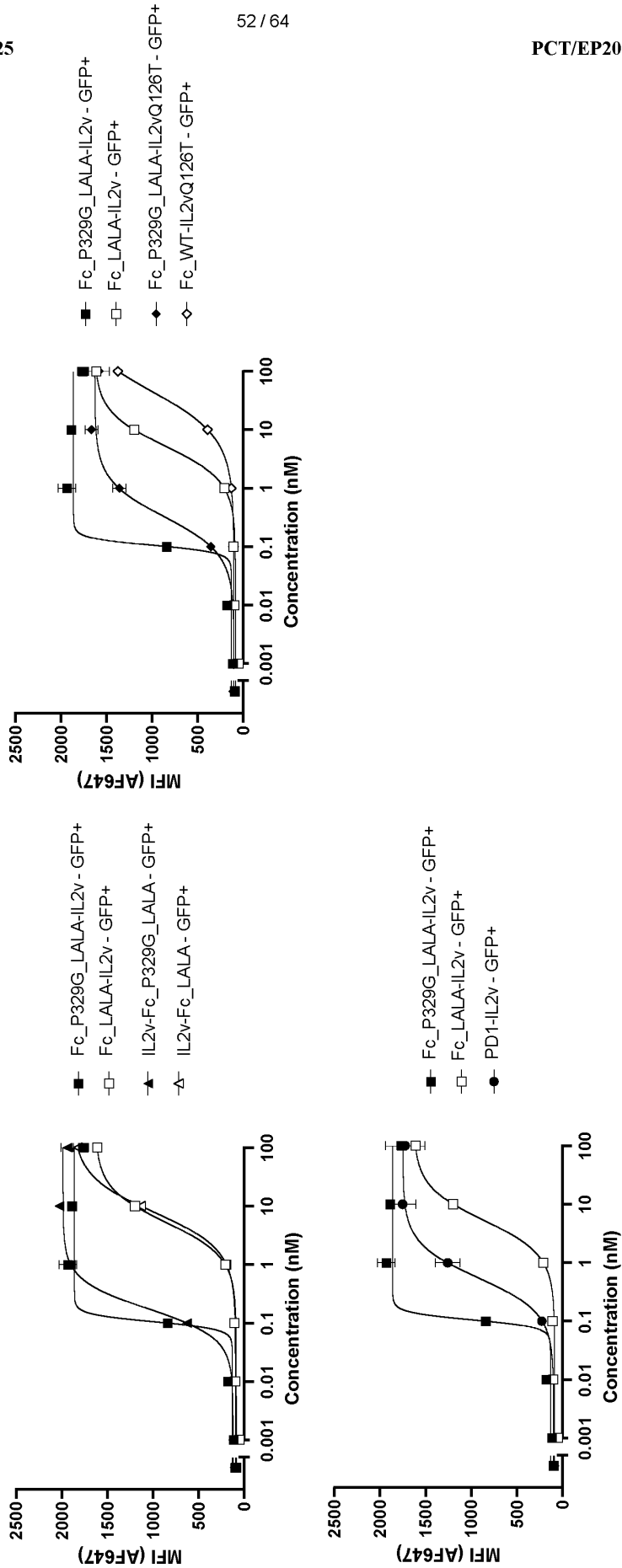


Figure 32A

