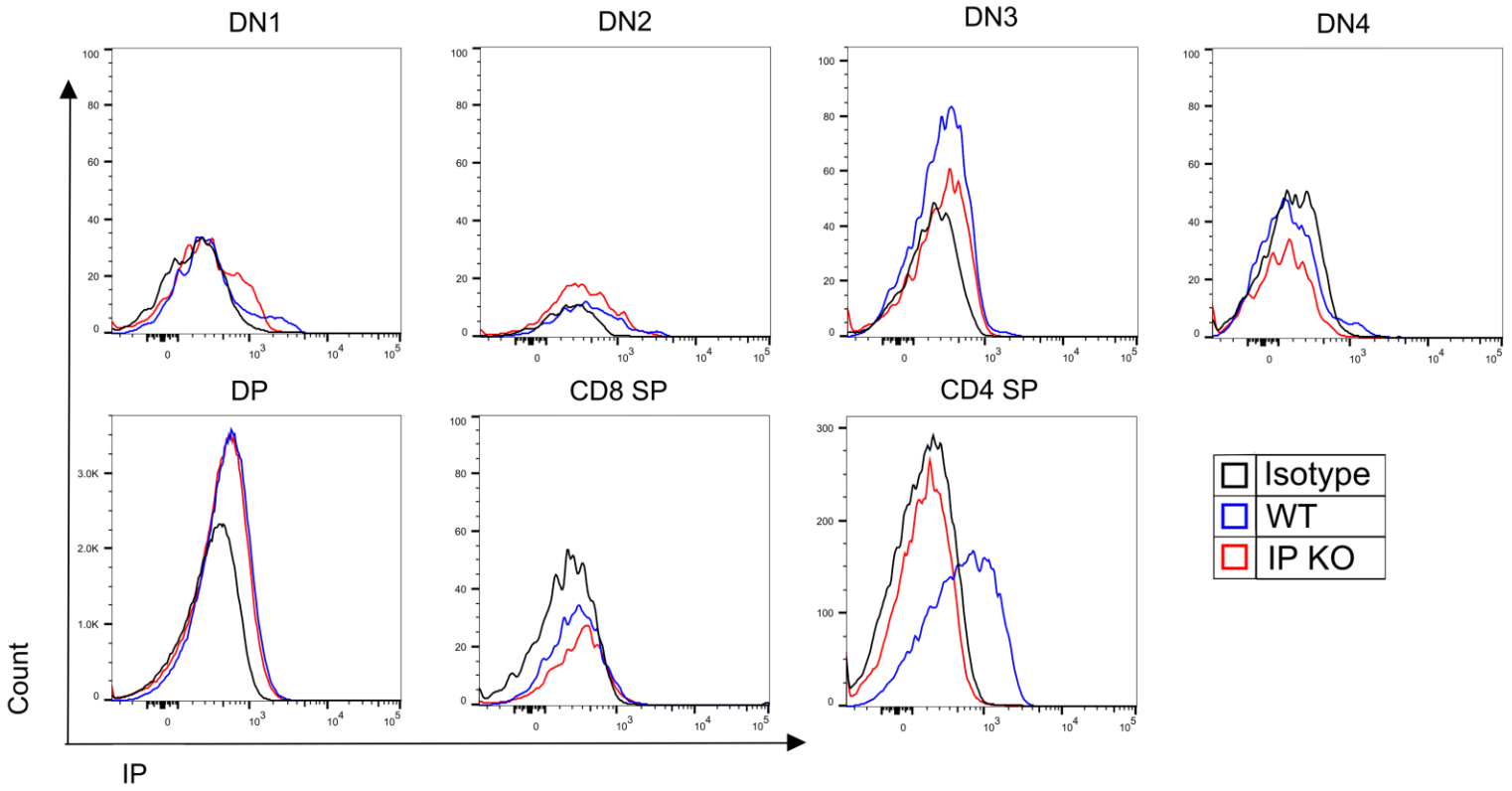
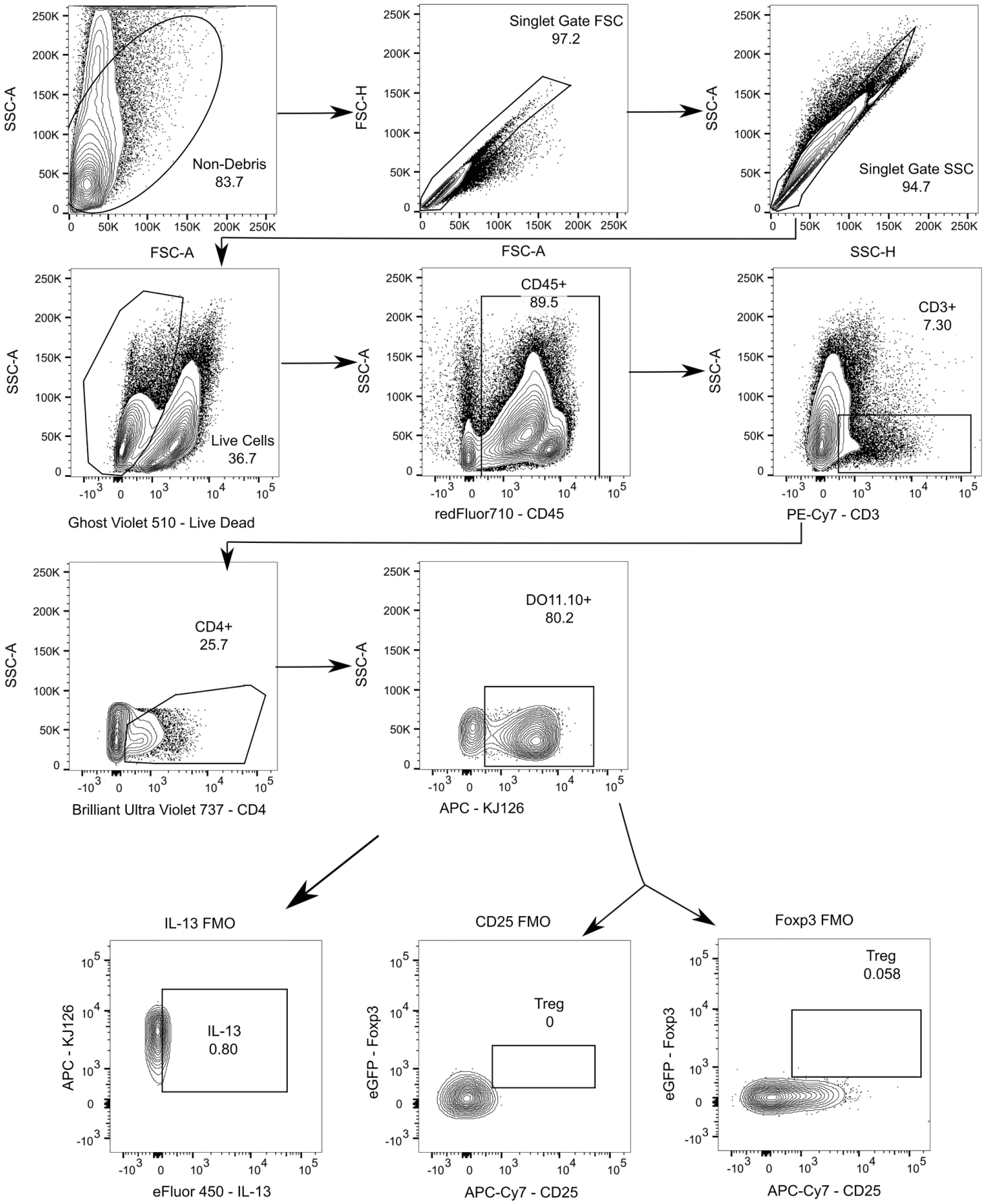
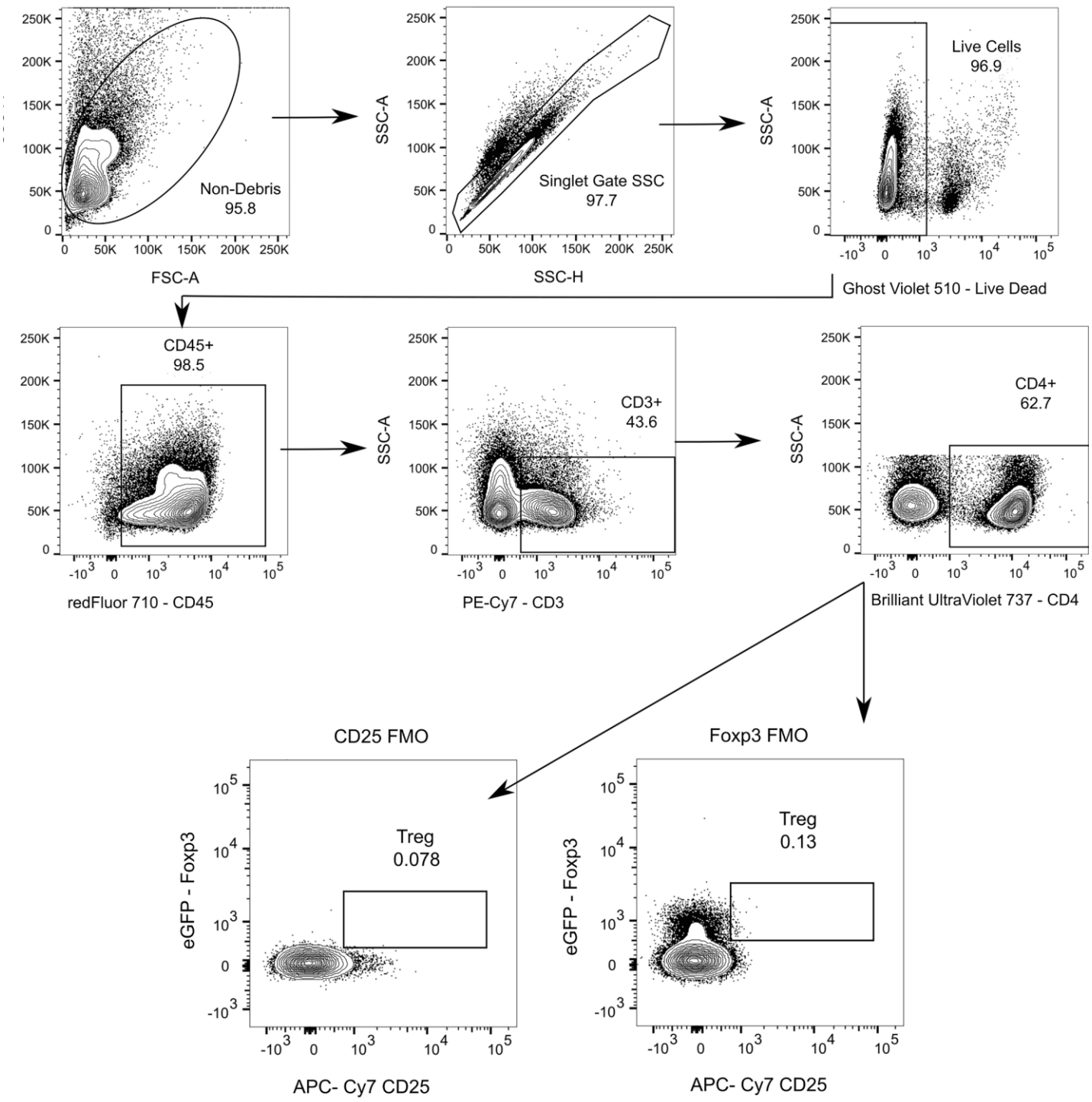


