

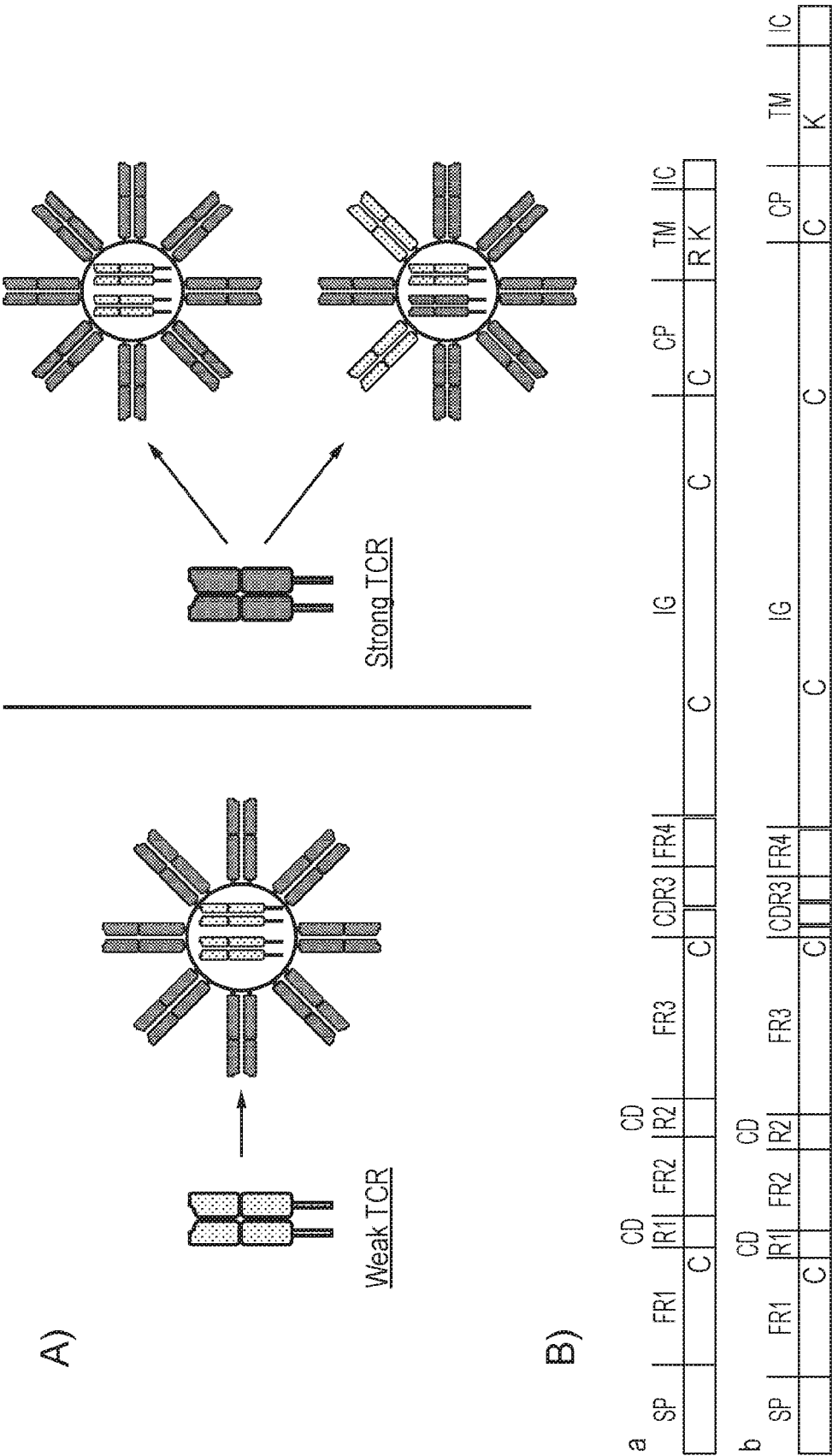


FIG. 1

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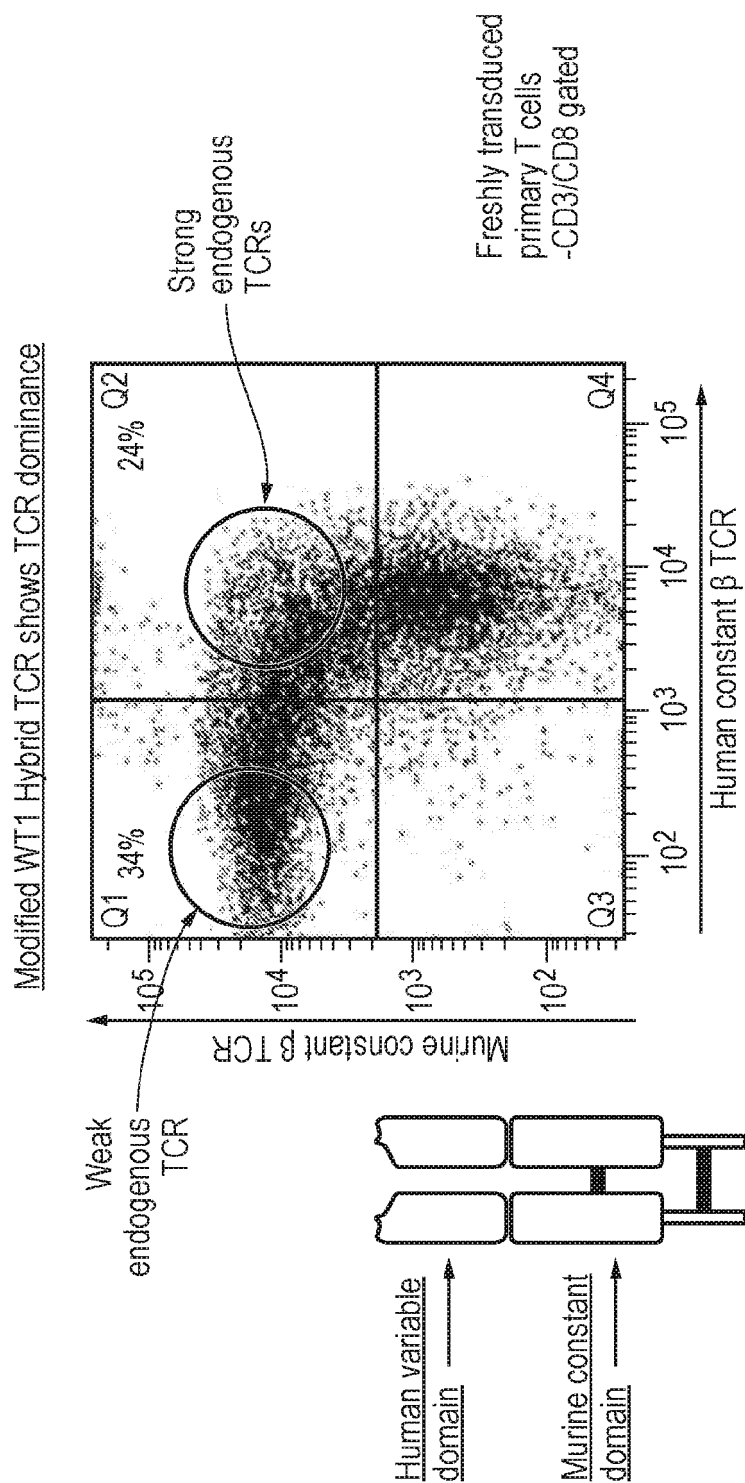


FIG. 2

	Number of TCRs sequenced in the endogenous:	
	Strong TCR Population	Weak TCR Population
Alpha chains	294	286
Beta chains	151	153
TRAV 38.1	20	2
TRAV 38.2	48	11
TRAV 9.2	13	3
TRBV 5.1	42	21
TRBV 7.8	7	0
TRAV 13.2	6	21
TRAV 23	3	10
TRBV 7.3	2	8
TRBV 7.9	1	11

Strong variable segments

Weak variable segments

FIG. 3

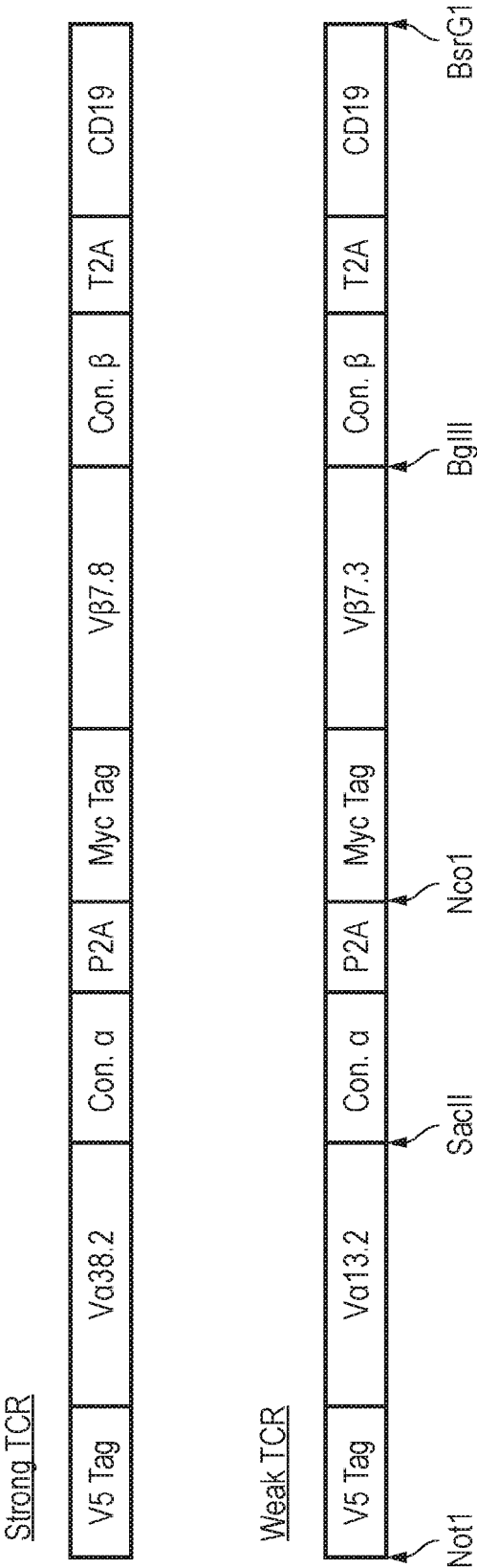
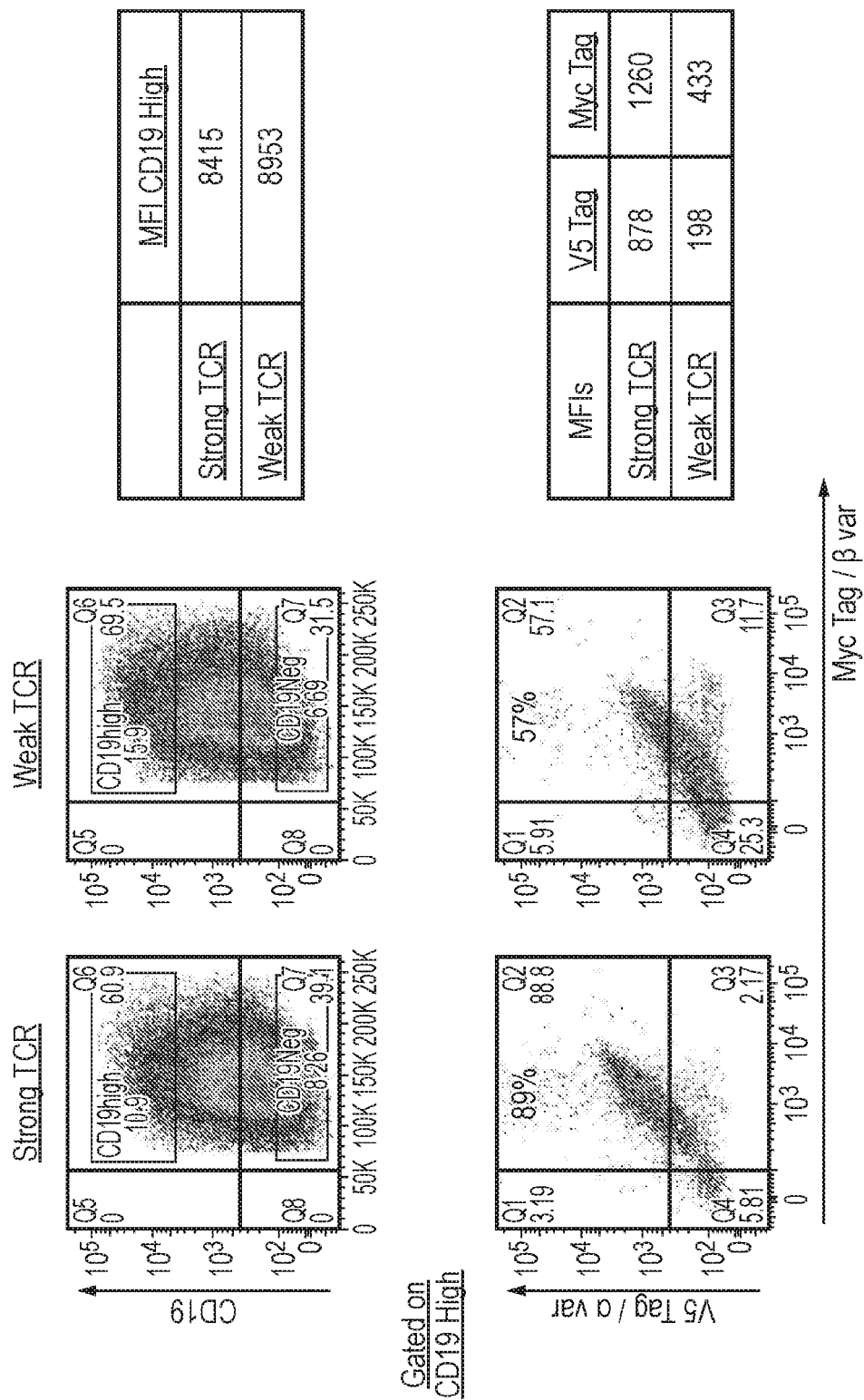