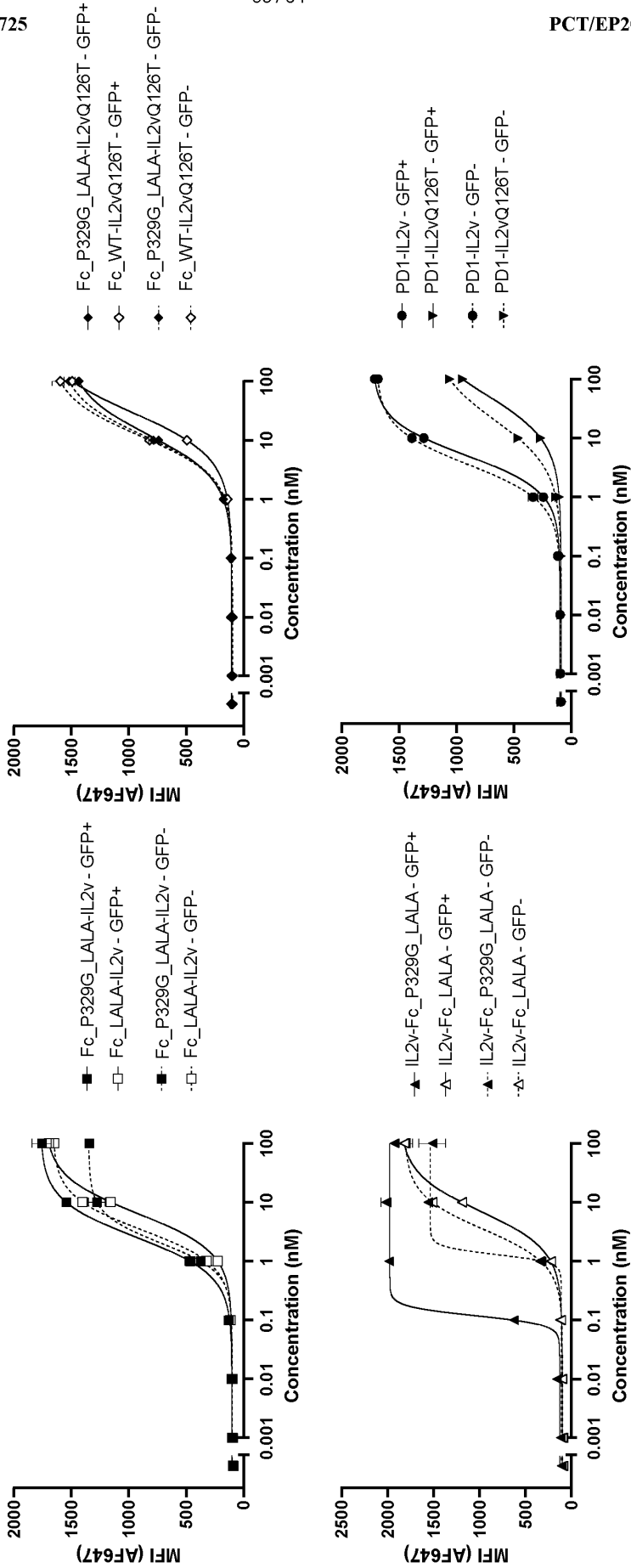
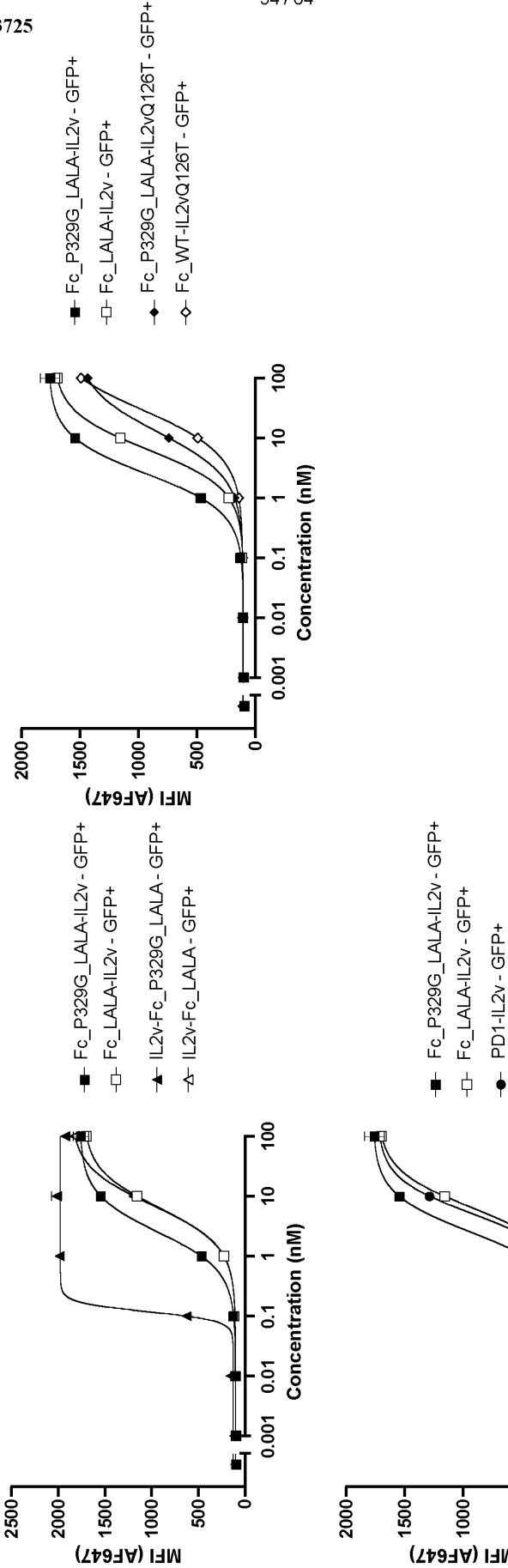


