

Supp. Table 1

	B518	B618	B204	B108	XMEN_1	XMEN_2	XMEN_3	XIAP_1	Total
	Healthy Donors			EBV_naive	MAGT1 ^{y/-}			XIAP ^{y/-}	
C1	795	42	229	21	20	13	1	1	1122
C2	35	62	19	118	352	75	1	111	773
C3	35	4	360	3	17	0	0	61	480
C4	38	45	39	126	170	48	0	241	707
C5	380	96	2	5	3	1	0	0	487
C6	12	58	35	337	95	11	5	5	558
C7	29	6	153	7	66	7	0	143	411
C8	11	56	7	290	2	1	0	3	370
C9	91	61	30	7	104	31	6	1	331
C10	184	10	21	3	22	3	2	0	245
C11	74	25	10	85	4	1	0	60	259
C12	173	9	57	4	3	9	1	2	258
C13	76	39	9	103	0	0	0	22	249
C14	40	13	9	56	5	3	0	27	153
C15	21	0	114	0	22	0	1	32	190
C16	3	11	15	13	38	15	1	0	96
C17	14	4	10	2	18	1	2	1	52
C18	29	8	46	2	14	0	0	23	122
Total	2040	549	1165	1182	955	219	20	733	6863

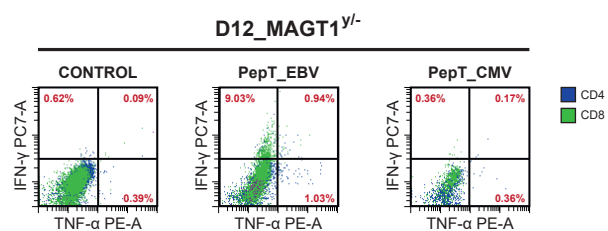
Supp. Table 2

	HD080	HD1268	HD756	HD04	HD05	HD06	HD07	HD08	HD09	XMEN_1	XMEN_3	XIAP_2	PIK3CD_1	PIK3CD_2
	Healthy donors									XMEN		XIAP_2	APDS	
C1	157	84	99	86	96	47	99	65	44	309	2599	231	1871	296
C2	241	332	171	144	280	102	162	34	65	330	1143	5	148	1136
C3	248	69	344	765	180	545	82	58	42	86	638	751	274	588
C4	85	65	157	572	25	86	45	31	13	61	261	1639	123	82
C5	549	608	764	117	59	24	59	133	39	98	289	18	122	59
C6	113	86	154	49	47	62	133	37	46	264	649	215	301	164
C7	178	90	174	630	71	102	45	23	24	61	129	204	40	46
C8	104	114	78	47	19	15	158	335	115	39	132	43	53	40
C9	290	105	217	136	77	69	40	15	31	35	94	19	375	129
C10	110	289	19	49	92	56	23	24	16	231	235	3	15	223
C11	12	44	142	45	54	15	21	26	37	205	325	6	86	57
C12	39	7	497	172	85	115	37	97	46	1	5	0	0	0
C13	33	4	281	23	3	2	24	20	47	2	0	0	0	0
C14	2	0	0	4	4	1	1	2	0	31	310	20	127	4
C15	36	17	24	20	14	4	9	19	4	36	93	2	7	8
C16	6	75	6	8	14	4	5	3	2	33	112	21	12	4
C17	19	73	22	4	3	1	2	0	2	13	23	0	1	0
C18	0	0	1	0	0	0	8	12	17	0	0	0	0	0
C19	2	1	3	17	3	8	3	1	1	3	13	22	3	5
C20	1	12	56	2	0	0	1	0	0	1	1	3	4	1
C21	16	1	10	0	2	3	0	0	2	5	5	0	4	2