FIG. 4

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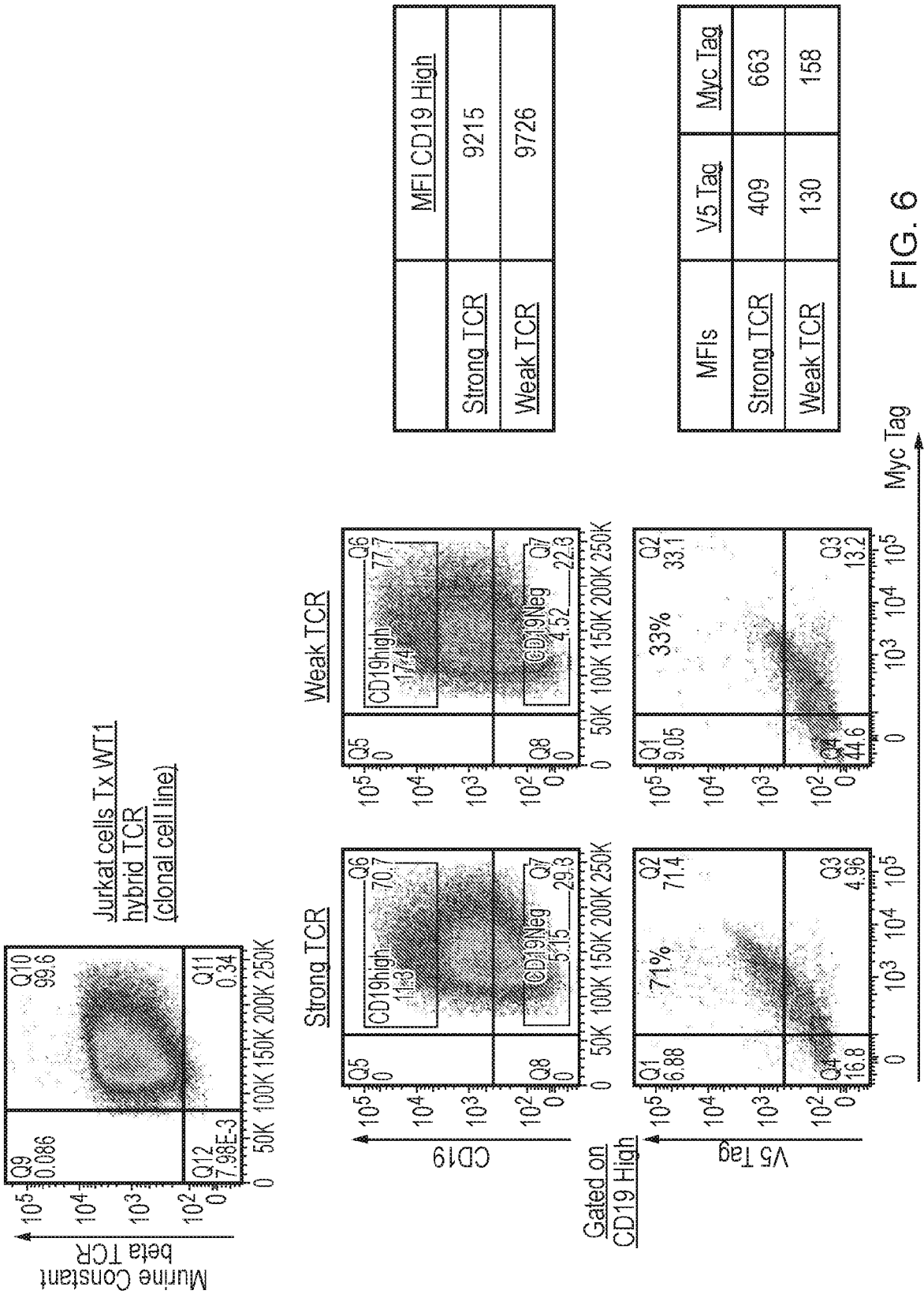
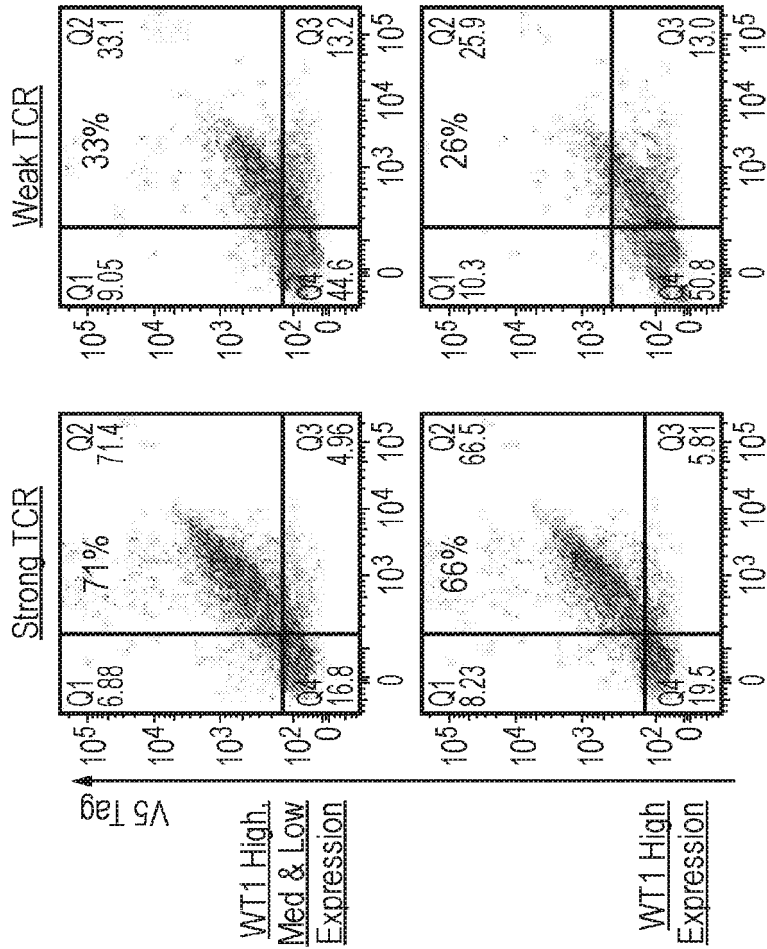
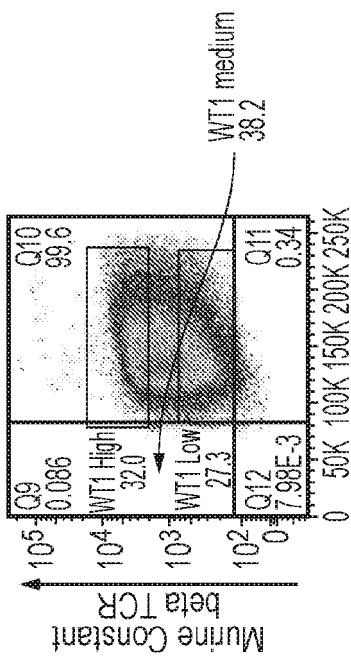


FIG. 6

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MFIs	V5 Tag	Myc Tag
Strong TCR	409	663
Weak TCR	130	158