Figure 32B



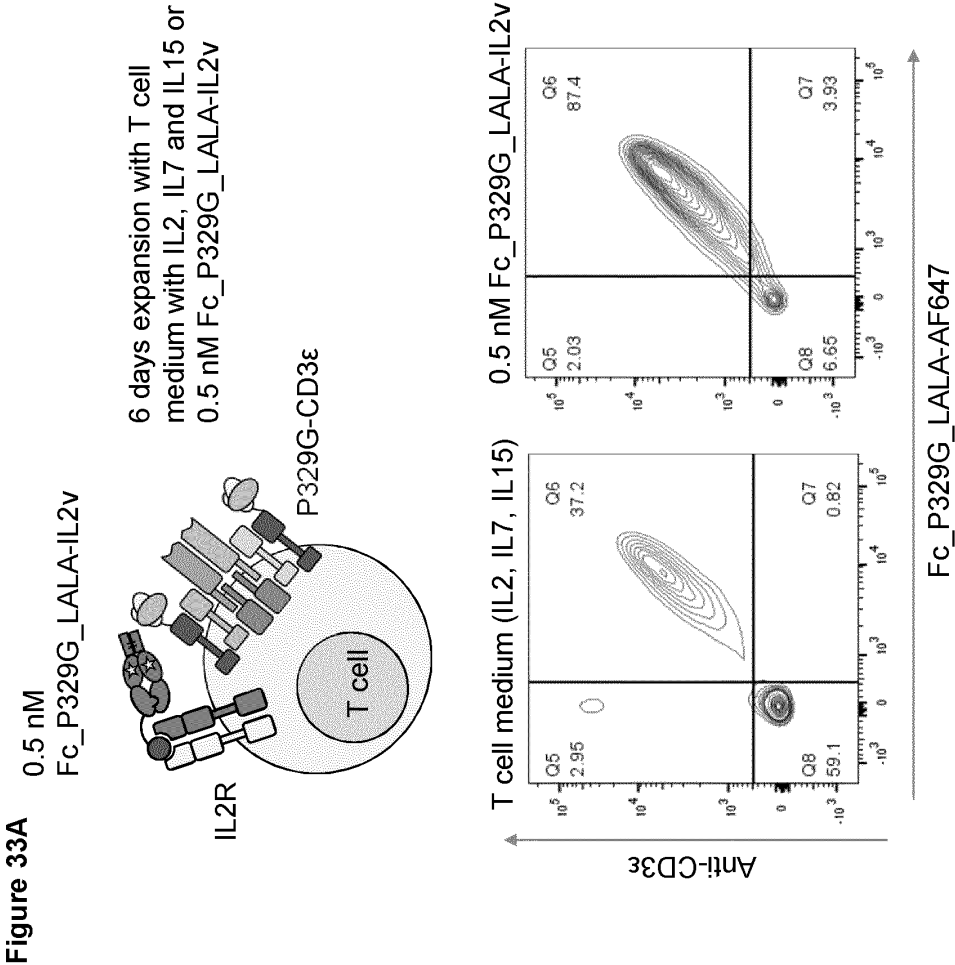