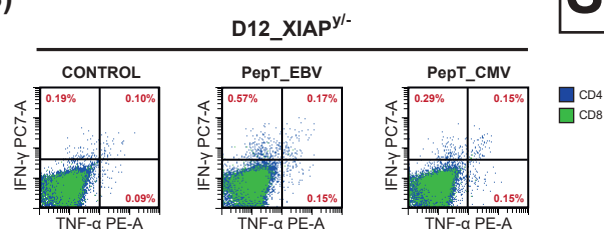
Supp. Table 3

	Fluorophore	Clone	Supplier
Viability			
AnnexinV	APC	-	BD Biosciences
AnnexinV	PE	-	BD Biosciences
DAPI	-	-	BD Biosciences
LIVE/DEAD Fixable Blue	-	-	Thermo Fisher
Propidium iodide	-	-	BioLegend
Zombie Aqua Fixable Surface	-	-	BioLegend
CCR2	APC	K036C2	BioLegend
CCR5	PB450	HEK/1/85a	BioLegend
CD16	APC	3G8	BioLegend
CD16	V500	3G8	BD Horizon
CD161	PE	W18070C	BioLegend
CD161	AF700	HP-3G10	BioLegend
CD19	BYG667	SJ25C1	CYTEK
CD19	FITC	H1B19	BioLegend
CD25	PB450	BC96	BioLegend
CD25	APC-Fire810	M-A251	BioLegend
CD25	PE	BC96	BioLegend
CD25	PE/Cy7	BC96	BioLegend
CD27	FITC	M-T271	BioLegend
CD3	BUV496	UCHT1	BD Biosciences
CD3	FITC	UCHT1	BioLegend
CD3	PB450	UCHT1	BioLegend
CD3	PerCP5.5	OKT3	BioLegend
CD38	Spark-NIR685	HIT2	BioLegend
CD39	FITC	A1	BioLegend
CD4	APC	OKT4	BioLegend
CD4	FITC	OKT4	BioLegend
CD4	V500	RPA-T4	BD Biosciences
CD45	BUV395	HI30	BD Biosciences
CD45RA	PB450	HI100	BioLegend
CD56	PE	MEM-188	BioLegend
CD56	PE-Cy5	MEM-188	BioLegend
CD56	PE-Dazzle594	5.1H11	BioLegend
CD57	PE-Dazzle594	HNK-1	BioLegend
CD62L	PE-Cy7	DREG-56	BioLegend
CD69	Alexa Fluor 700	FN50	BioLegend
CD69	APC/Cy7	FN50	BioLegend
CD69	PE/Cy7	FN50	BioLegend
CD8	APC/Cy7	SK1	BioLegend
CD8	PE/Cy7	SK1	BioLegend
CD94	FITC	DX22	BioLegend
CTV	-	-	ThermoFisher
CXCR3	APC	G025H7	BioLegend
HLA-DR	APC-Cy7	L243	BioLegend
HLA-DR	PE	LN3	BioLegend
KIR2DL2/L3	PE/Cy7	DX27	BioLegend
KIR2DL1/S1/S3/S5	PE/Cy7	HP-MA4	BioLegend
KLRG1	APC	SA231A2	BioLegend
LAMP1	APC	H4A3	BioLegend
LAMP1	PerCP	H4A3	BioLegend
NKG2A	APC	S19004C	BioLegend
NKG2A	PE-Cy5	S19004C	BioLegend
NKG2C	Alexa Fluor 488	-	R&D Systems
NKG2D	PE	1D11	BioLegend
NKp30	BV421	P30-15	BioLegend
NKp30	APC	P30-15	BioLegend
NKp44	PE/Cy7	P44-8	BioLegend
NKp80	APC	5D12	BioLegend
PD-1	BUV737	EH12.1	BD Biosciences
PD-1	APC/Cy7	NAT105	BioLegend
TCR Vα7.2	FITC	3C10	BioLegend
TCRVα7.2	PE-Cy7	3C10	BioLegend
TRDV1	PE	TS8.2	ThermoFisher
TRDV2	APC	B6	BioLegend
Intracellular			
GM-CSF	PE	BVD2-21C11	BioLegend
IFNγ	APC	4S.B3	BioLegend
IFNγ	PE/Cy7	4S.B3	BioLegend
GZMB	PE-Dazzle594	QA18A28	BioLegend
GZMB	PerCP5.5	QA16A02	BioLegend
TNFα	APC	MAb11	BioLegend
TNFα	PE	MAb11	BioLegend