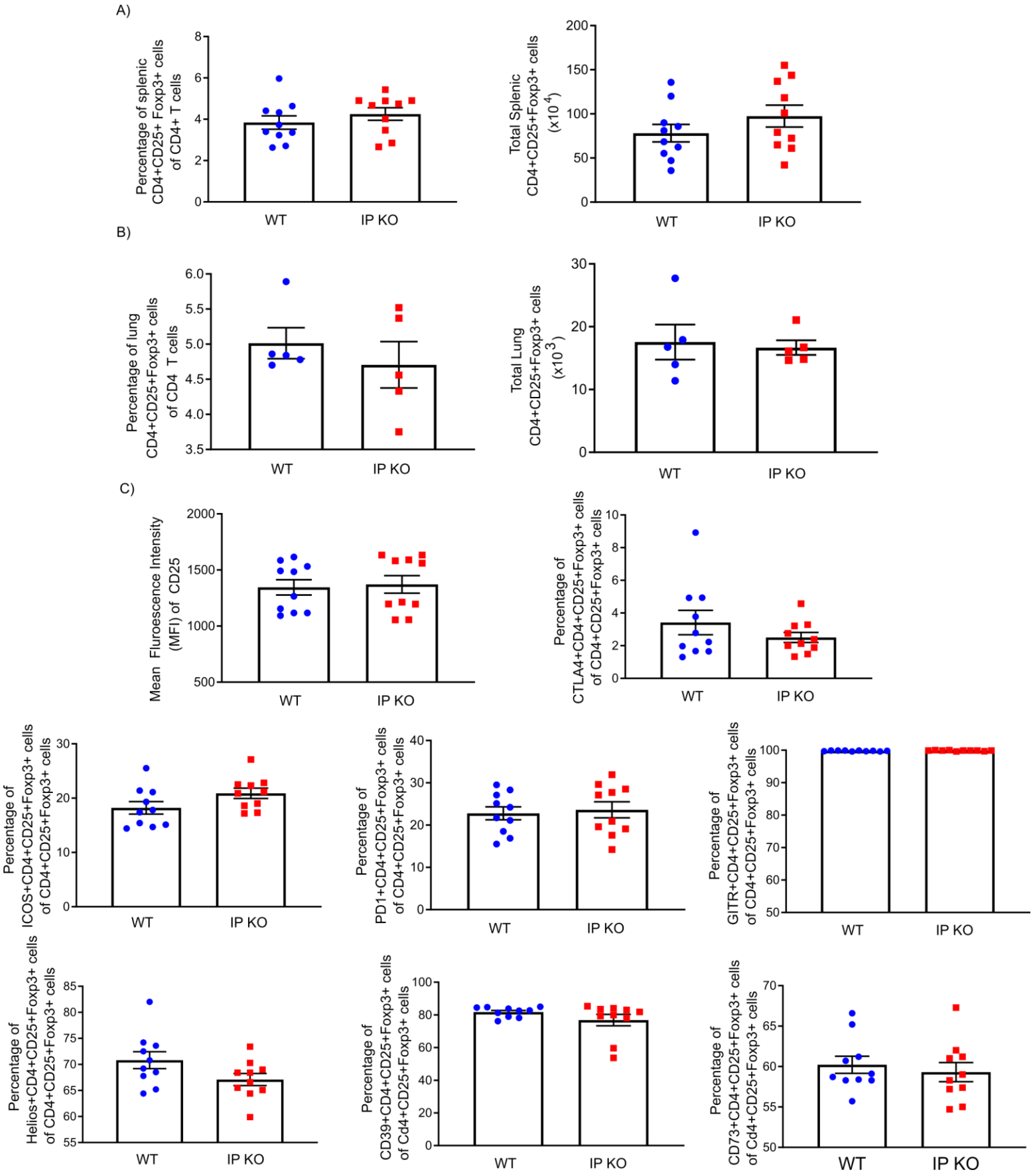
Supplemental Figure 1: Expression of IP on thymic T cells. Data are plotted as a histogram. Data shown are from one mouse. Evaluation was performed on 5 individual mice from each group. DN = Double negative. DP = Double Positive. SP = Single Positive. Populations were identified as follows: DN1: CD44+CD25-CD4-CD8-; DN2: CD44+CD25+CD4-CD8-; DN3: CD44-CD25+CD4-CD8-; DN4: CD44-CD25-CD4-CD8-; DP: CD44-CD25-CD4+CD8+; CD8 SP: CD44-CD25-CD4-CD8+CD3+; CD4SP: CD44-CD25-CD4+CD8-CD3+.