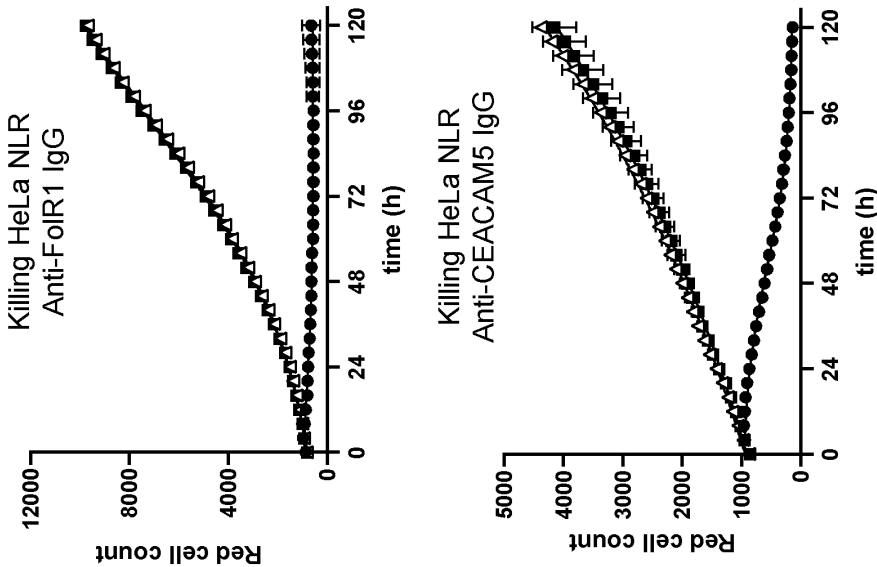
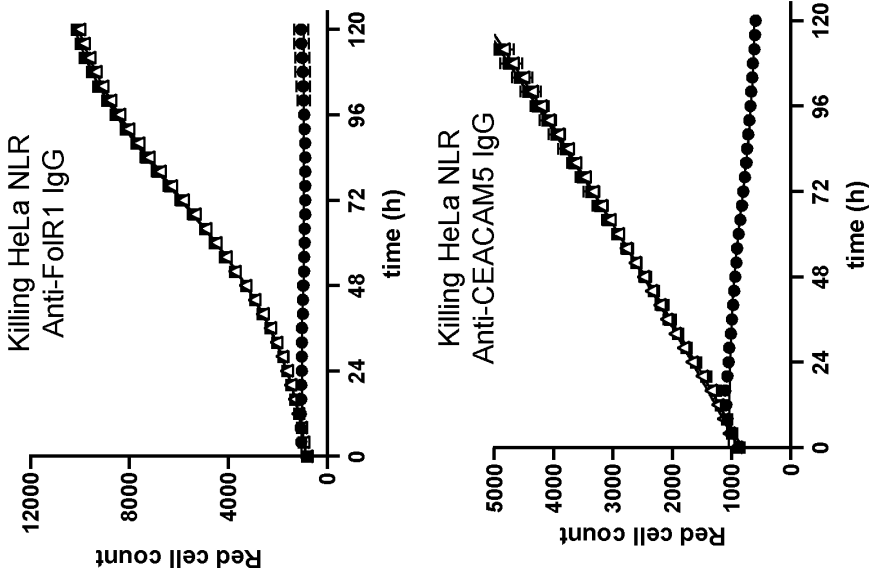