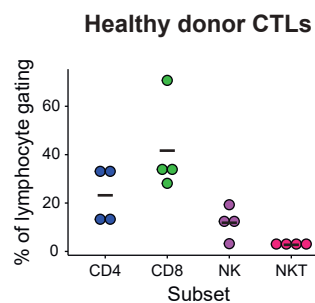
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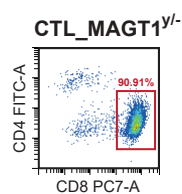
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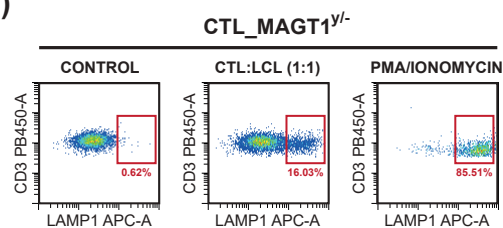
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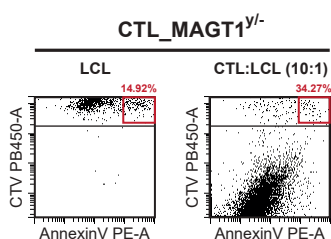
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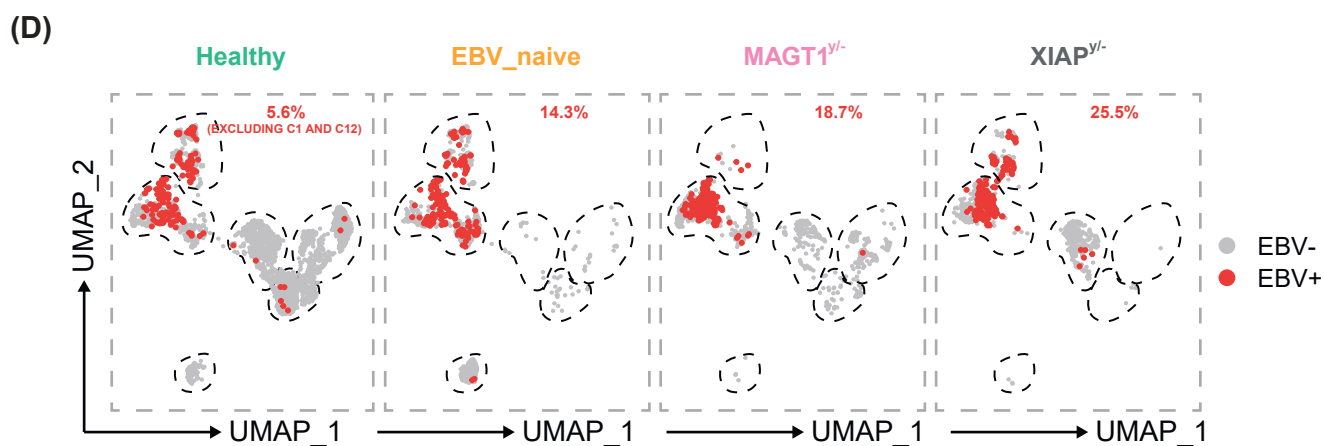
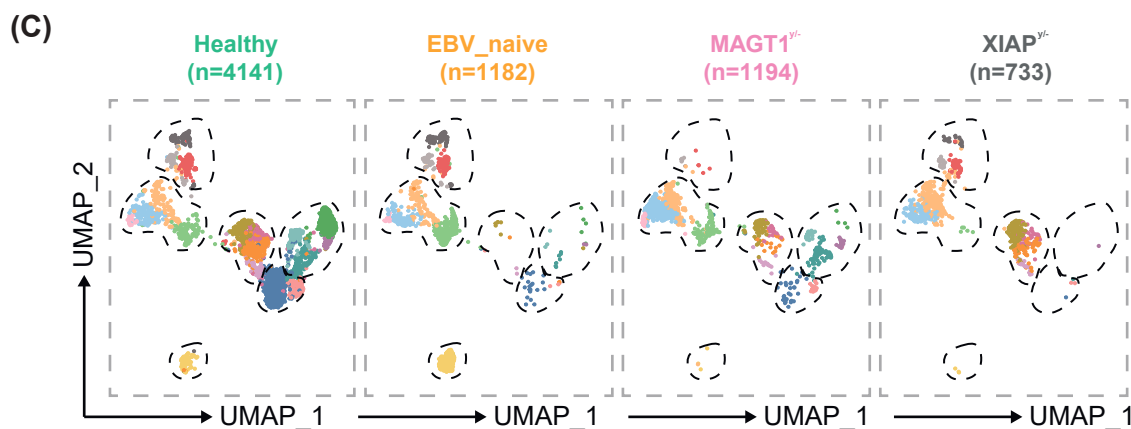
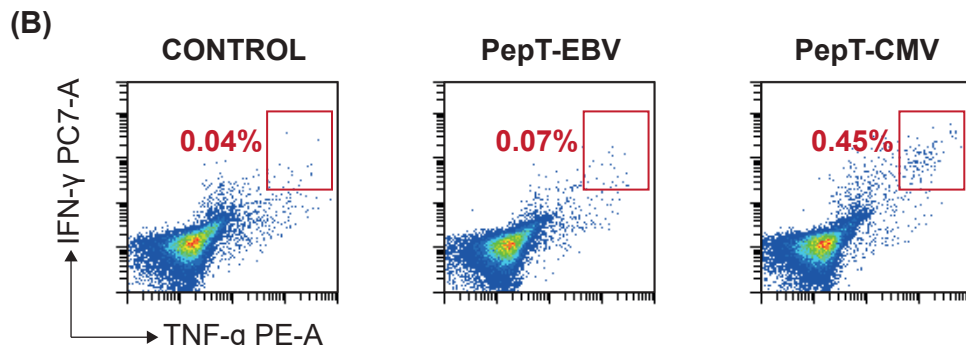
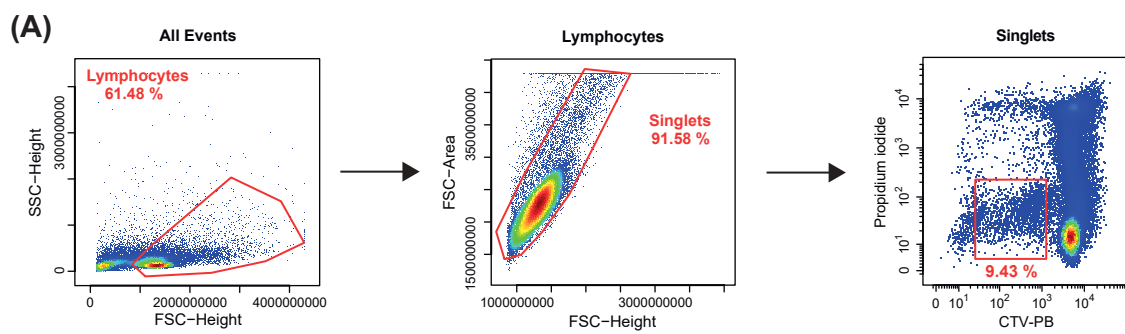