MFIs	V5 Tag	Myc Tag
Strong TCR	324	491
Weak TCR	123	131

FIG. 7

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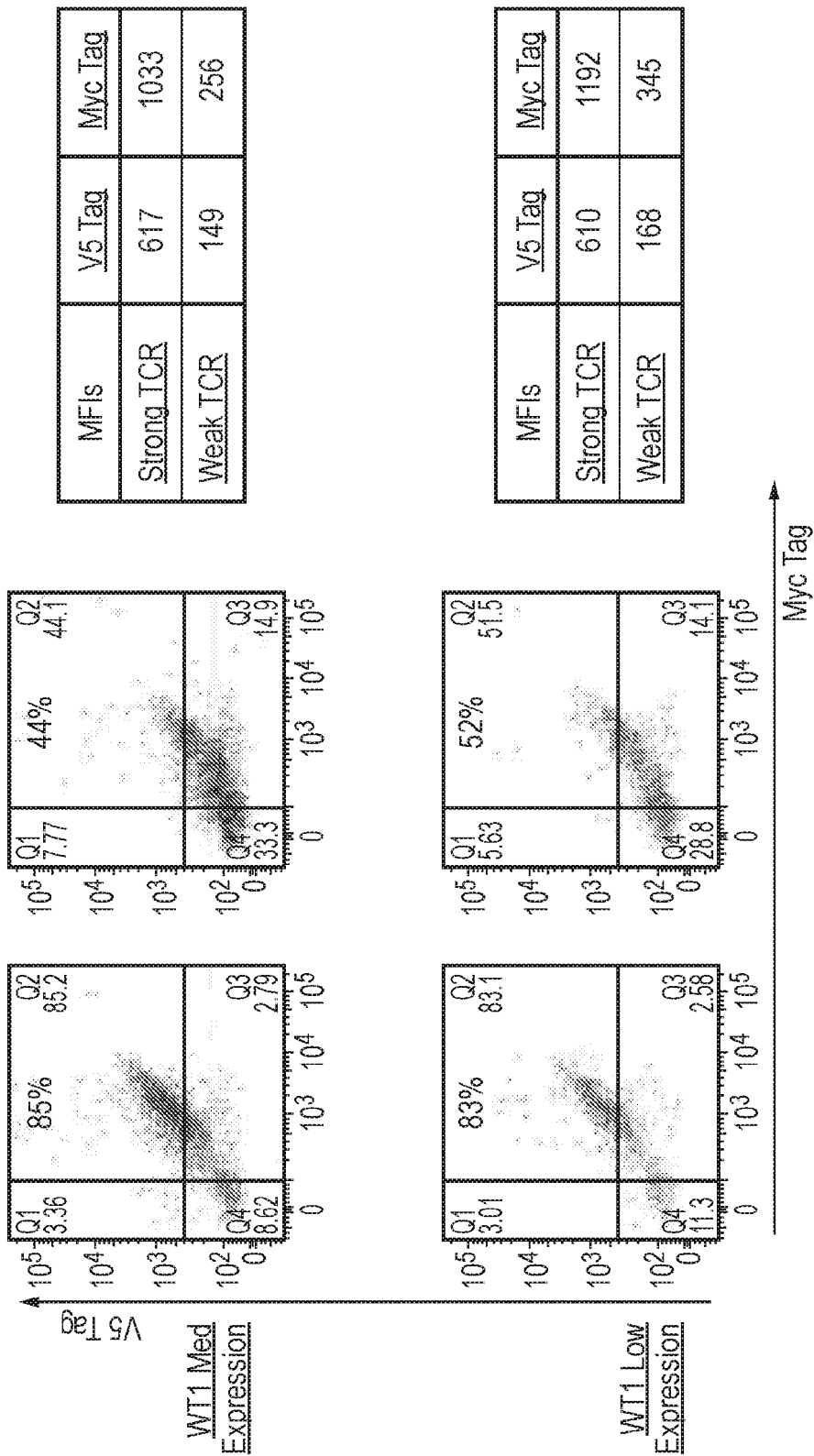
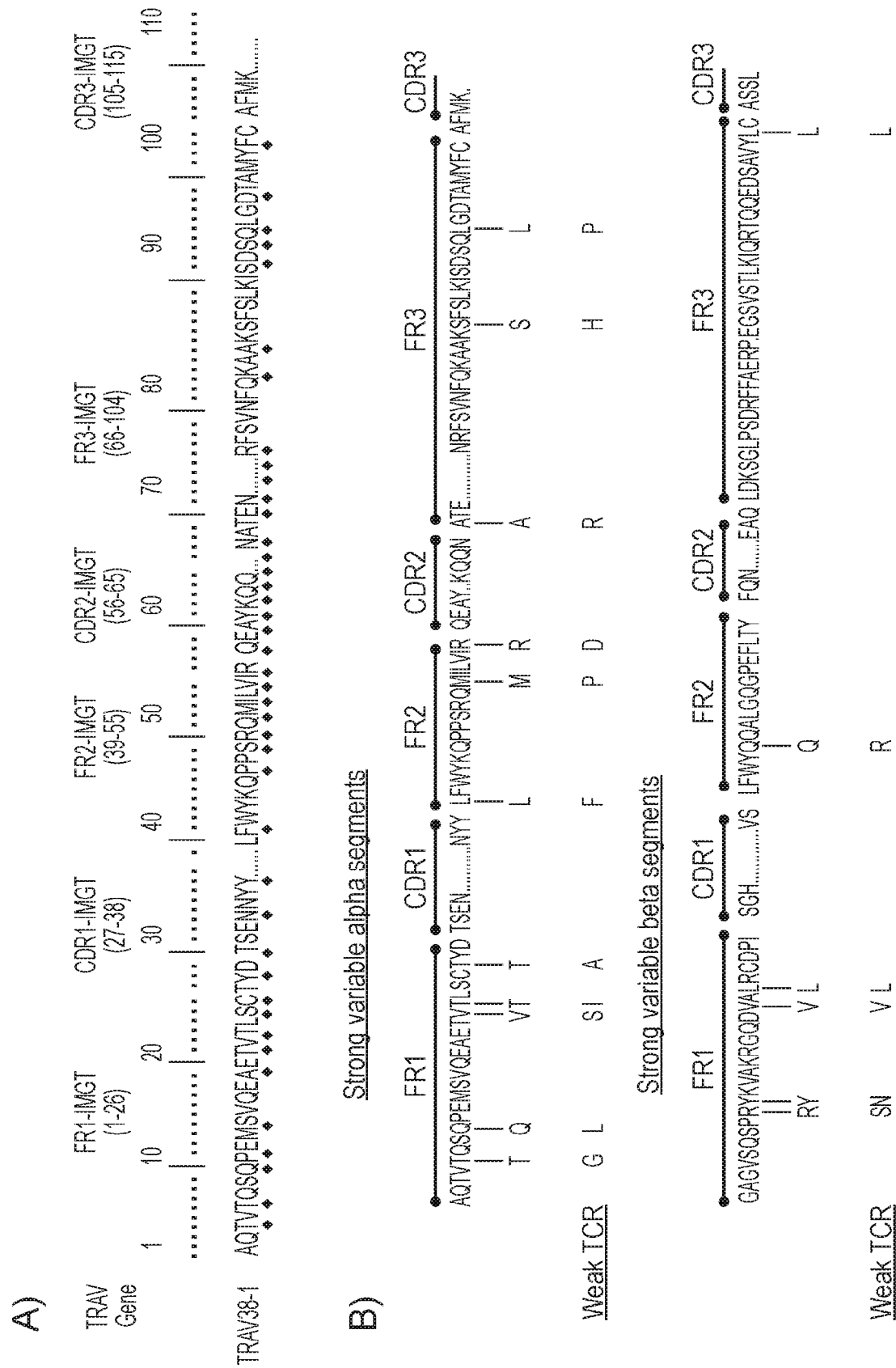


FIG. 7 (Continued)

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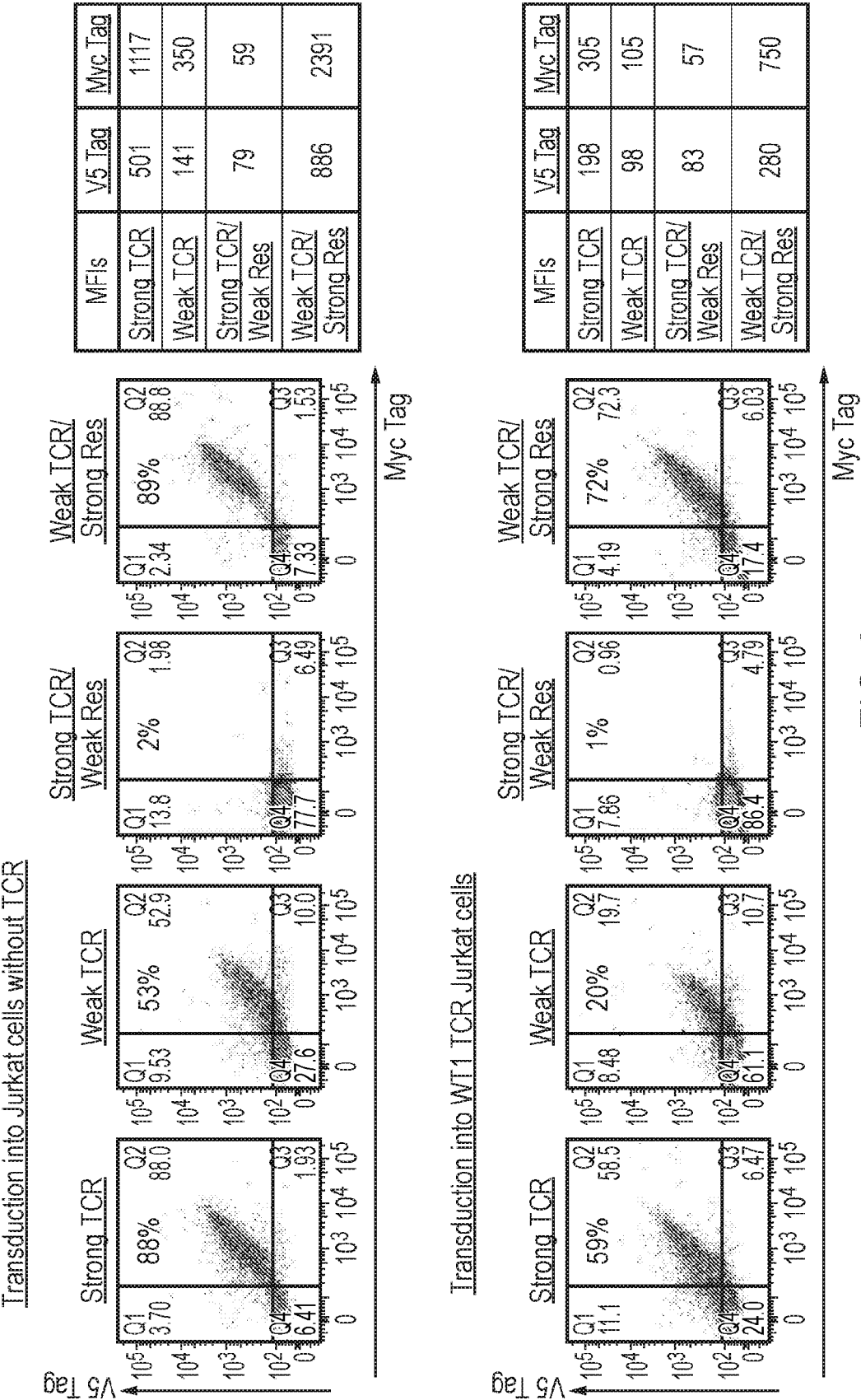