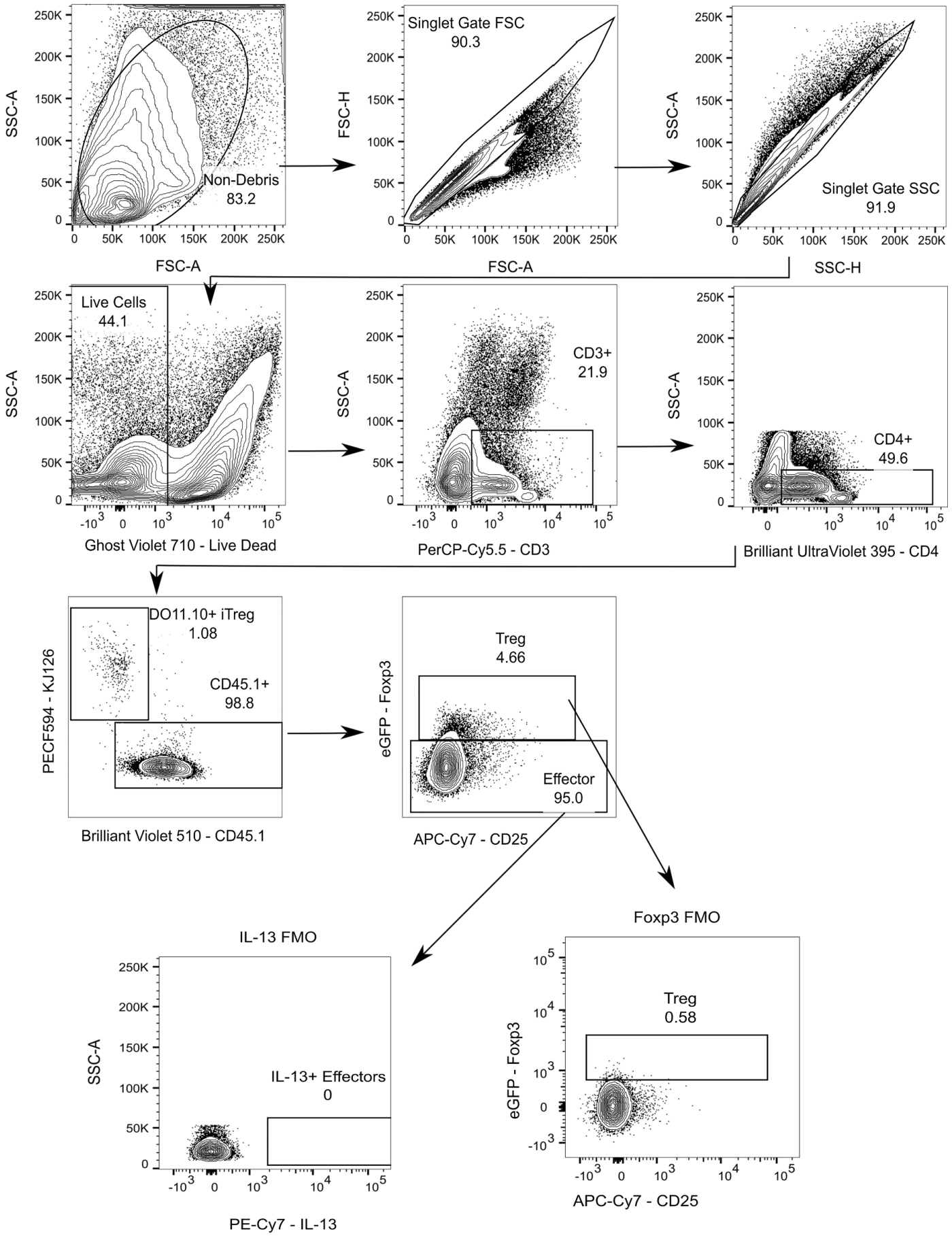
Supplemental Figure 2: Gating Strategy for Figure 1



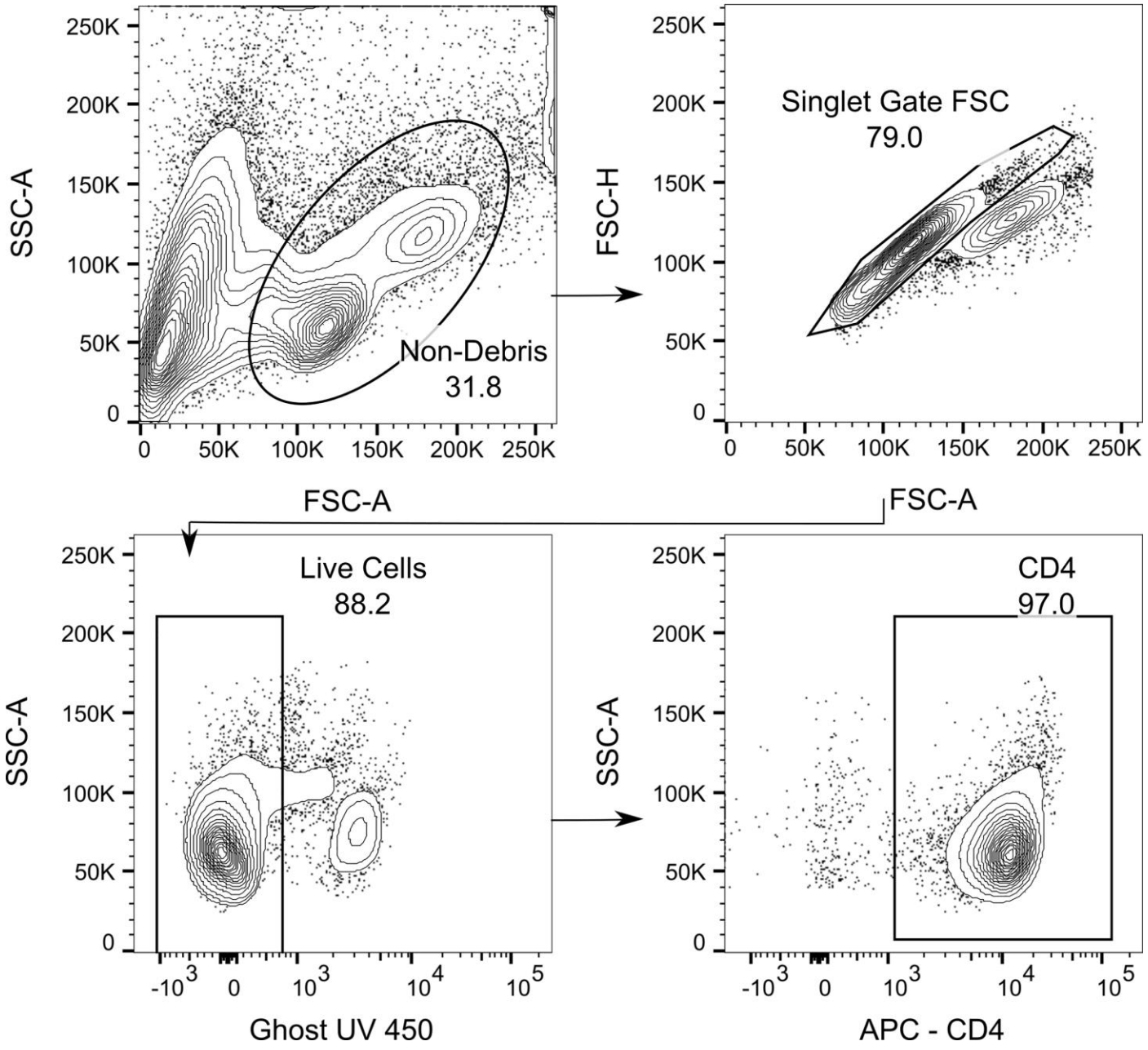
Supplemental Figure 3: Gating Strategy for Figure 2 and splenic cells quantified in Supplementary Figure 4.