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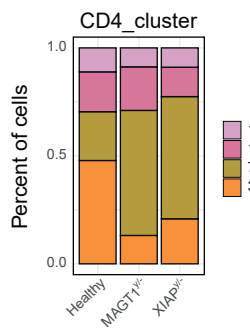


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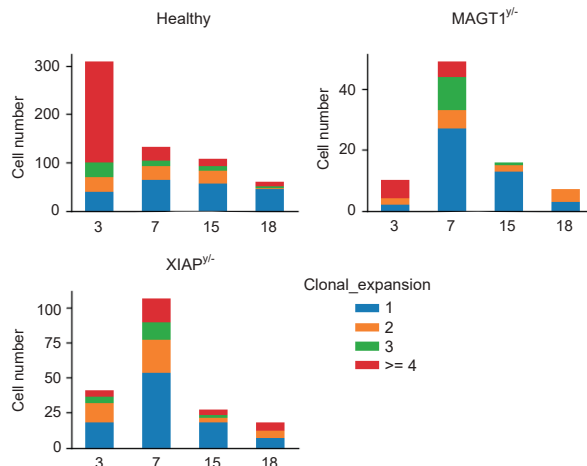




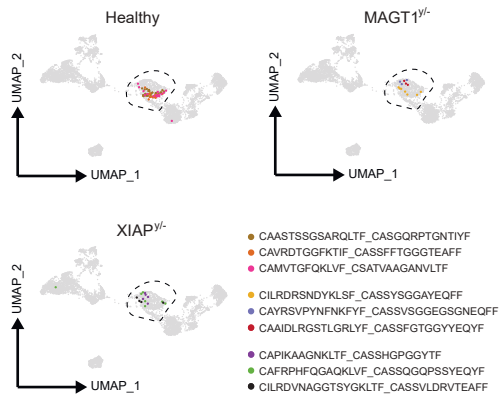
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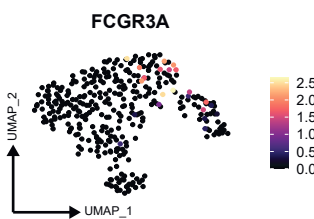
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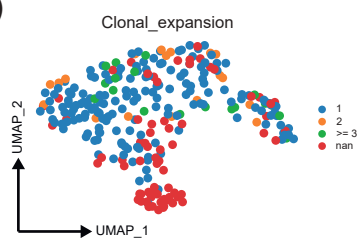
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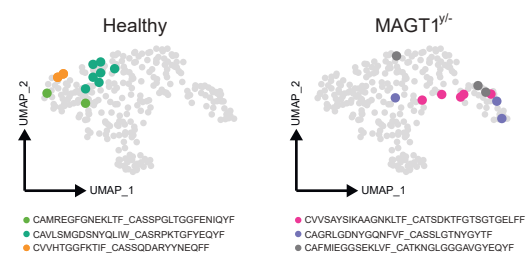
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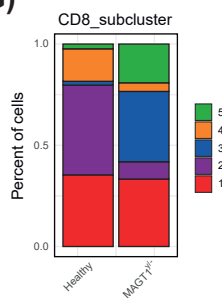
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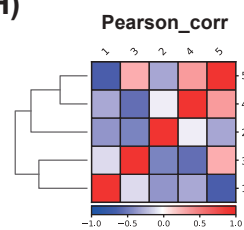
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(G)