FIG. 9

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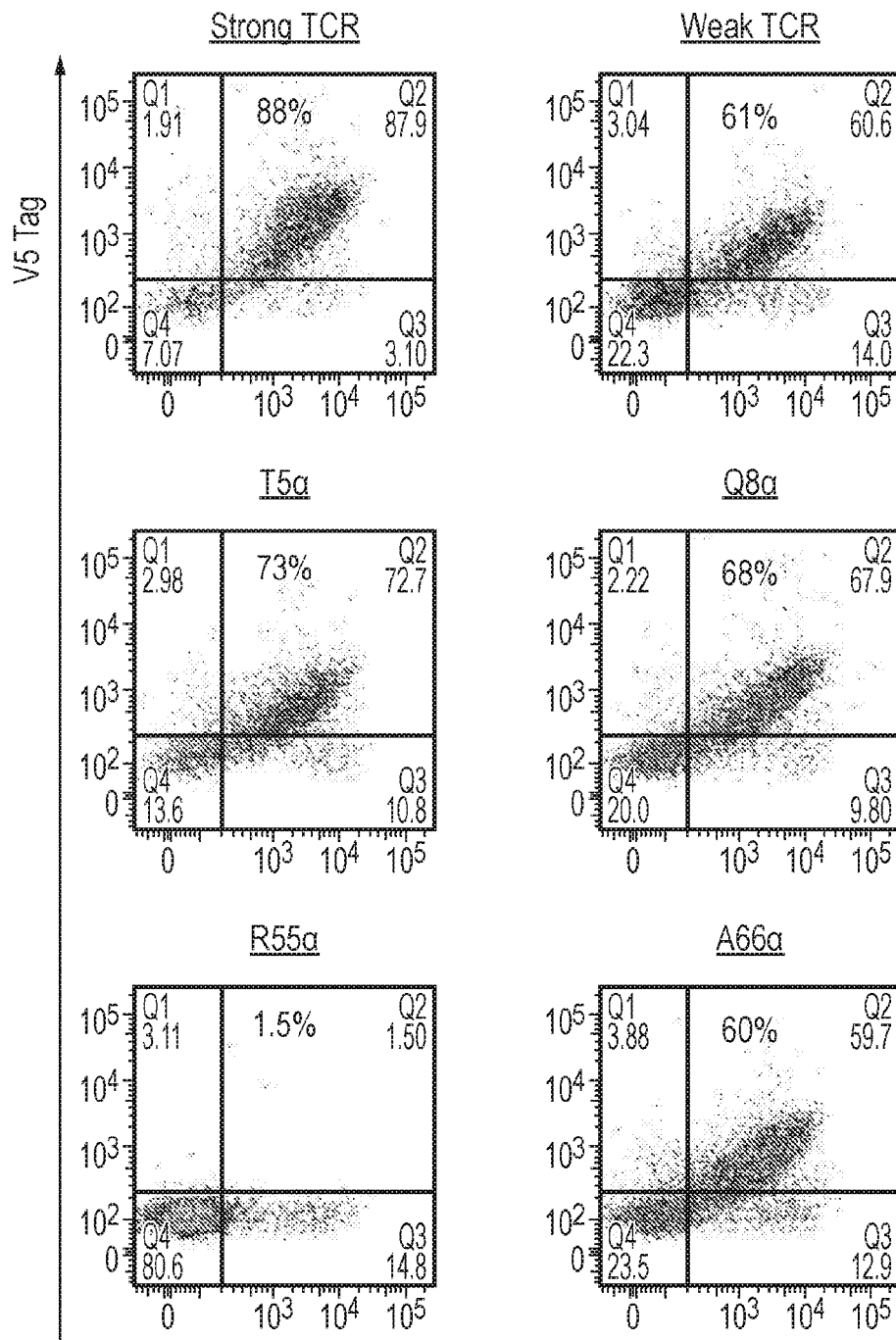
Weak TCR with individual strong residuesTransduction into Jurkat cells without TCR

FIG. 10

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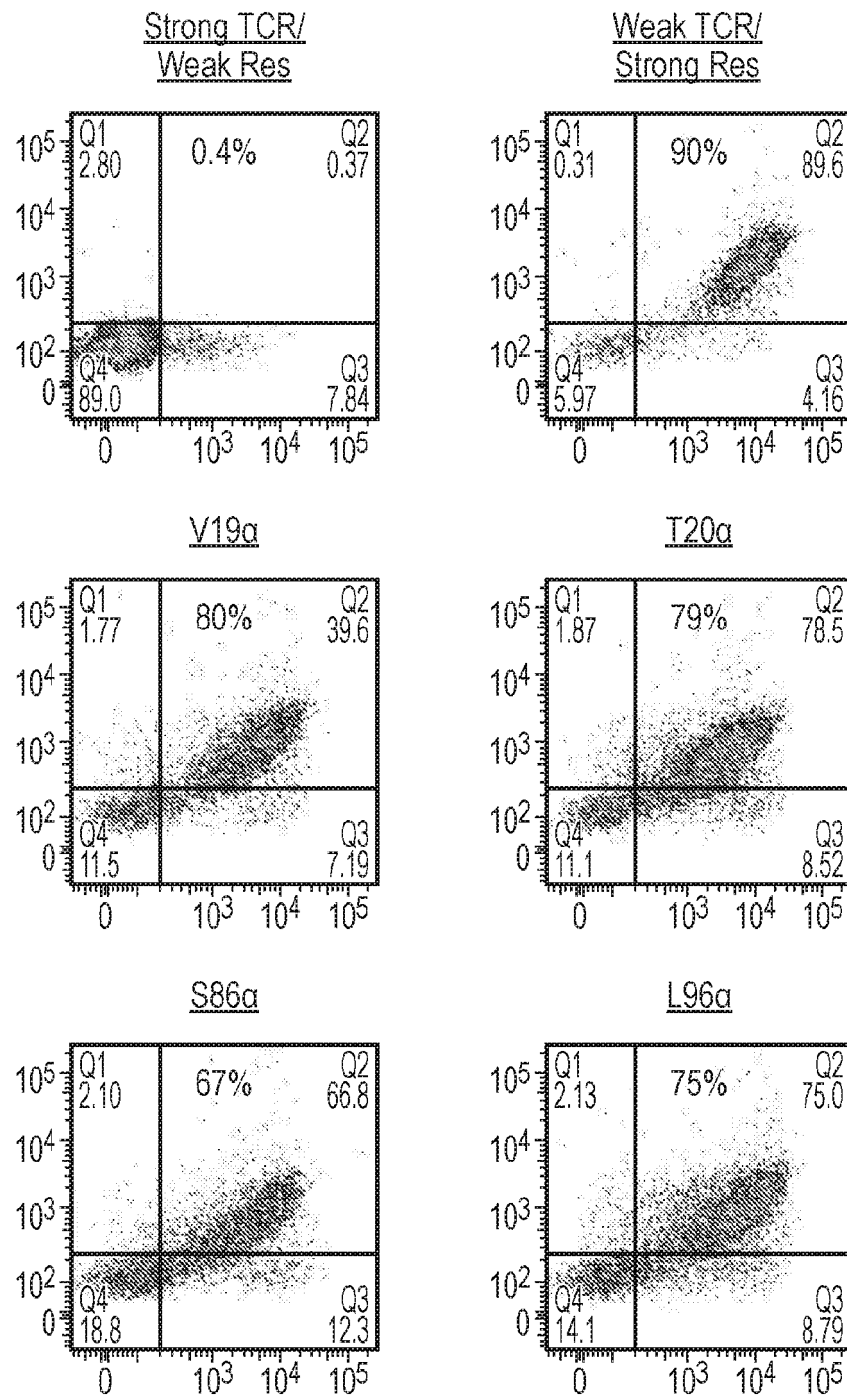


FIG. 10 (Continued)

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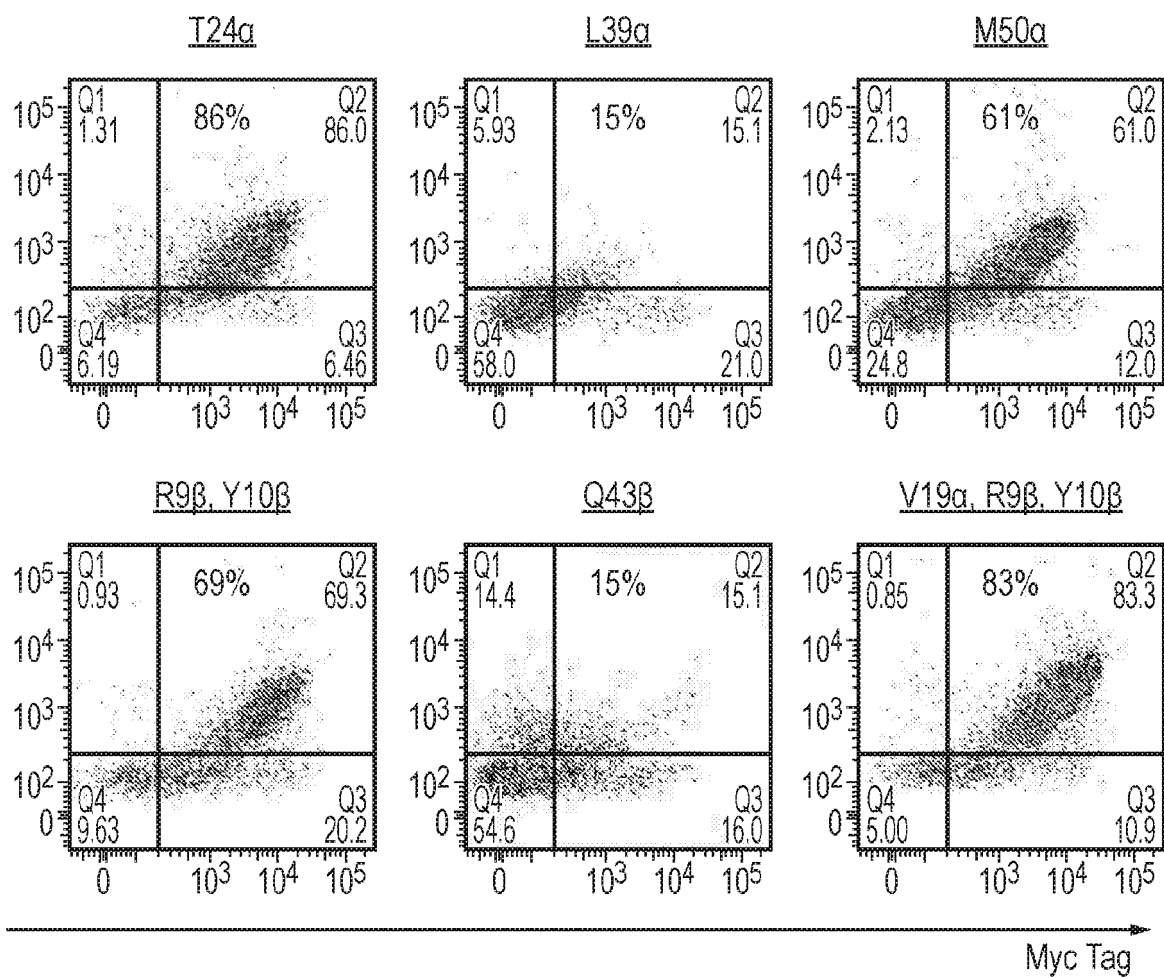


FIG. 10 (Continued)

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	<u>Jurkat cells</u>		
TCR	%	Myc MFI	V5 MFI
Strong TCR	88	2840	1341
Weak TCR	61	1077	377
Strong TCR / Weak Res	0.4	62	138
Weak TCR / Strong Res	90	8582	1617
T5 α	73	1529	479
Q8 α	68	1699	527
V19 α	80	3587	791
T20 α	79	2340	562
T24 α	86	2937	661
L39 α	15	135	170
M50 α	61	1159	378
R55 α	1.5	89	141
A66 α	60	826	366
S86 α	67	1854	465
L96 α	75	3738	770
R9 β , Y10 β	69	3951	599
Q43 β	15	117	185
V19 α , R9 β , Y10 β	83	6717	1064

FIG. 10 (Continued)