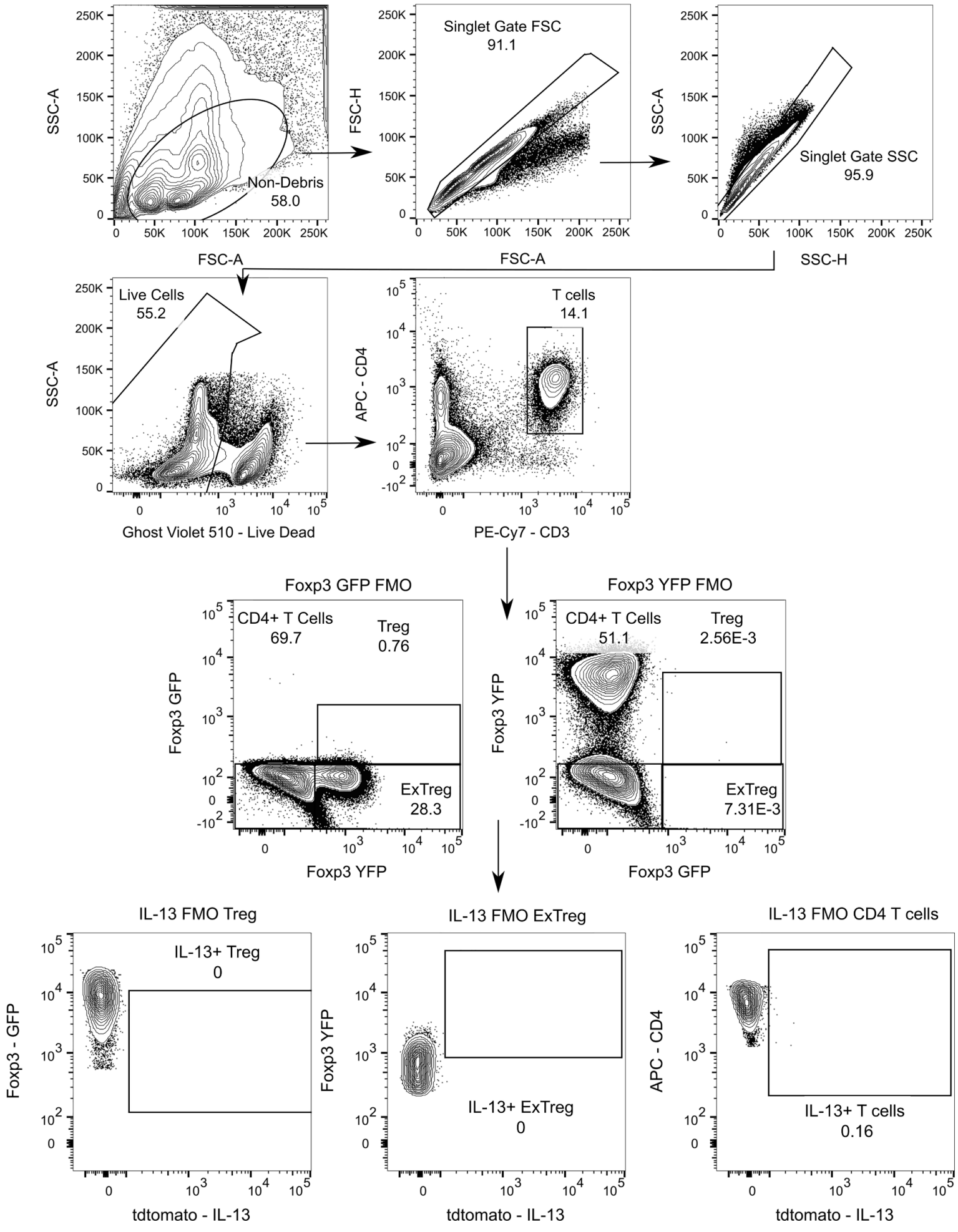
Supplemental Figure 4: A) Plotted percentages and calculated total number of splenic Treg identified from CD4+ T cell populations. (n=10, 2 independent experiments) B) Plotted percentages and calculated total number of lung Treg identified from CD4+ T cell populations. (n=5, 1 independent experiment) C) MFI of splenic Treg CD25 and plotted percentages of splenic Treg expressing CTLA4, ICOS, PD1, GITR, Helios, CD39, and CD73 (n=10, 2 independent experiments)



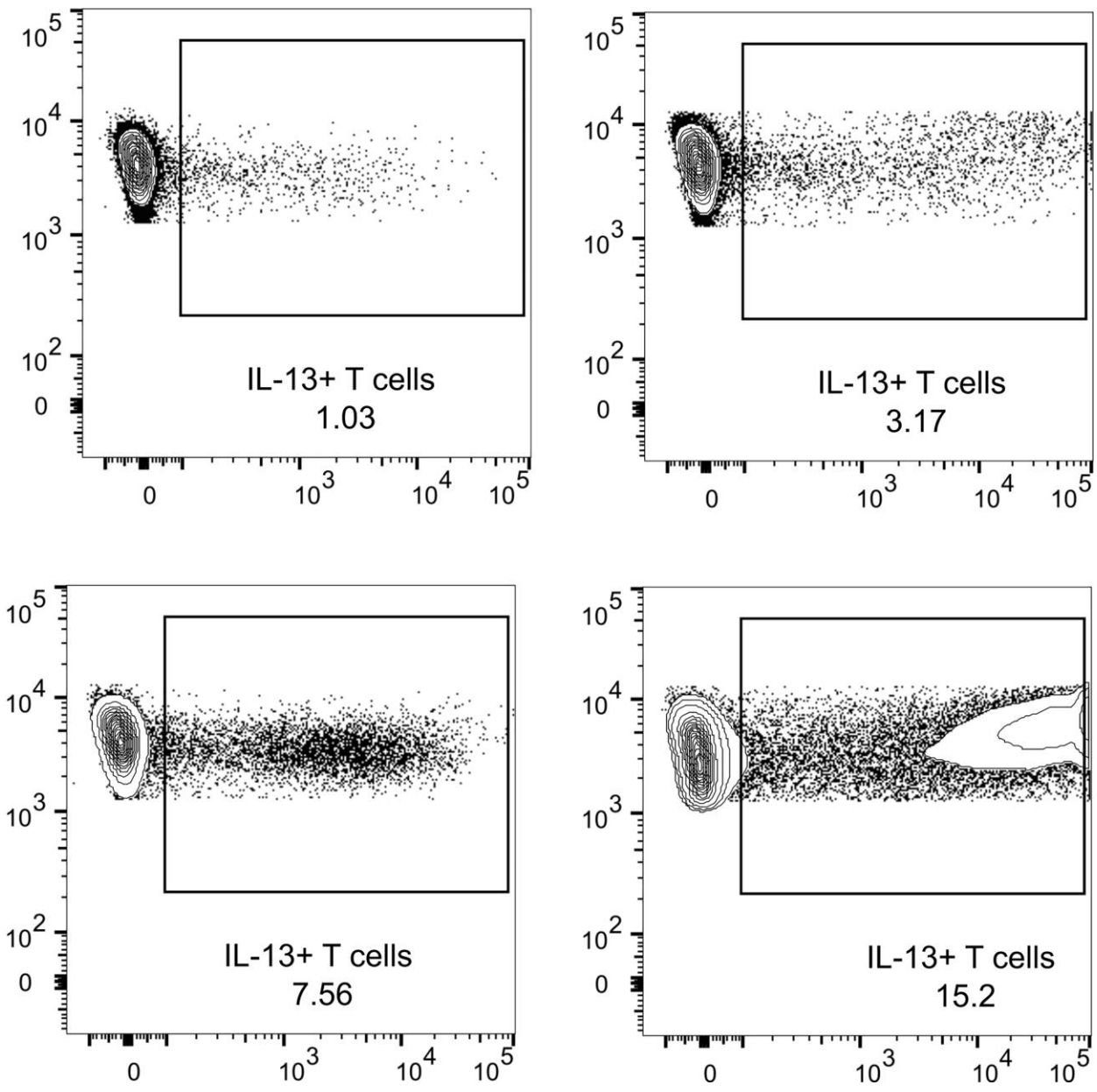
Supplemental Figure 5: Gating Strategy for Figure 3