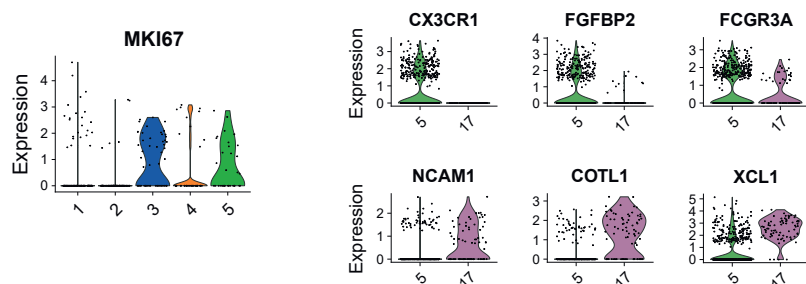
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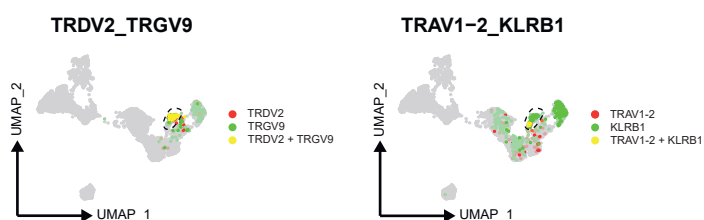
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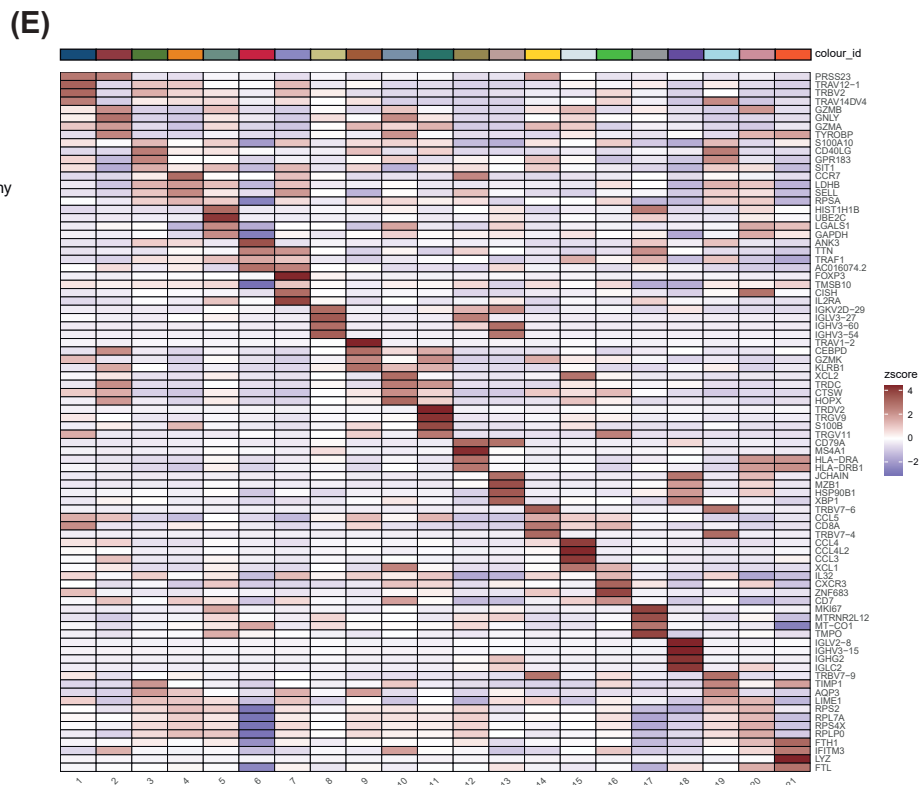
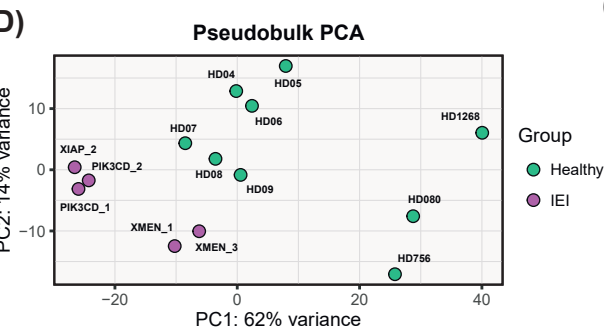
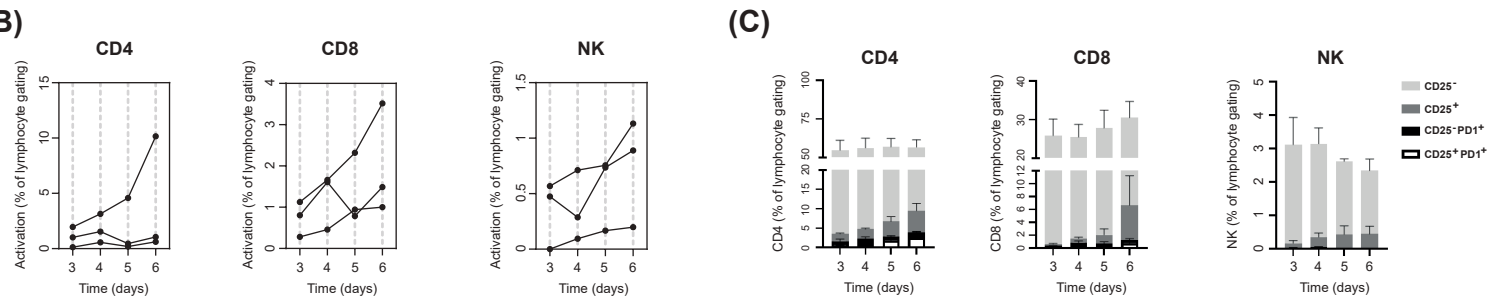
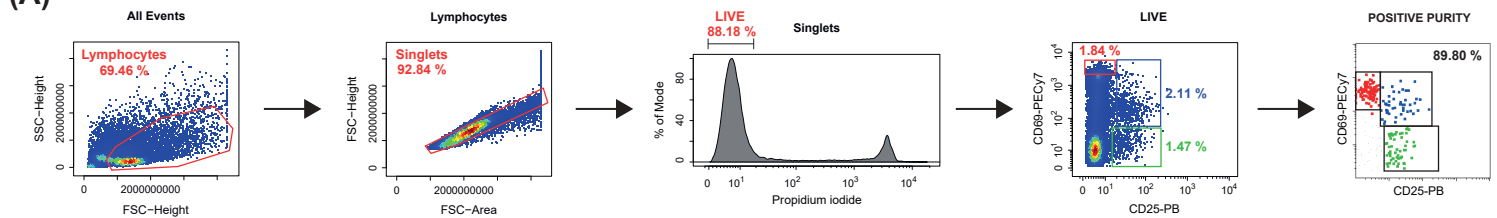
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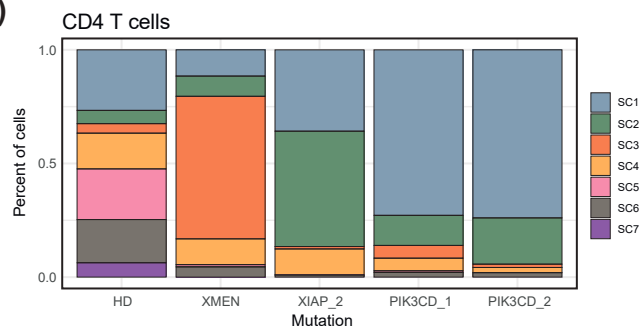
(K)