Figure 33B 0.5 nM Fc_P329G_LALA-IL2v



T cell medium (IL2, IL7, IL15)



● 0.1 nM adaptor IgG
△ 10 nM DP47-IgG
■ 0 nM adaptor IgG
10,000 eGFP+ cells :
10,000 target cells

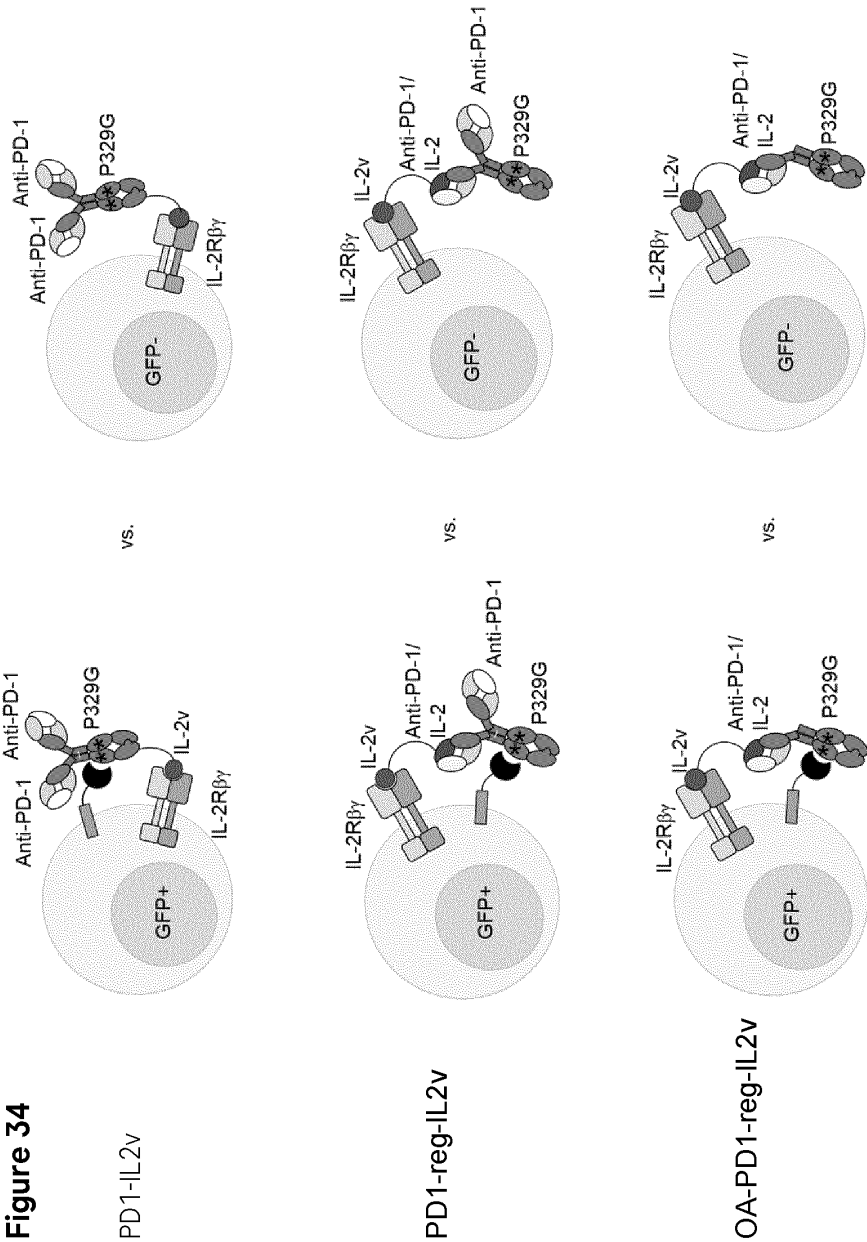


Figure 35A

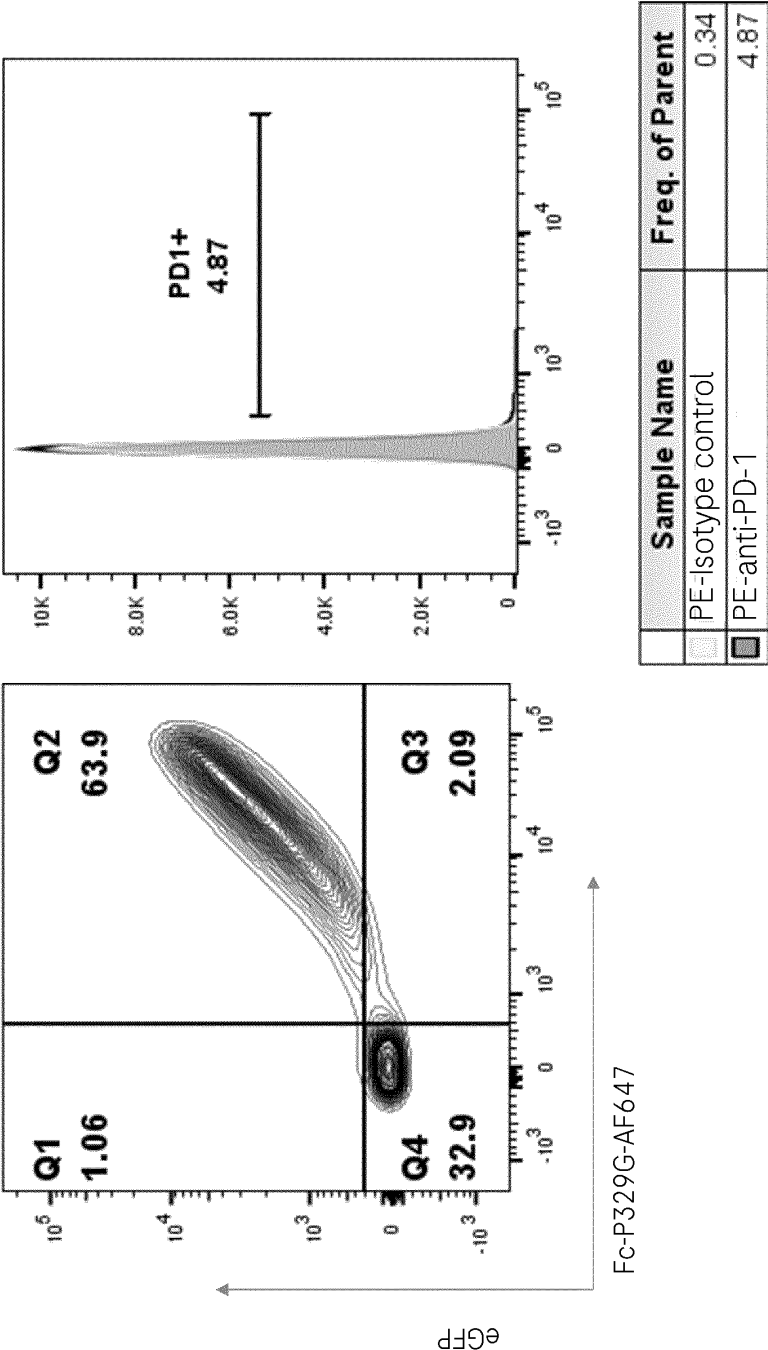