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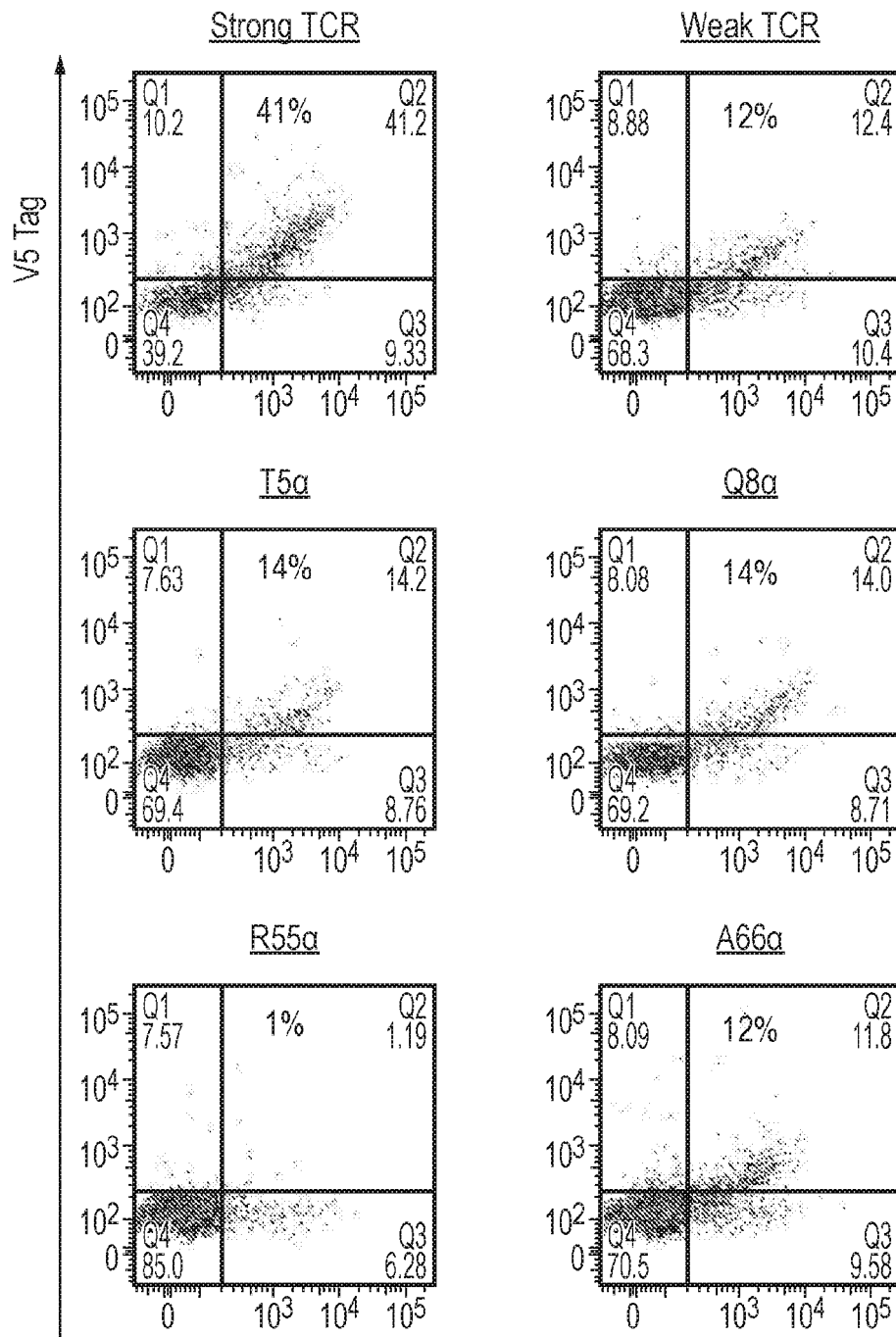
Weak TCR with individual strong residuesTransduction into WT1 Jurkat cells

FIG. 11

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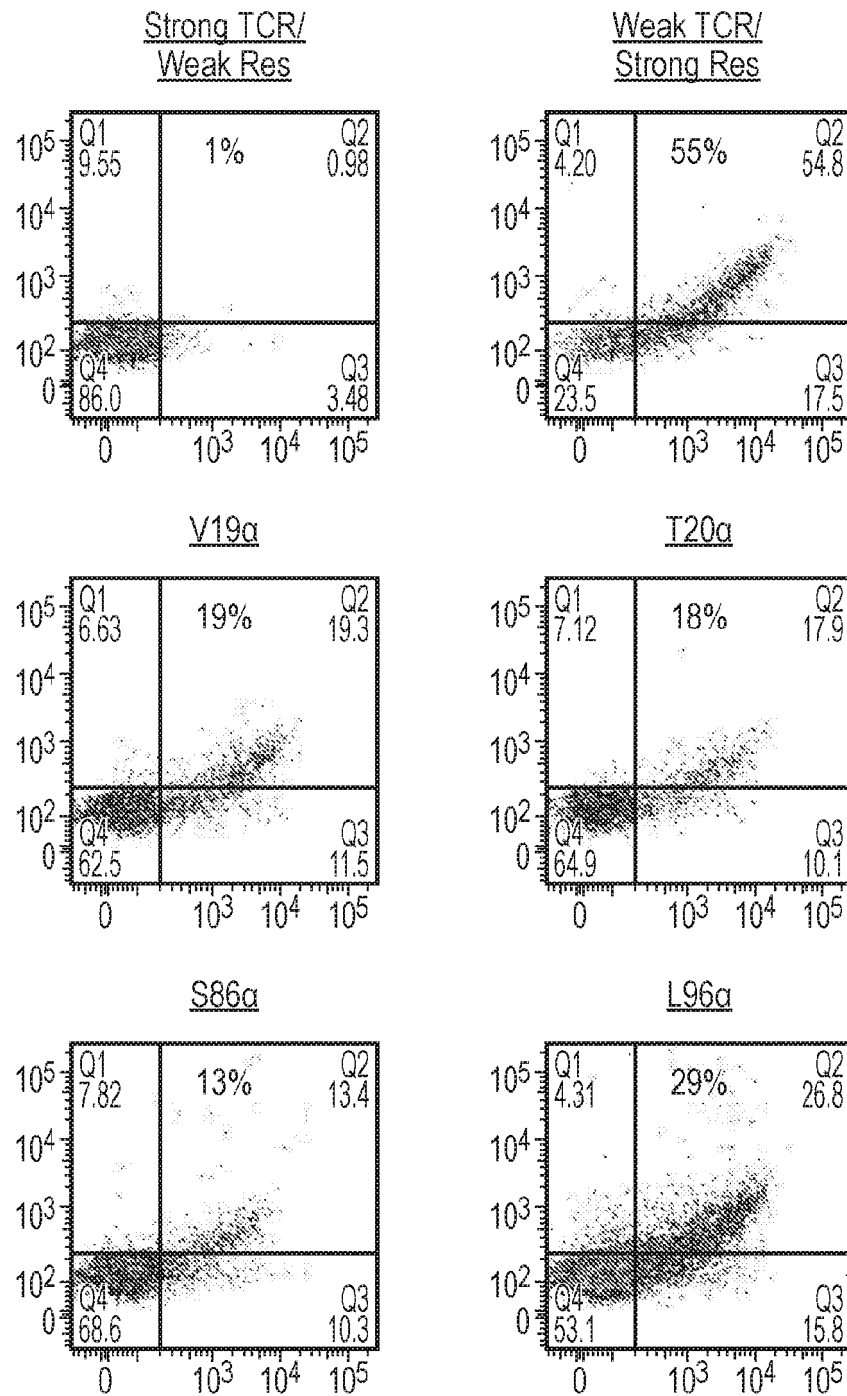


FIG. 11 (Continued)

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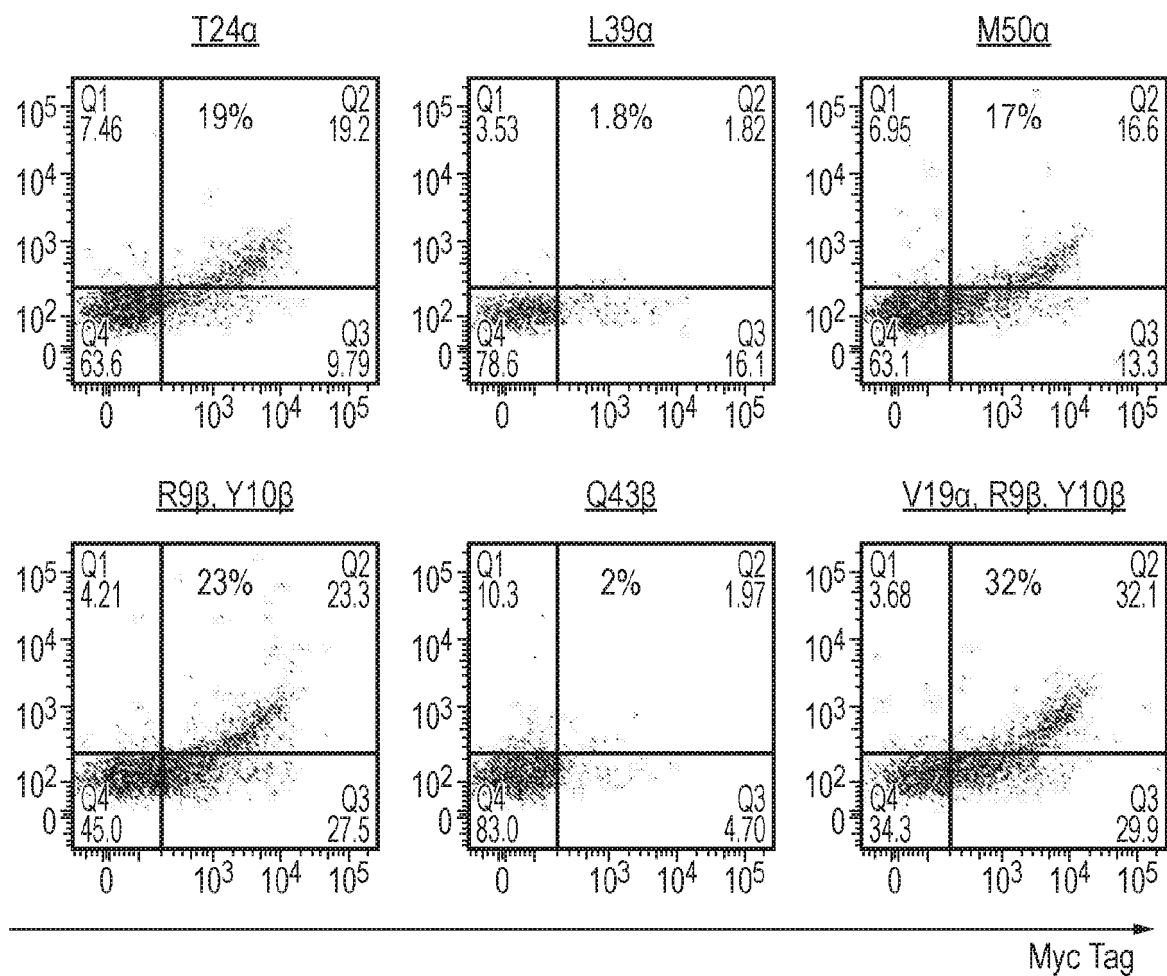


FIG. 11 (Continued)

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	WT1 TCR Jurkat cells		
TCR	%	Myc MFI	V5 MFI
Strong TCR	41	217	224
Weak TCR	12	100	163
Strong TCR / Weak Res	1	62	149
Weak TCR / Strong Res	55	704	254
T5 α	14	91	159
Q8 α	14	96	163
V19 α	19	121	164
T20 α	18	109	167
T24 α	19	114	168
L39 α	1.8	82	145
M50 α	17	114	164
R55 α	1	64	141
A66 α	12	96	154
S86 α	13	101	156
L96 α	29	162	180
R9 β , Y10 β	23	219	164
Q43 β	2	65	149
V19 α , R9 β , Y10 β	32	344	184