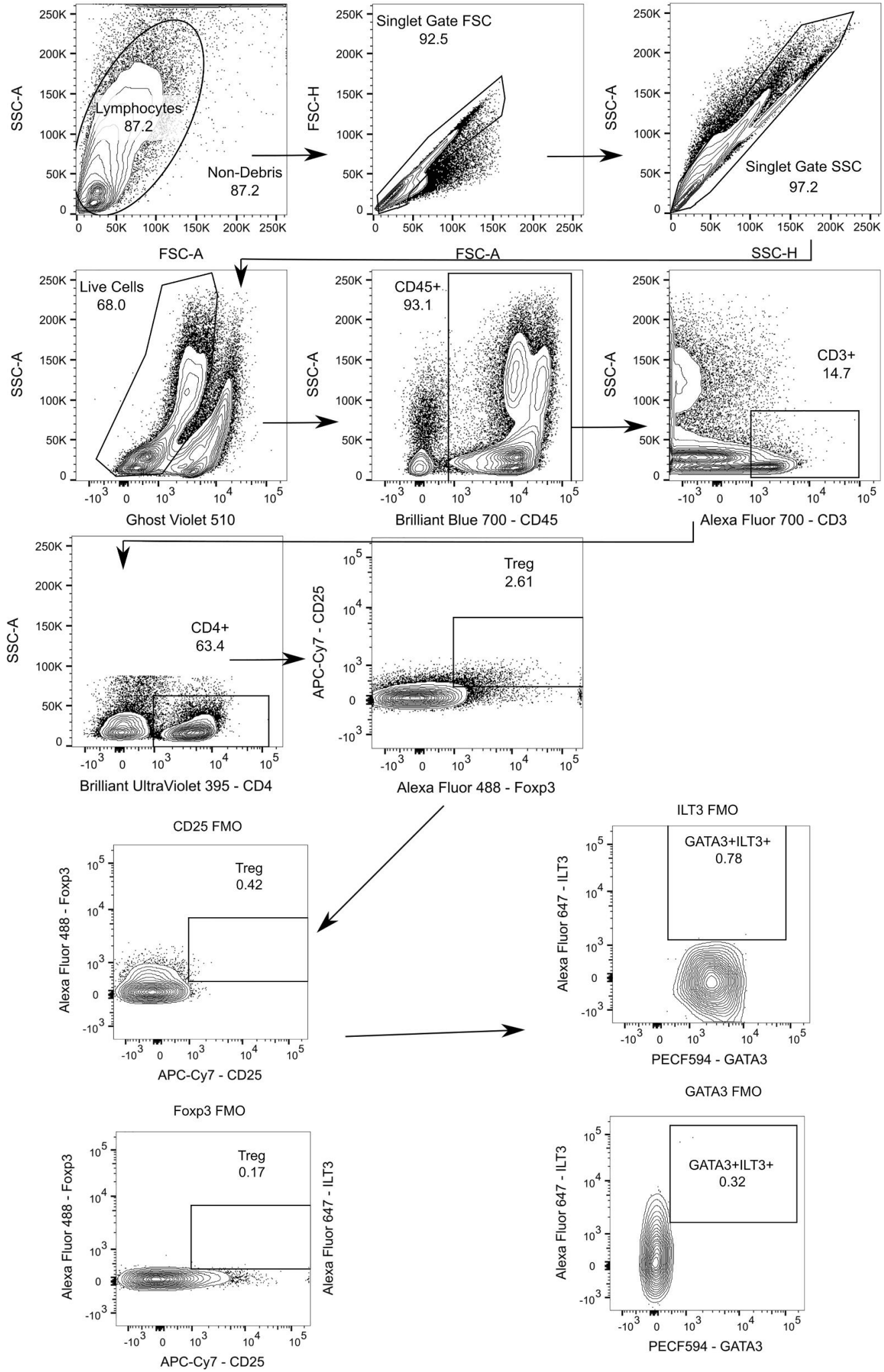
Supplemental Figure 6: Gating Strategy for Figure 4A-B and Figure 7A



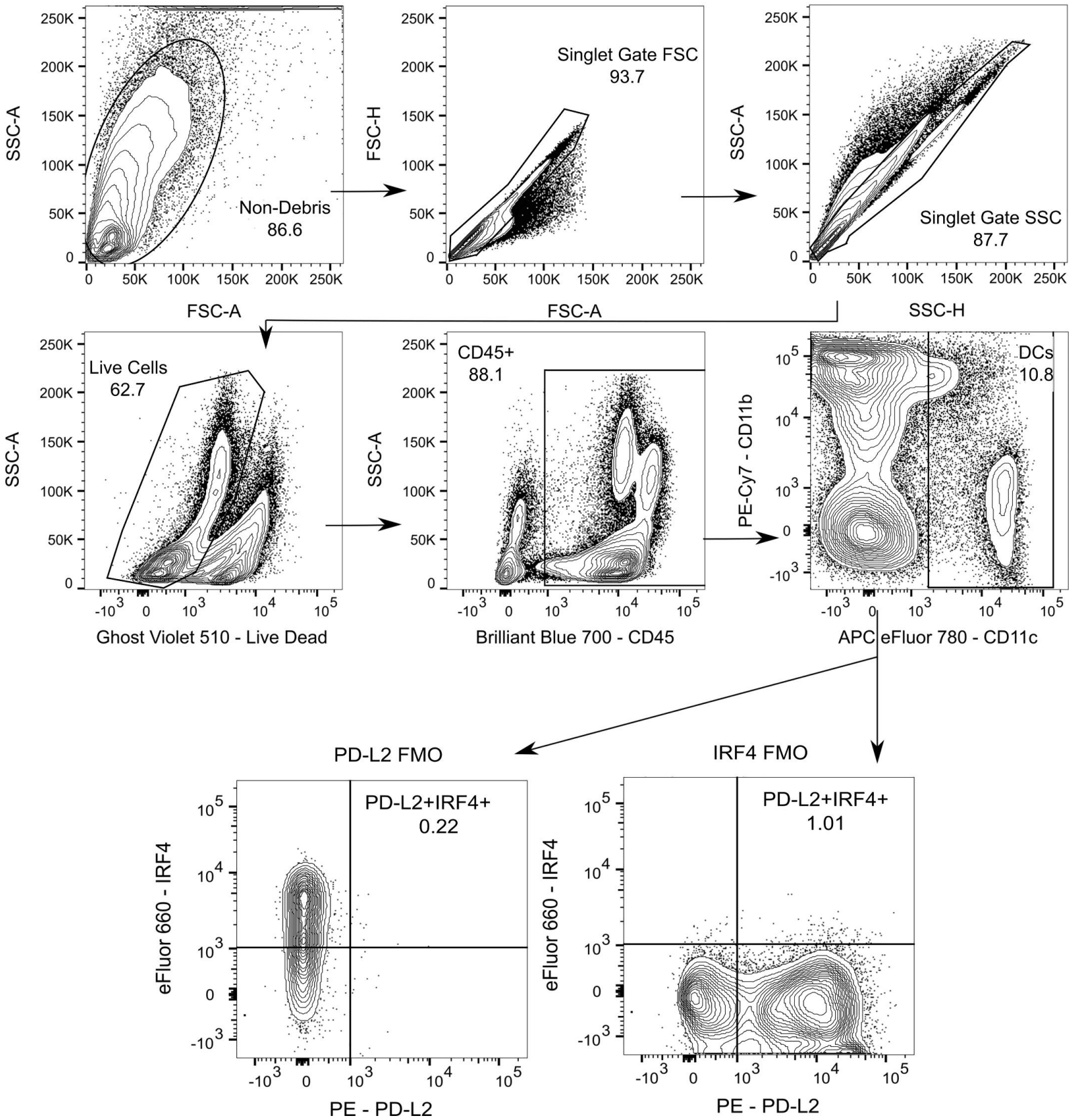
Supplemental Figure 7: Gating Strategy for Figure 5