Figure 35B

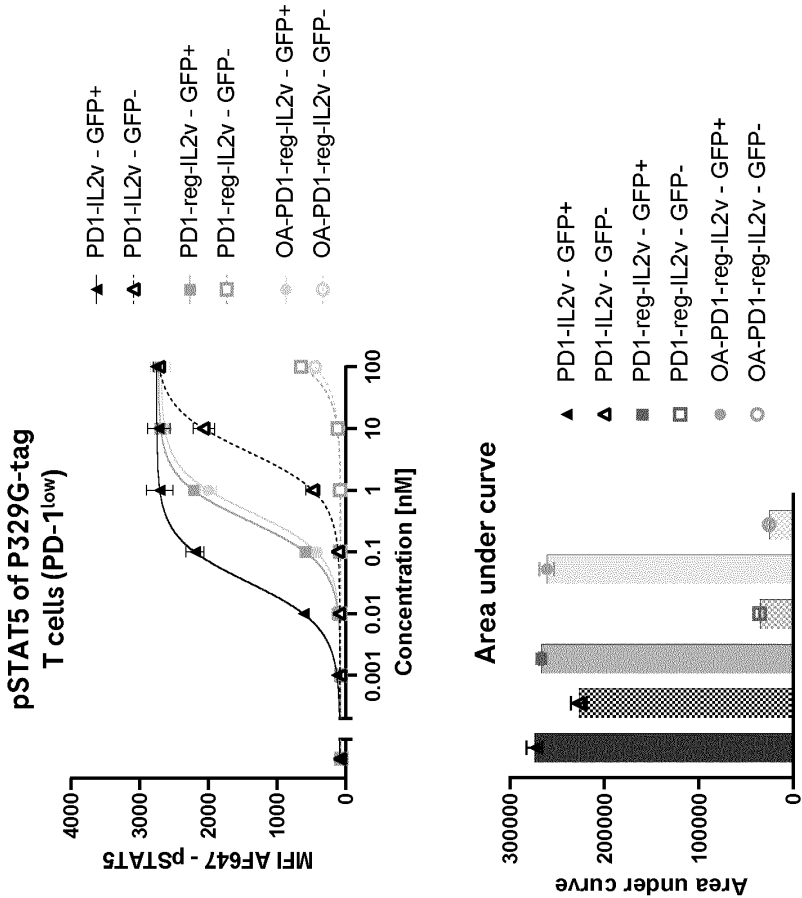
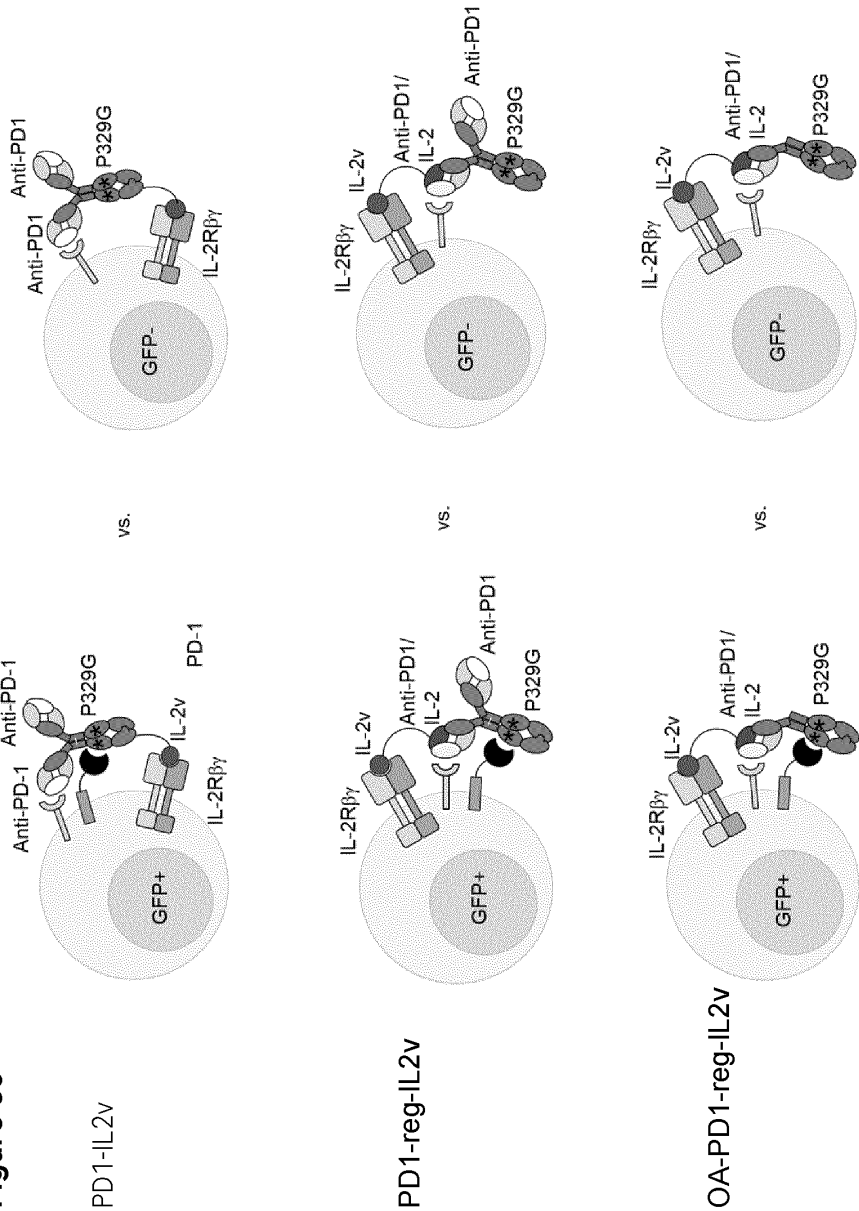
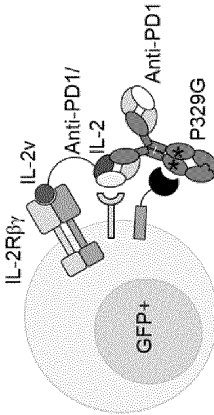