C10: $\gamma\delta$ _TRDV2 + MAIT cells

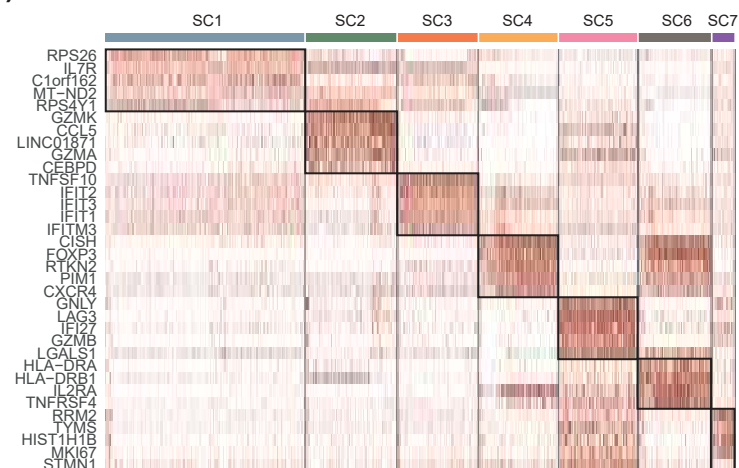




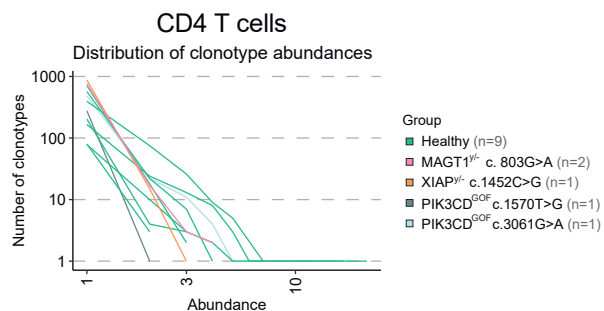
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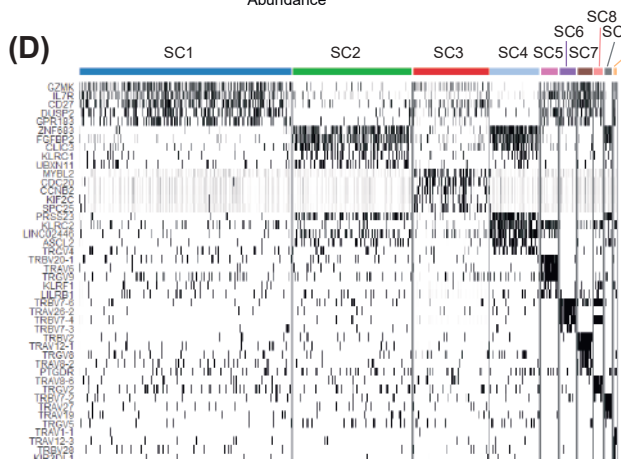
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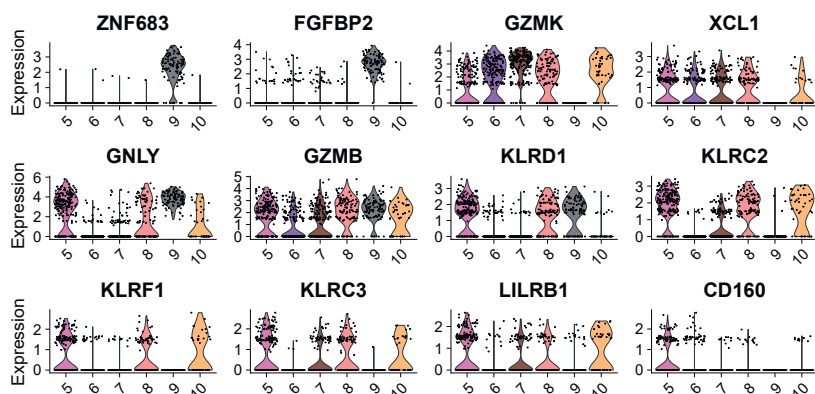