FIG. 11 (Continued)

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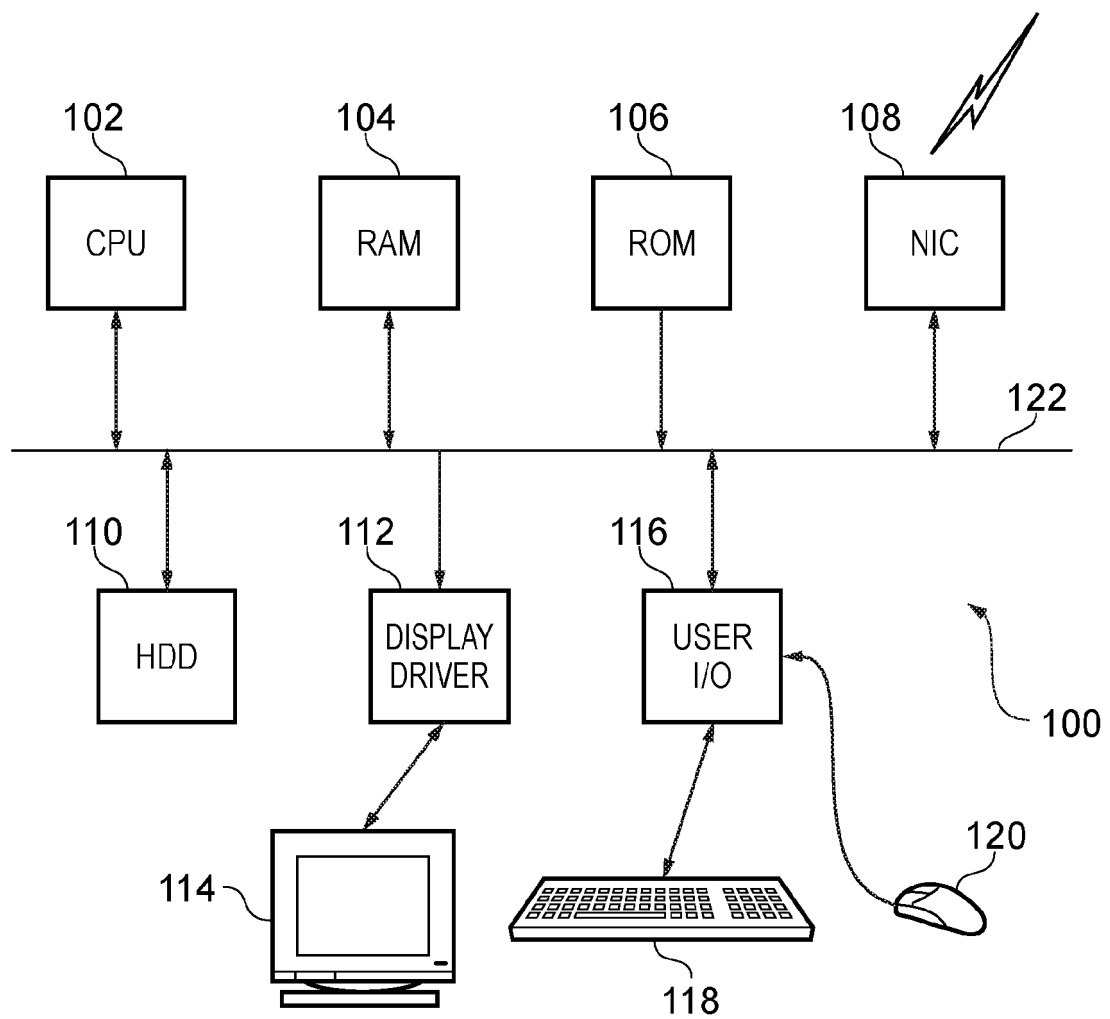
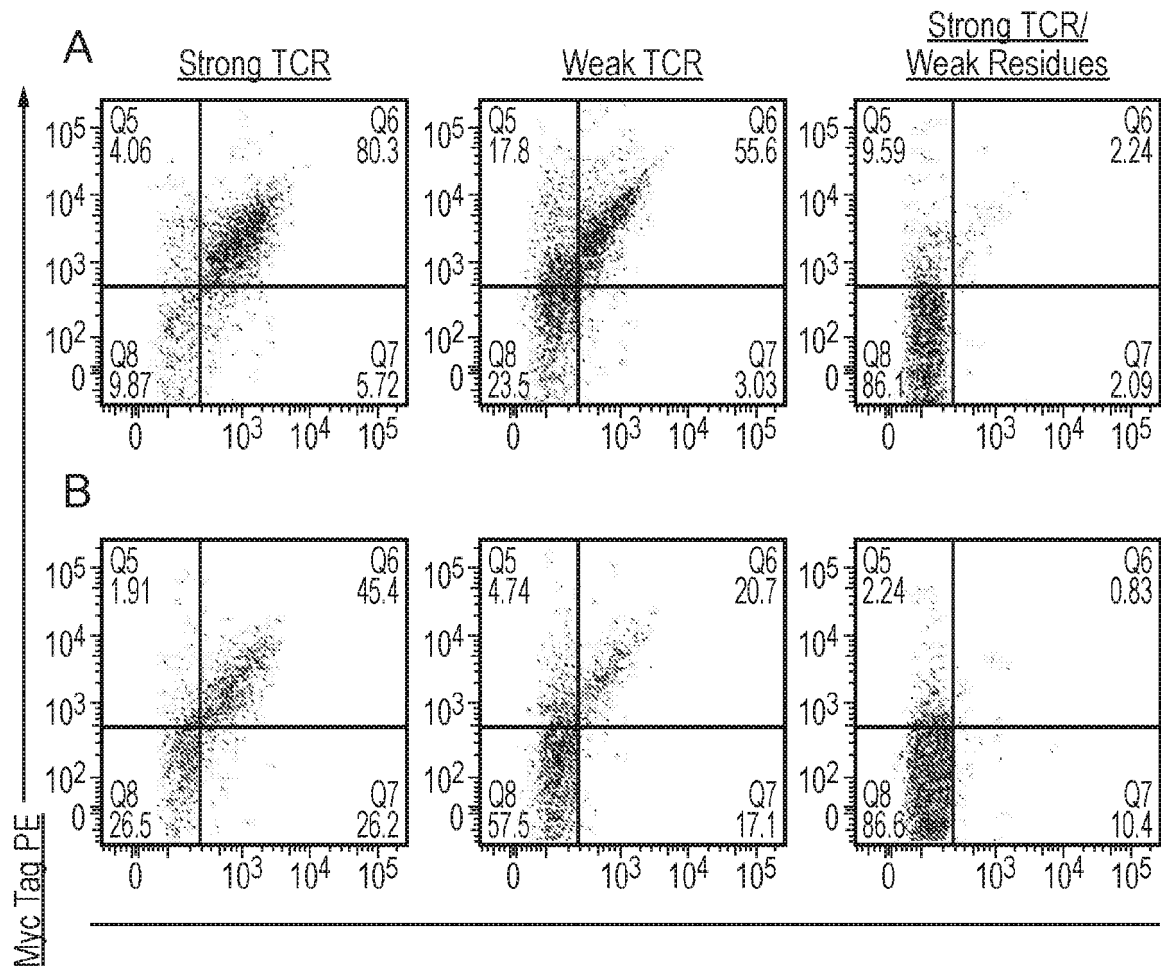


FIG. 12

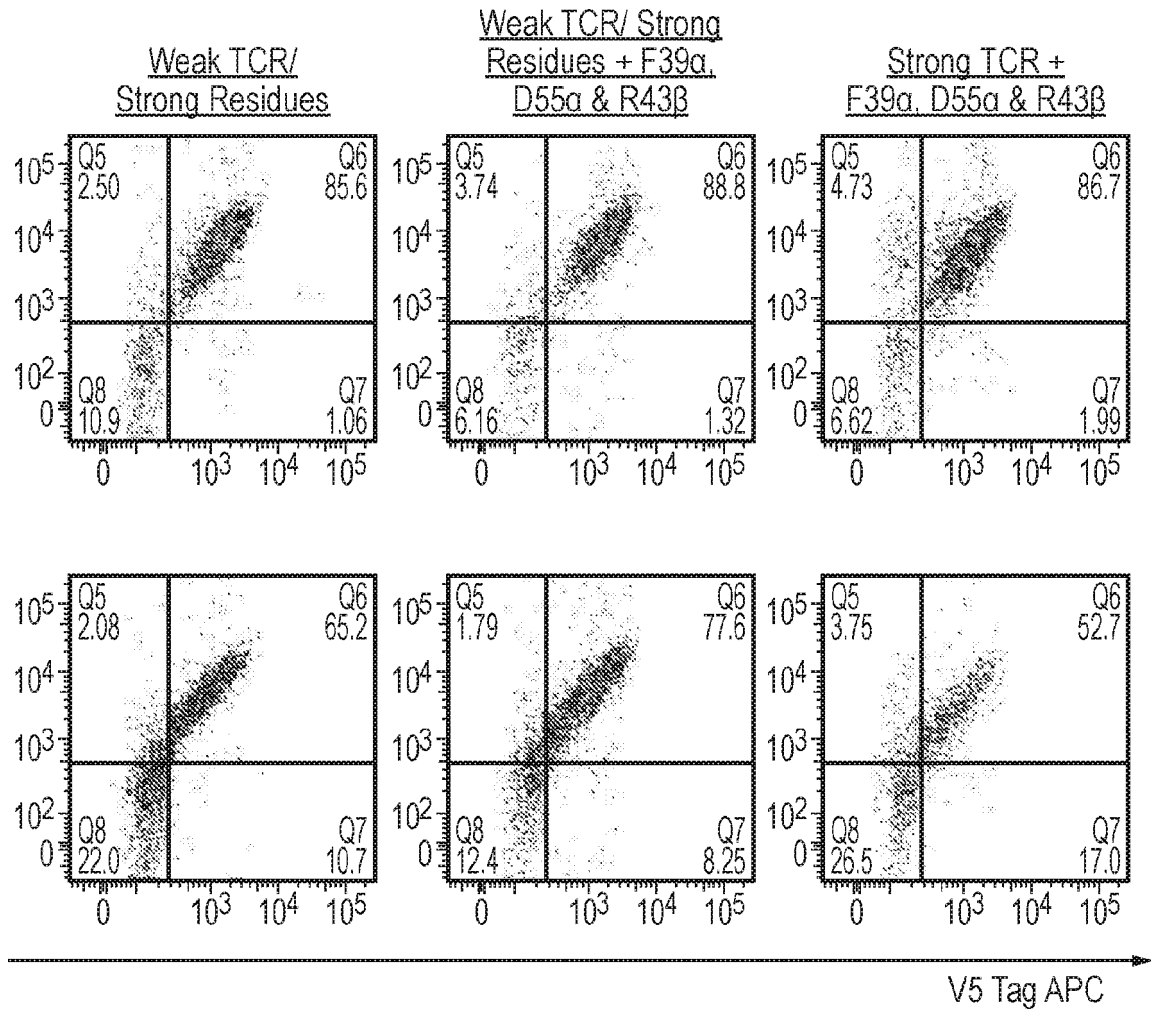
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	MFI	Strong TCR	Weak TCR	Strong TCR / Weak Res
C	V5 Tag	864	328	149
	Myc Tag	2005	1392	114
D	V5 Tag	413	209	169
	Myc Tag	830	329	132
	Con beta	3866	3838	3747