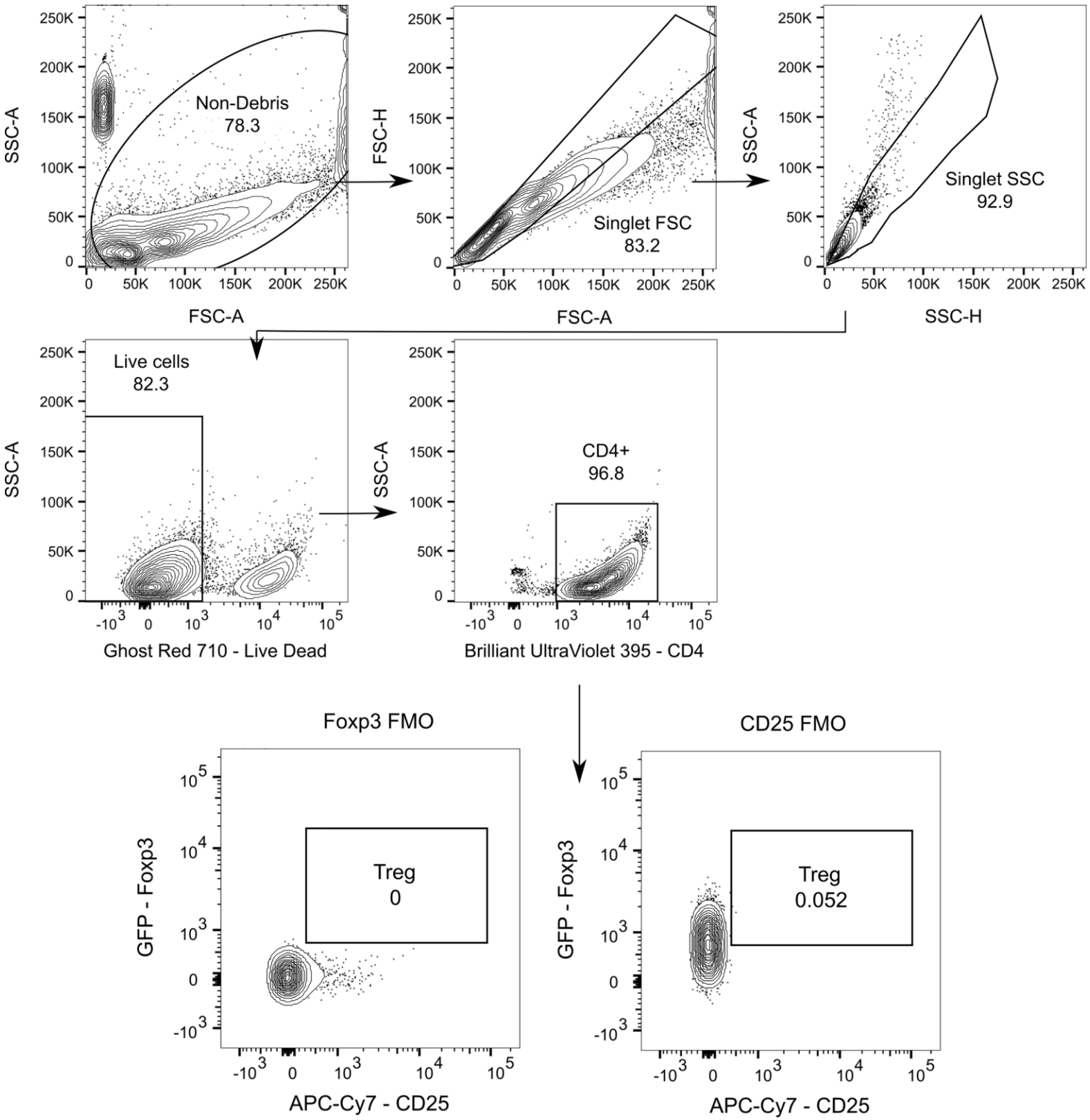
Supplemental Figure 8: Representative flow cytometric analysis of IL-13+CD4+ T cells