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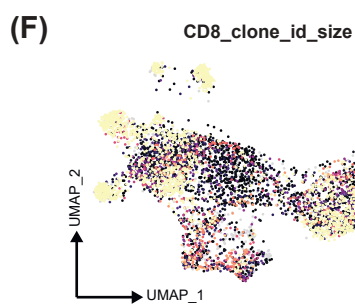
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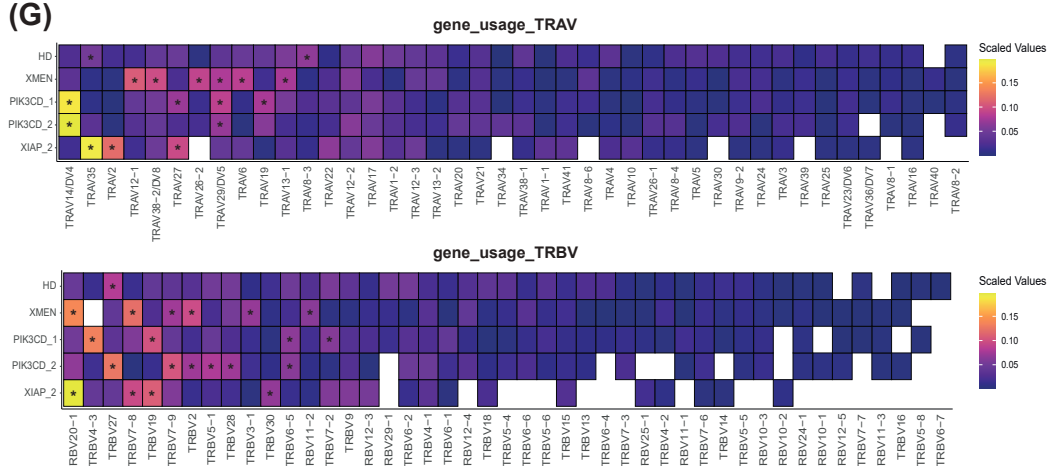
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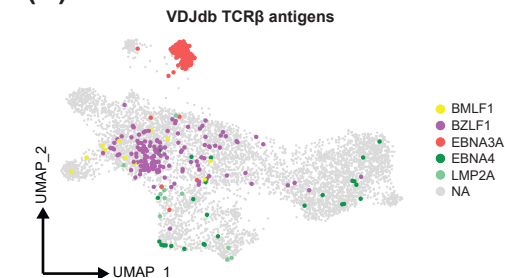
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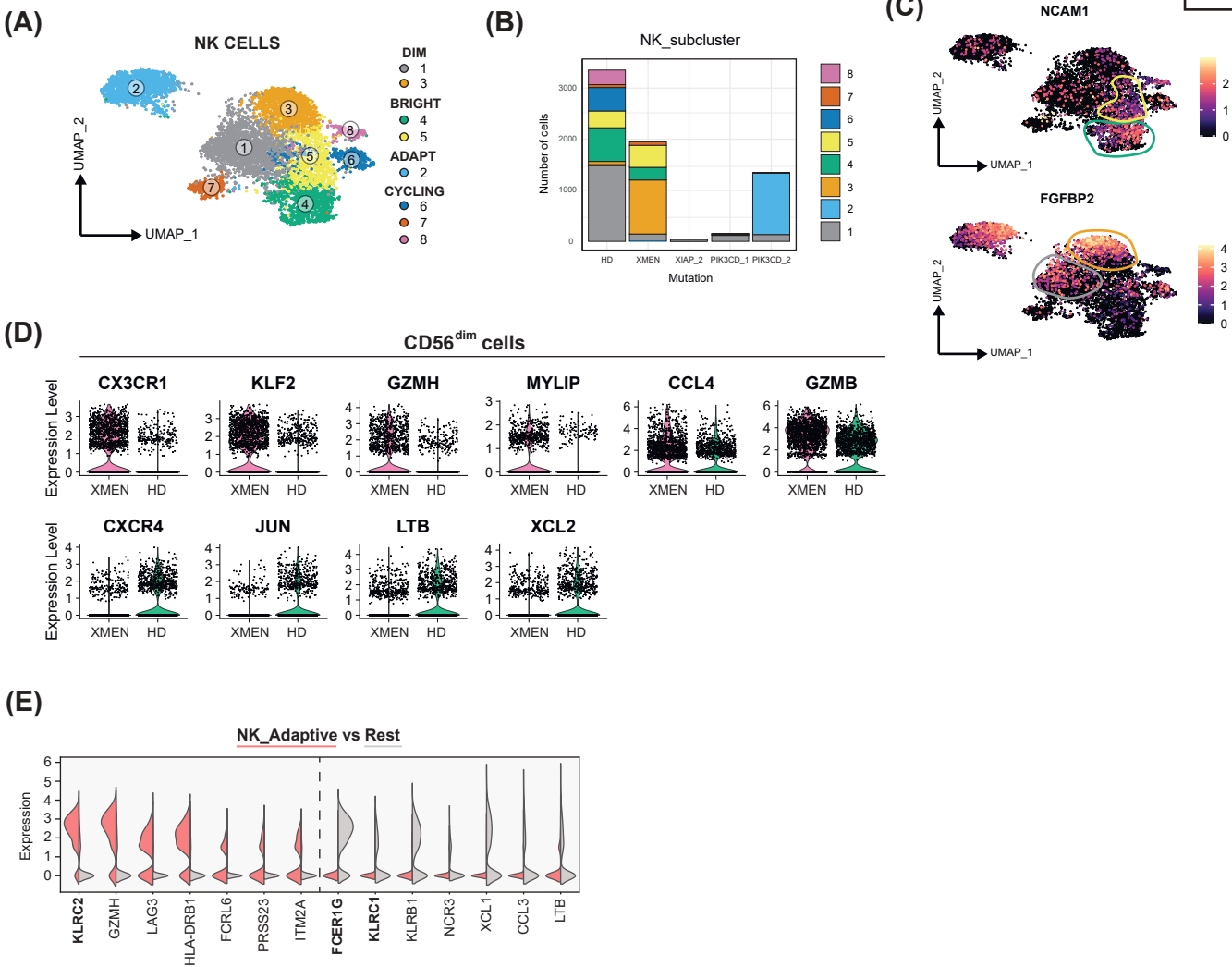