Figure 36

PD1-IL2v



PD1-reg-IL2v



OA-PD1-reg-IL2v

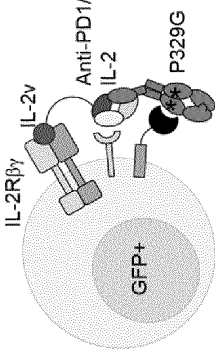


Figure 37A

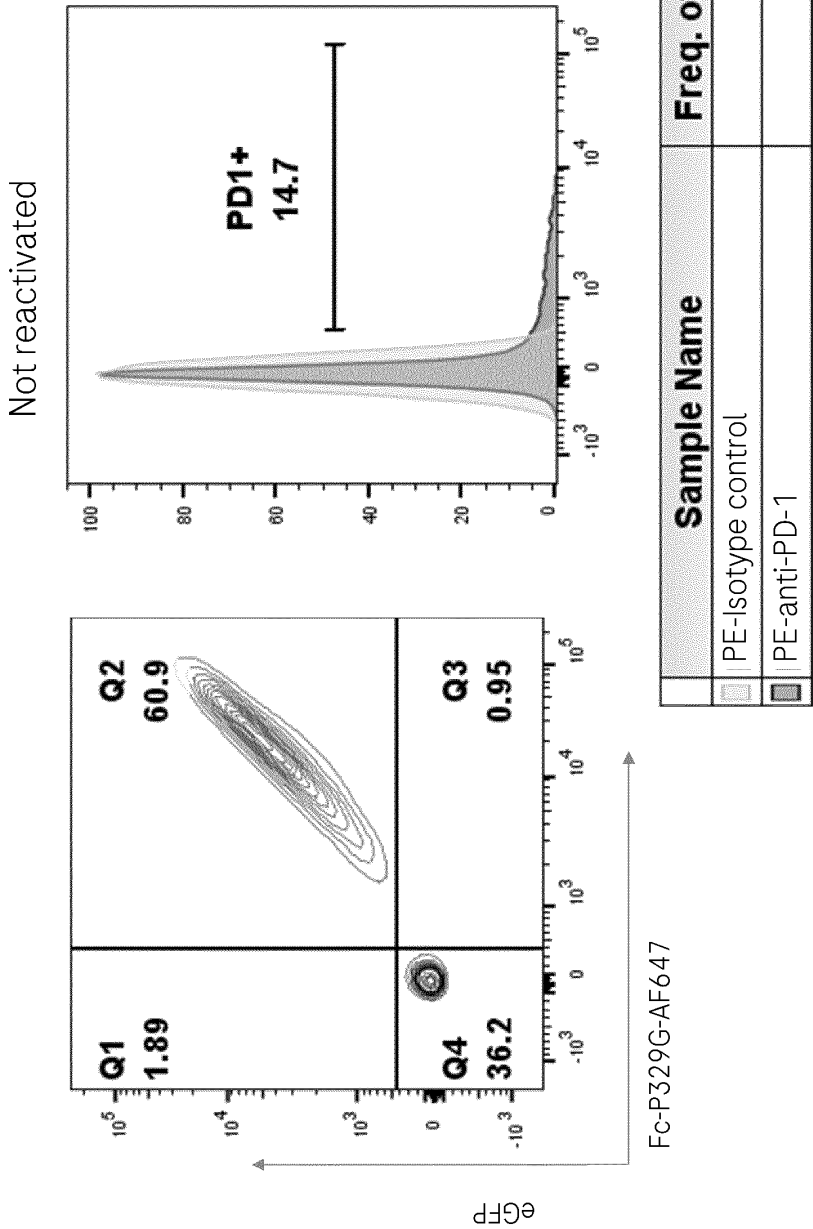


Figure 37B

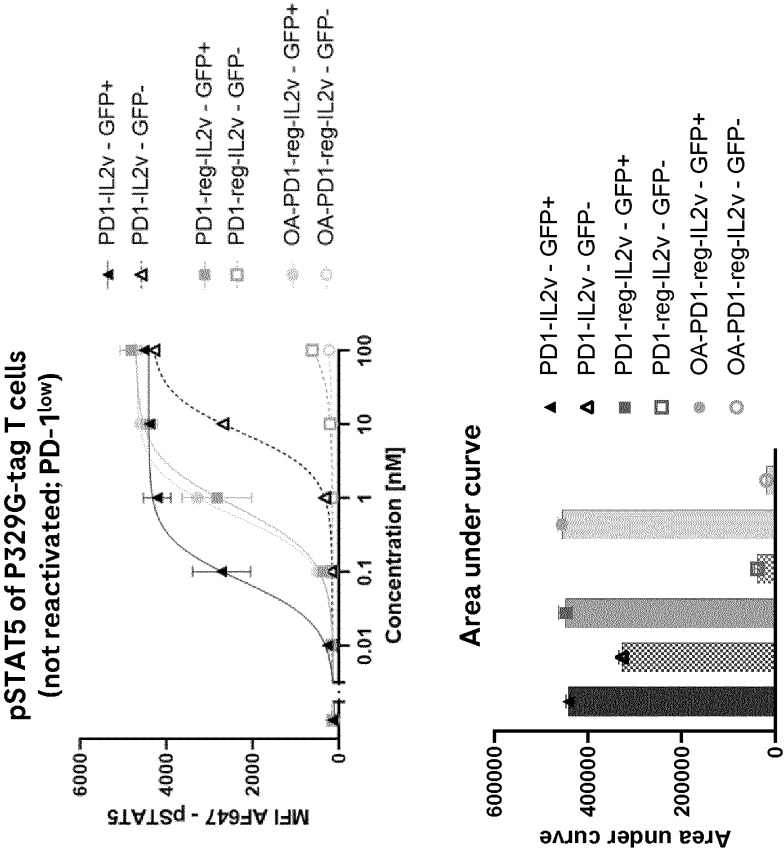


Figure 37C