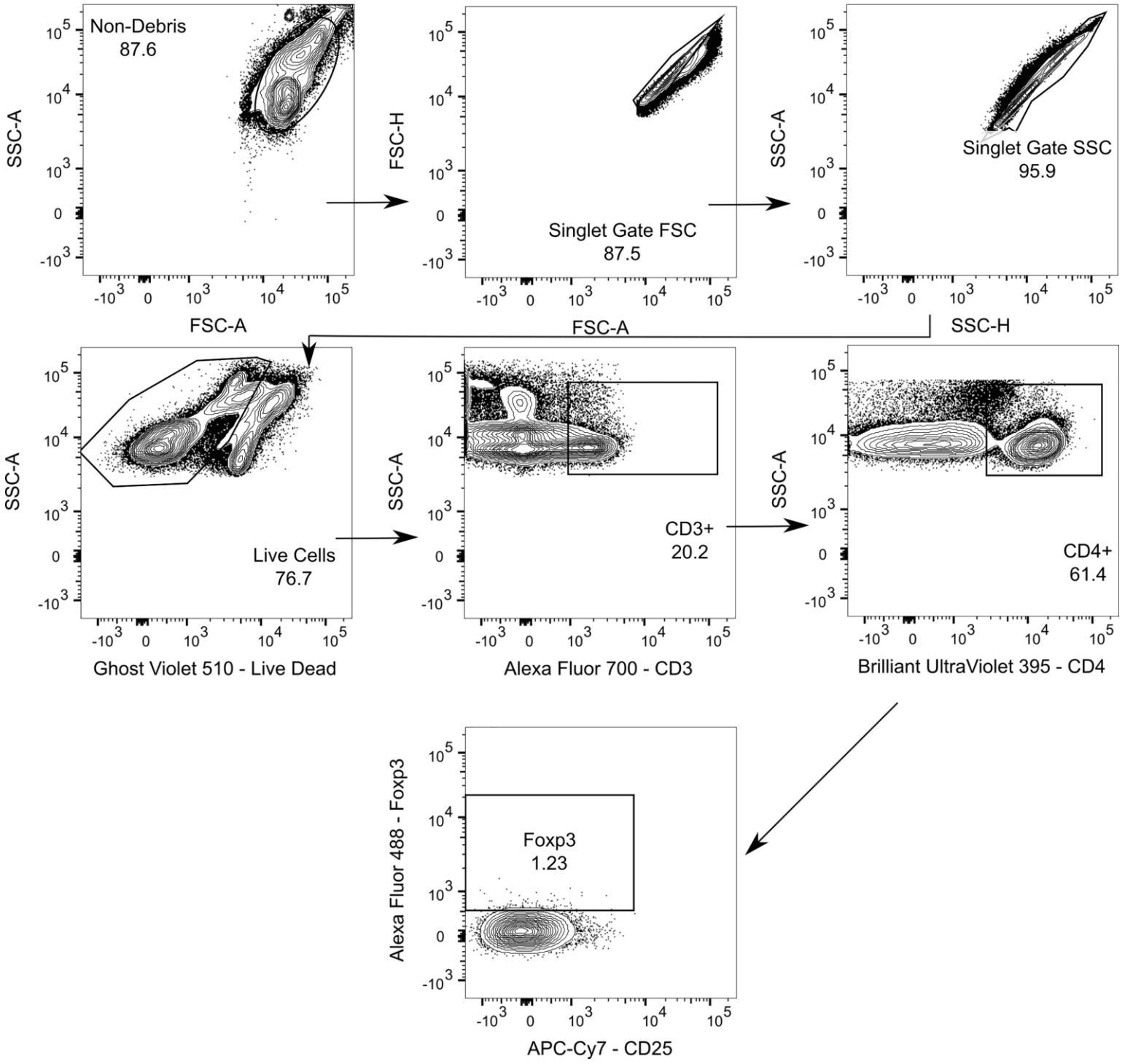
Supplemental Figure 9: Gating Strategy for Figure 6C-D



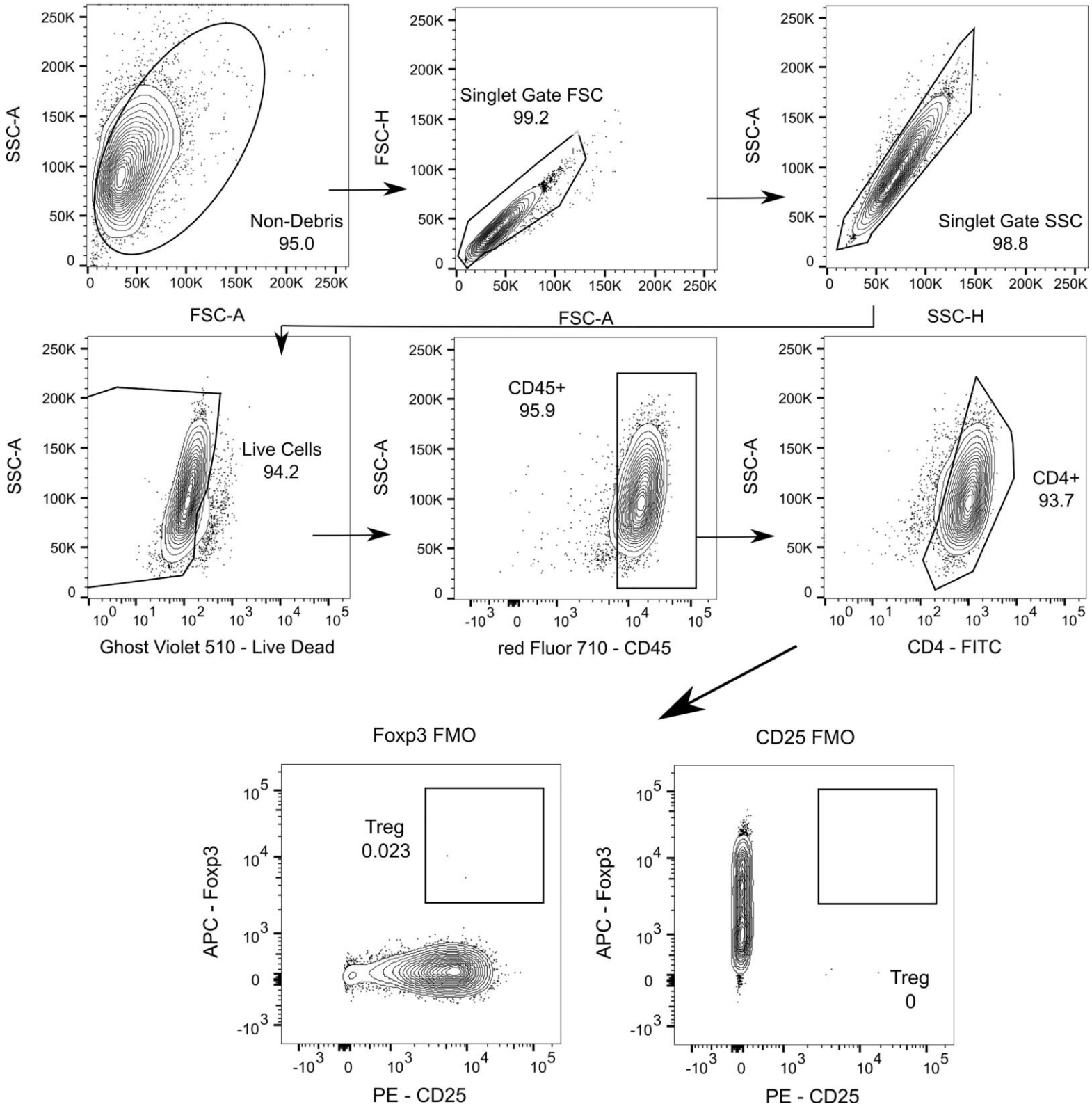
Supplemental Figure 10: Gating Strategy for Figure 6E-F