FIG. 13

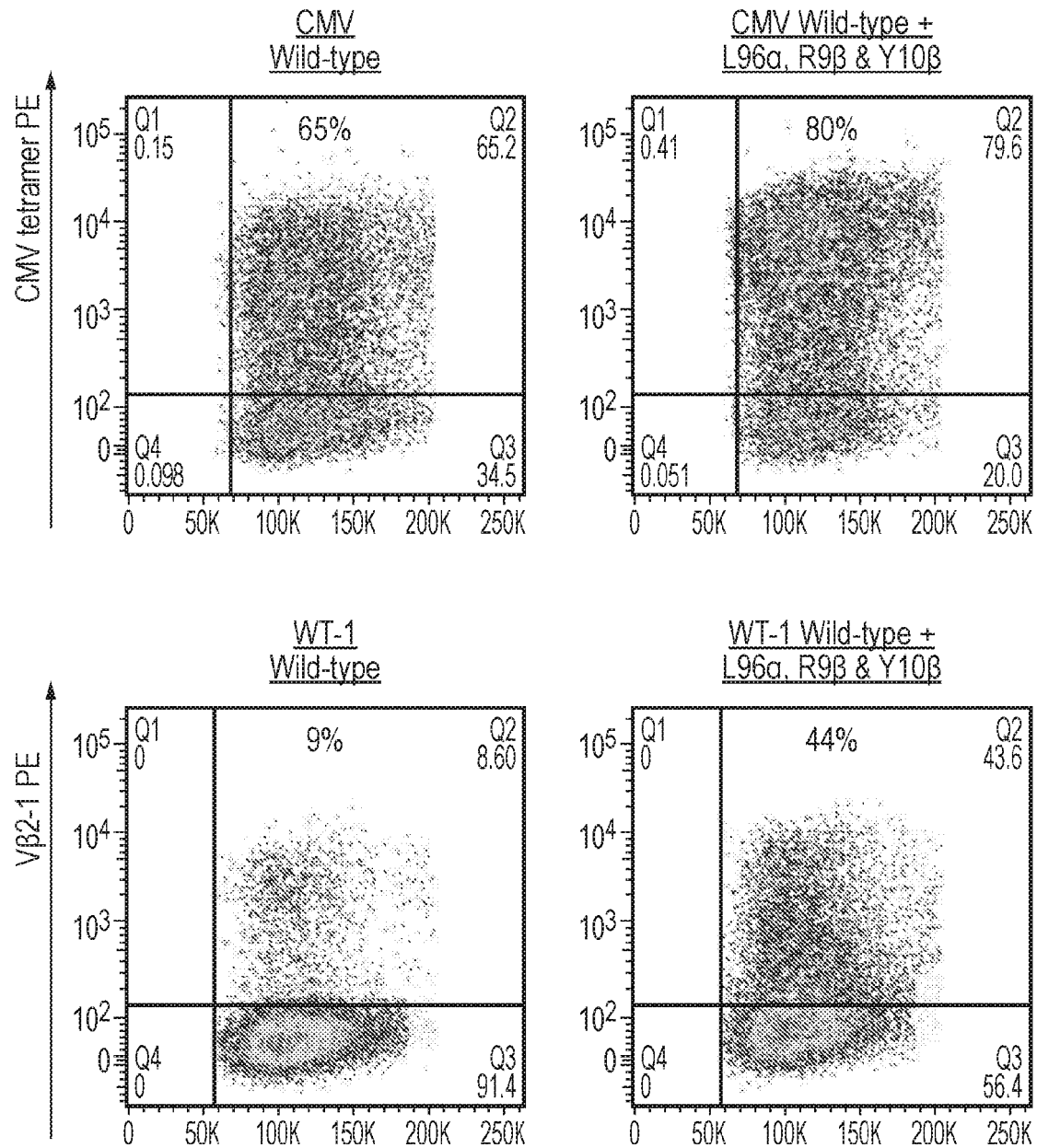
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Weak TCR / Strong Res	Weak TCR / Strong Res -3aa	Strong TCR -3aa
1338	1695	1295
5432	7020	4964
535	868	418
2143	3561	1295
3451	3045	3596

FIG. 13 (Continued)

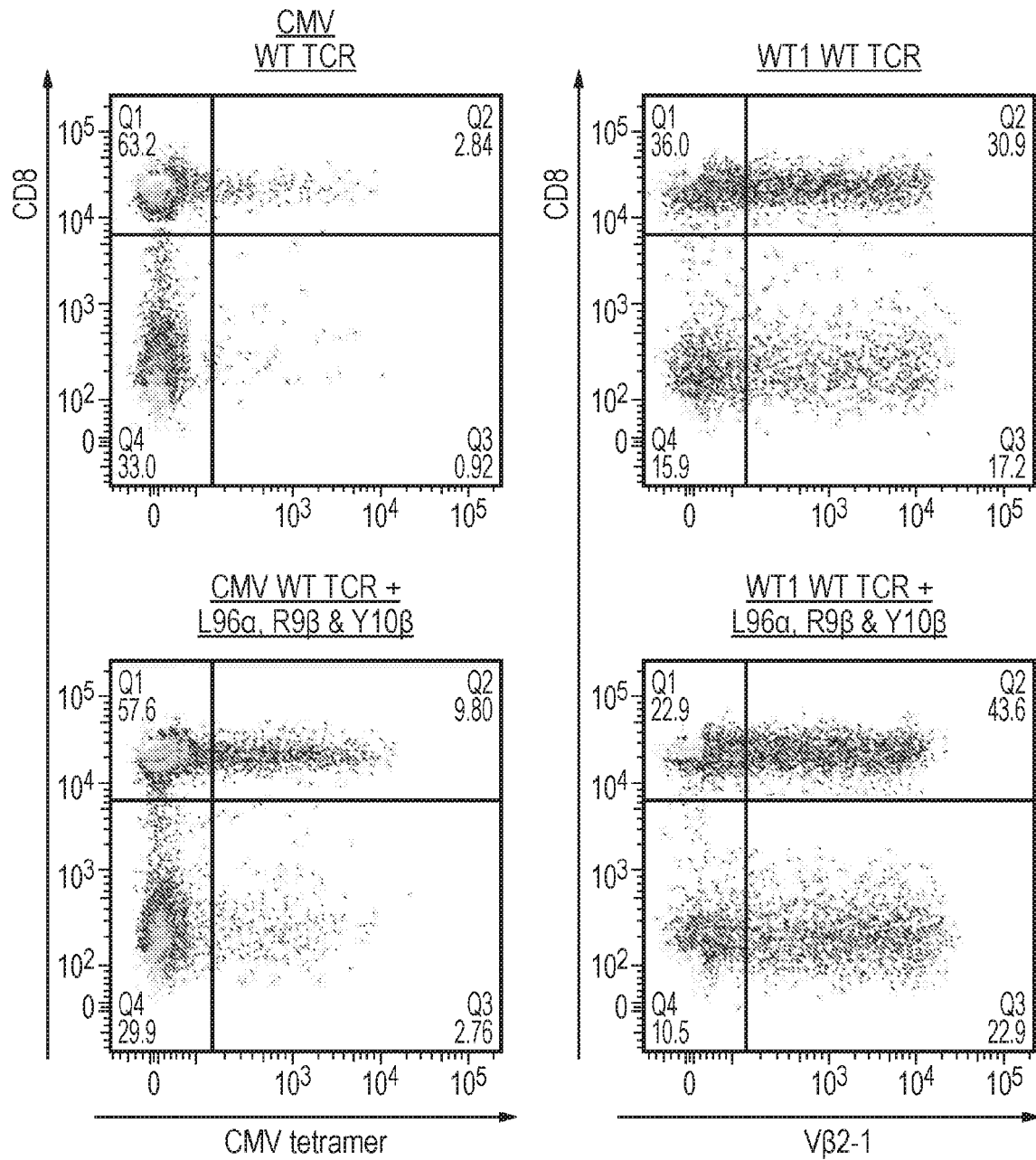
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MF1	Wild-type	Wild-type + L96α, R9β & Y10β
CMV tetramer	410	2153
WT1 Vβ2-1	64	131

FIG. 14

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MFI in Q2	Wild-type	Wild-type + L96α, R9β & Y10β
CMV tetramer	176	341
WT1 Vβ2-1	836	1278

FIG. 15

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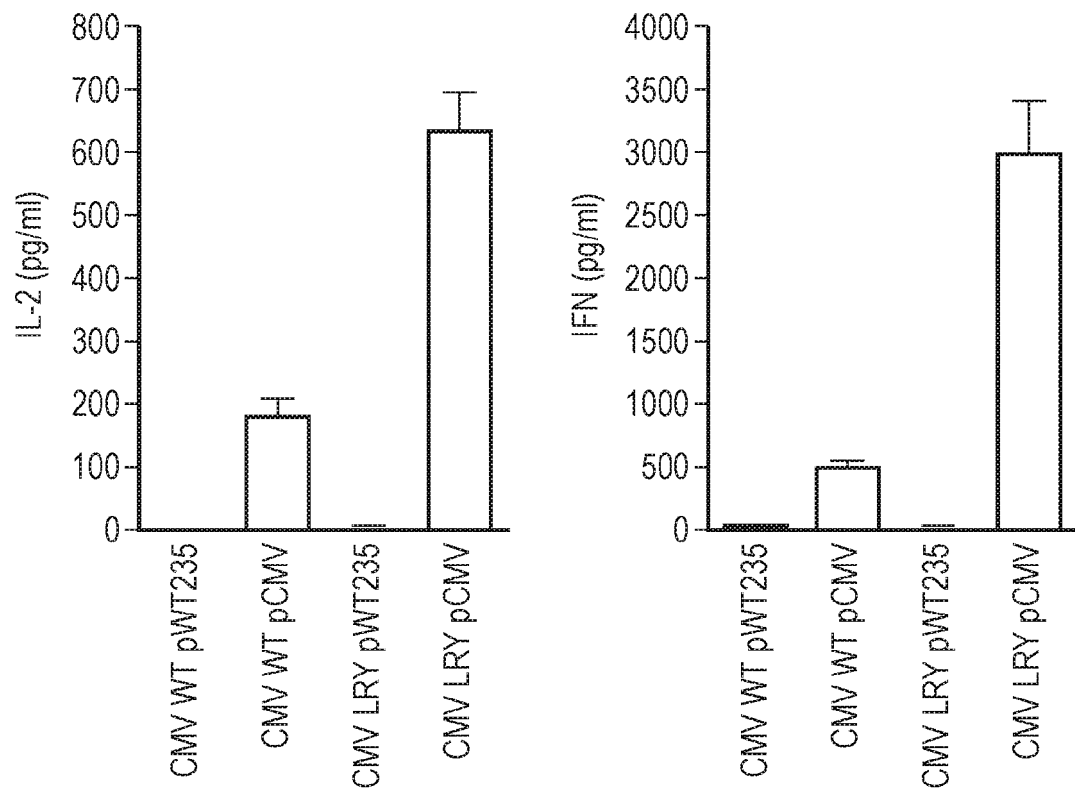