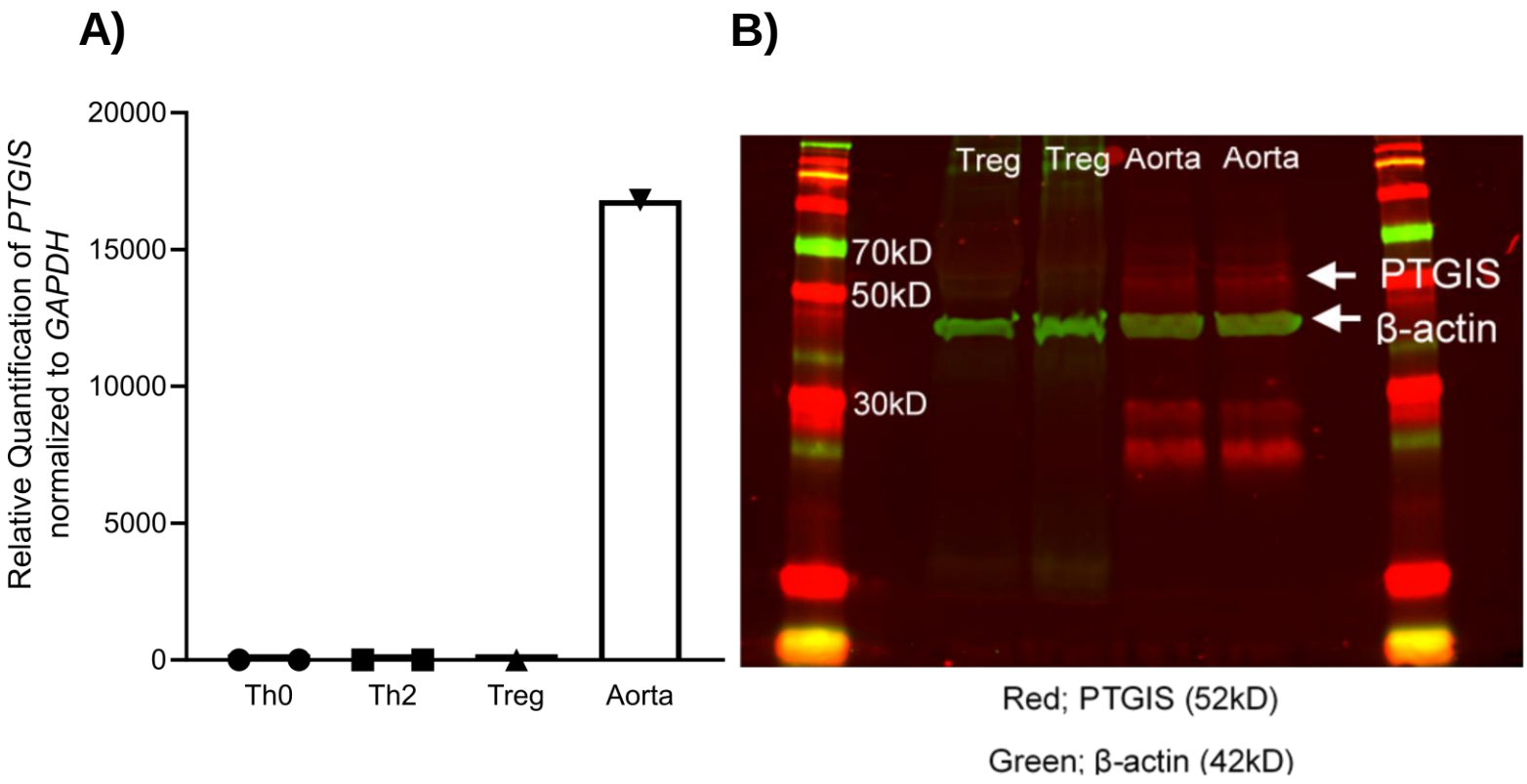
Supplemental Figure 11: Gating Strategy for Figure 7B



Supplemental Figure 12: Gating Strategy for Figure 7C



Supplemental Figure 13: Gating Strategy for Figure 8



Supplemental Figure 14: Determination of PTGIS expression. A) Relative quantification by RT-PCR of *PTGIS* mRNA normalized to *GAPDH* (n=1-2). B) Unedited western blot of PTGIS and β-actin protein expression (n=2).

Racial Categories	Female	Male
American Indian/Alaska Native	0	0
Asian	1	2
Native Hawaiian or Pacific Islander	0	0
Black or African American	1	1
Caucasian	5	6
Hispanic or Latino	1	0
More than one race	1	1
Age (Mean(SD))	34.26(6.51)	29.39(7.05)

Supplementary Table 1: Human Subject demographics

Anti-Mouse antibodies				
Fluorophore	Target	Clone	Manufacturer	Catalog Number
PE	CD25	PC61	BioLegend	102008
PE	IL-5	TRFK5	eBioscience	12-7052-82
PE	CD273 (PD-L2)	TY25	eBioscience	12-5986-82
PE	Anti-rabbit IgG	Poly4064	BioLegend	406421
PE	PD1	JW3	BD Biosciences	551892
PE-Cy7	CD3e	145-2C11	BD Biosciences	561100
PE-Cy7	CD11b	M1/70	eBioscience	25-0112-81
PE-Cy7	IL-13	eBio13A	eBioscience	25-7133-82
PE-Cy7	Foxp3	FJK-16s	eBioscience	25-5773-82
PECF594	CTLA4	UC10-4F10-11	BD Biosciences	564332
PECF594	GATA3	L50-823	BD Biosciences	563510
PECF594	Streptavidin		BD Biosciences	562284
PE/Dazzle	CD8	53-9.7	BioLegend	100762
PerCP-Cy5.5	CD3e	145-2C11	BD Biosciences	551163
PerCP-Cy5.5	CD44	IM7	BD Biosciences	560570
PerCP-eFluor710	CD39	24DMS1	eBioscience	46-0391-80
Brilliant Blue 700	CD45	30-F11	BD Biosciences	566439
Alexa Fluor 488	CD103	2E7	BioLegend	121408
Alexa Fluor 488	CD25	PC61	BioLegend	102017
Super Bright 436	ST2	RMST2-2	eBioscience	62-9335-82
	CD16/CD32	2.4G2	TONBO Biosciences	70-0161-M001
	IP	Polyclonal	Cayman Chemical	160070
APC	CD4	GK1.5	eBioscience	17-0041-82
APC	Streptavidin		TONBO Biosciences	20-4317-U100
APC	GITR	DTA-1	eBioscience	17-5874-81
APC	Helios	22F6	eBioscience	17-9883-41
eFluor 660	IRF4	3E4	eBioscience	50-9858-82
Alexa Fluor 647	ILT3 (CD85k) (gp49 receptor)	H1.1	BioLegend	144906
APC-Cy7	CD25	PC61	BD Biosciences	557658
APC eFluor 780	CD11c	N418	eBioscience	47-0114-82
eFluor 450	IL-13	eBio13A	eBioscience	48-7133-82
eFluor 450	CD73	eBioTY/11.8	eBioscience	48-0731-80
Brilliant Ultraviolet 395	CD4	GK1.5	BD Biosciences	563790
Brilliant Ultraviolet 737	CD4	GK1.5	BD Biosciences	564298
Alexa Fluor 700	CD3	17A2	BioLegend	100216
Red Fluor 710	CD45	30-F11	TONBO Biosciences	80-0451-U100
Biotin	DO11.10 TCR	KJ1-26	eBioscience	13-5808-82
Ultra-LEAF purified	CD3e	145-2C11	BioLegend	100340
Ultra-LEAF purified	CD28	37.51	BioLegend	102116
NA/LE	CD3	145-2C11	BD Biosciences	553057
NA/LE	CD28	37.51	BD Biosciences	553294
Ghost Dye UV 450			Tonbo Biosciences	13-0868-T500
Ghost Dye Violet 510			Tonbo Biosciences	13-0870-T500
Ghost Dye Red 710			Tonbo Biosciences	13-0871-T500
Near-IR	Live/Dead		Invitrogen	L34975
Brilliant Violet 421	CD45.2	104	BioLegend	109832
Brilliant Violet 421	ICOS	398.4A	BioLegend	313524
Brilliant Violet 421	CD4	GK1.5	BD Biosciences	562891
Brilliant Violet 510	CD45.1	A20	BioLegend	110741
Alexa Fluor 488	Foxp3	150D	BioLegend	320012

Supplementary Table 2: Mouse Antibody Table

Anti-Human antibodies				
Fluorophore	Target	Clone	Manufacturer	Catalog Number
redFluor 710	CD45	HI30	TONBO Biosciences	80-0459-T100
FITC	CD4	SK3	eBioscience	11-0047-42
Brilliant UltraViolet 395	CD3	UCHT1	BD Biosciences	563546
APC	Foxp3	236A/E7	eBioscience	17-4777-42
PE	CD25	BC96	eBioscience	12-0259-42
Ultra Leaf	CD3	OKT3	BioLegend	317326
Ultra Leaf	CD28	CD28.2	BioLegend	302933

Supplementary Table 3: Human Antibody Table