FIG. 16

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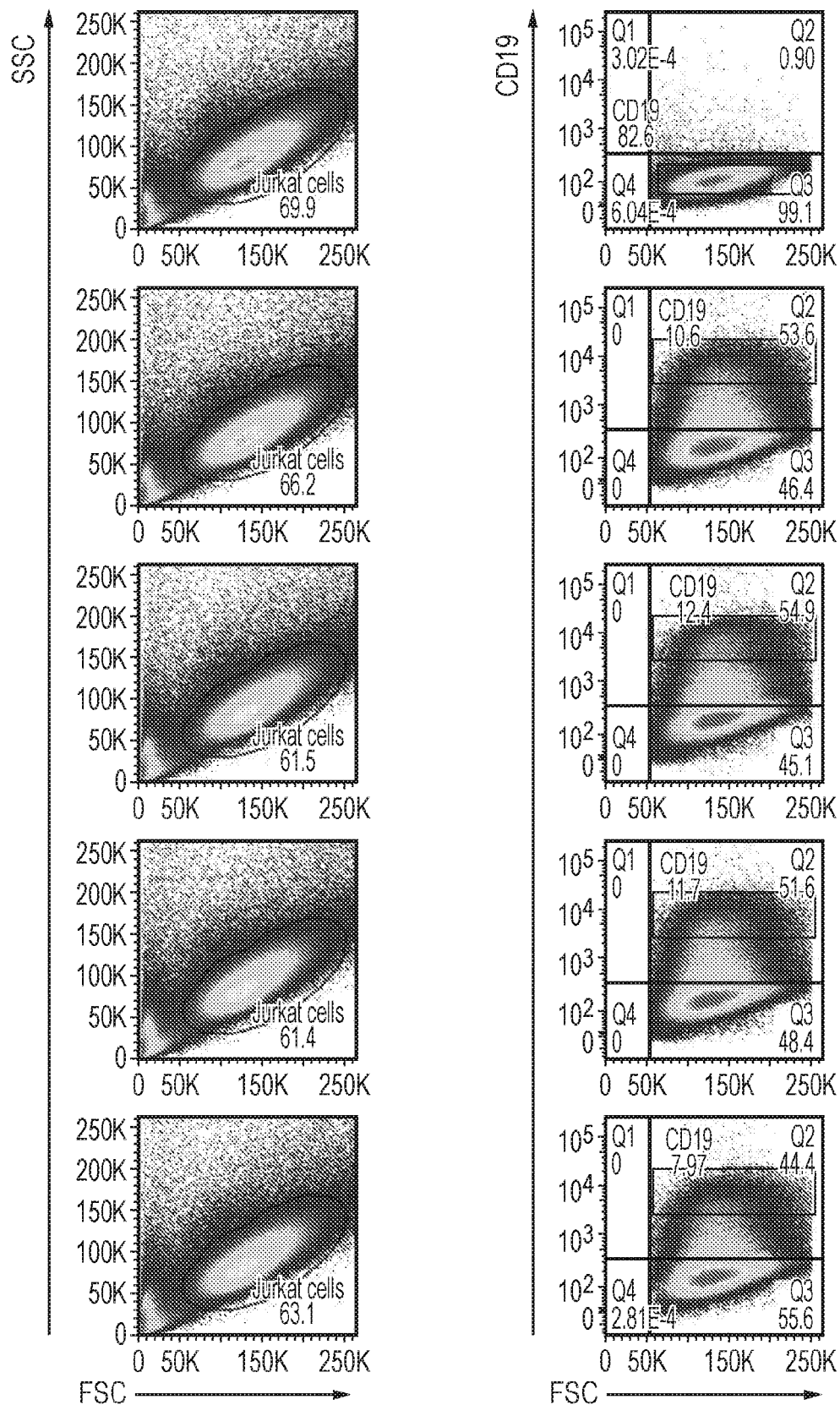
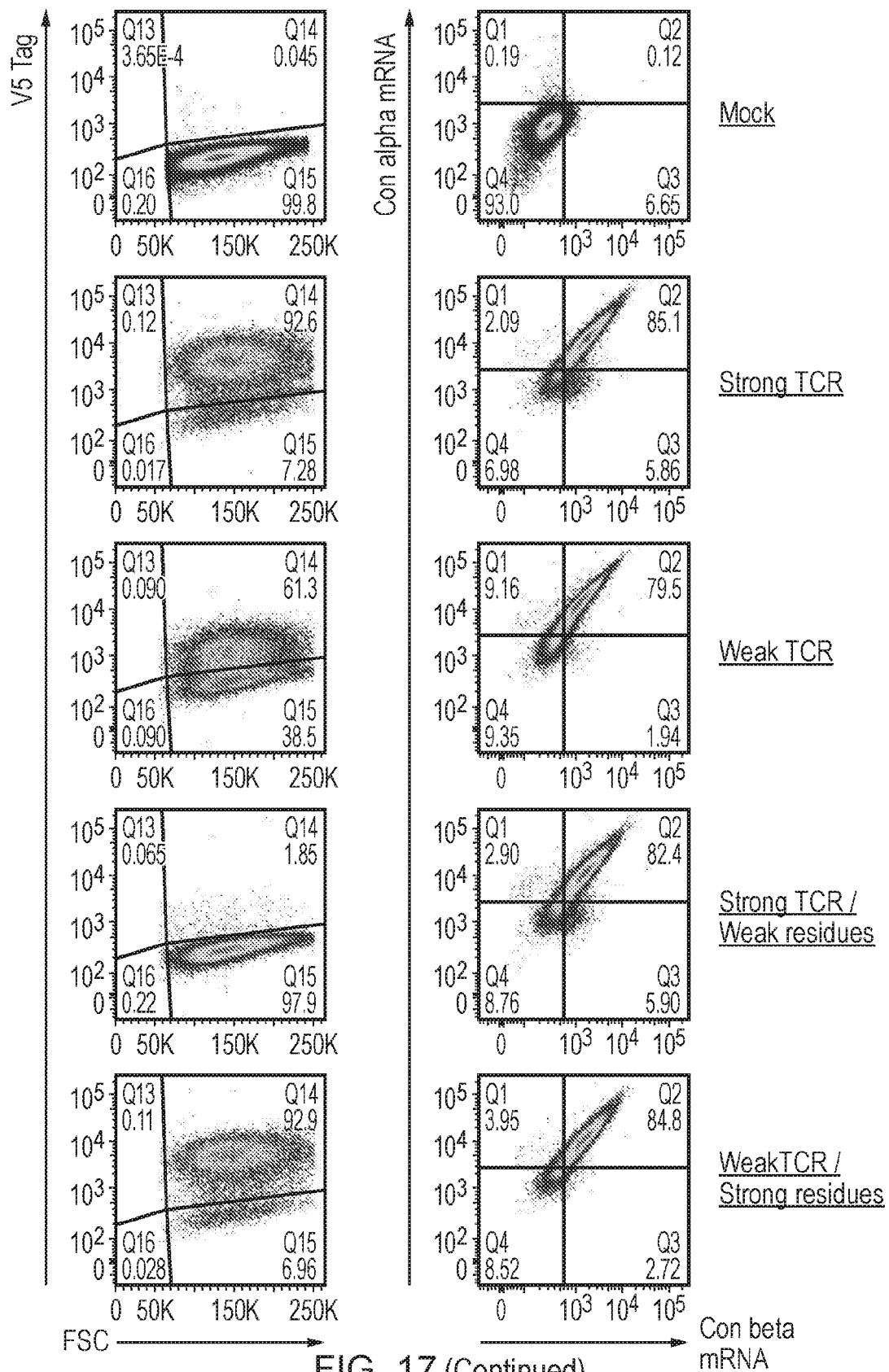


FIG. 17

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CD19 gated

<u>MFI</u>	<u>Alpha mRNA</u>	<u>Beta mRNA</u>
<u>Strong TCR</u>	9847	1675
<u>Weak TCR</u>	8709	1045
<u>Strong TCR / Weak res</u>	9035	1480
<u>Weak TCR / Strong res</u>	9260	1487

FIG. 17 (Continued)

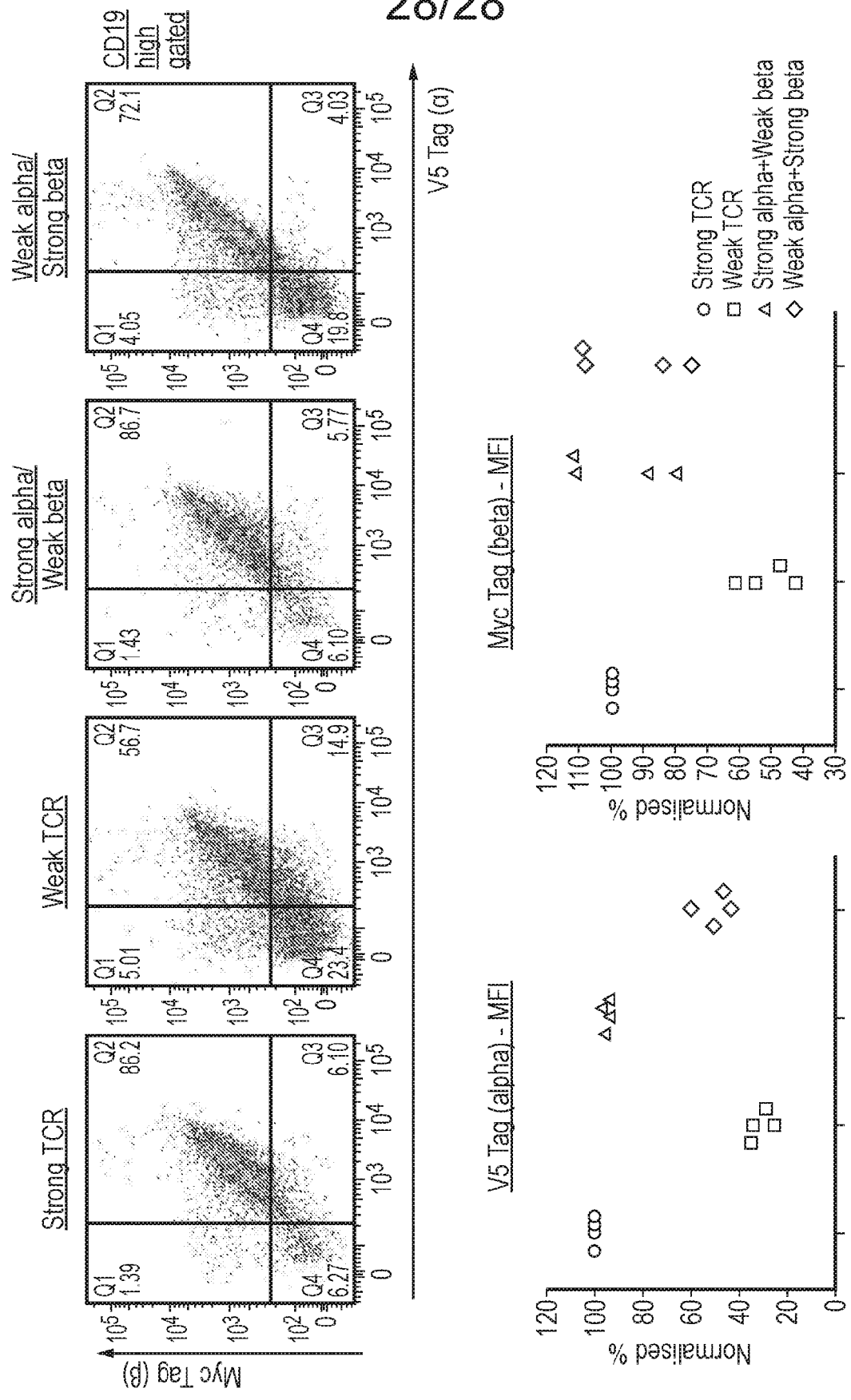


FIG. 18