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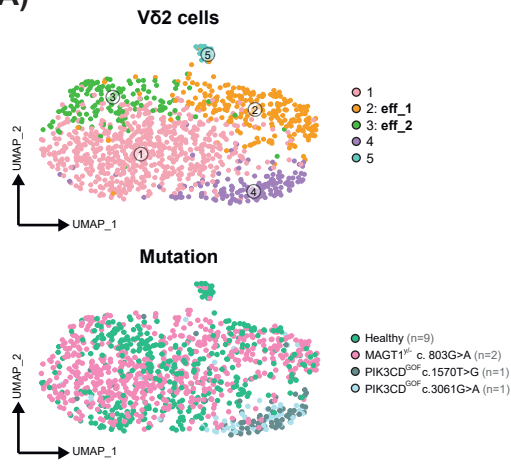


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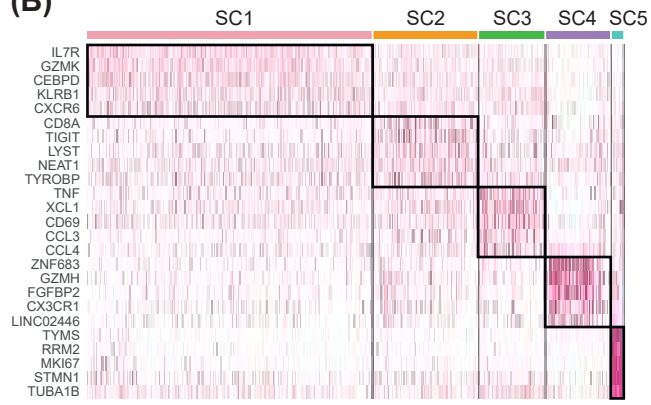




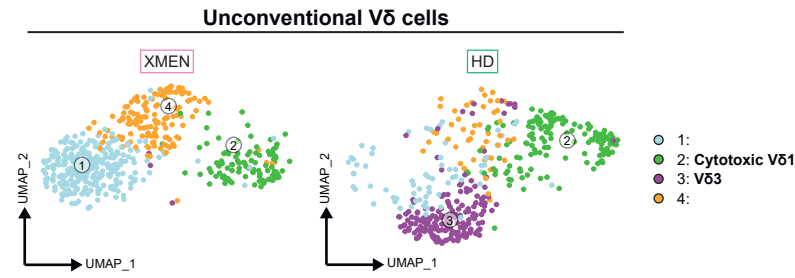
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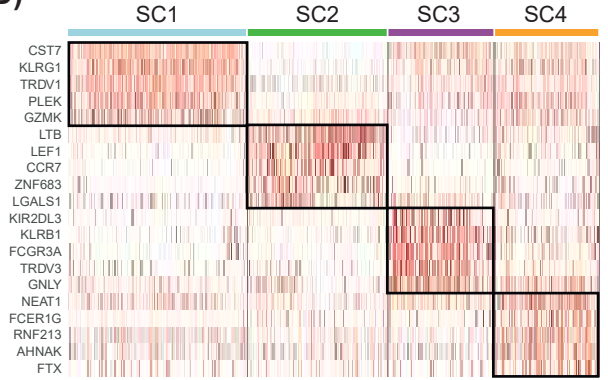
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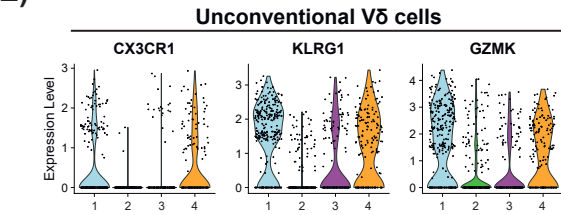
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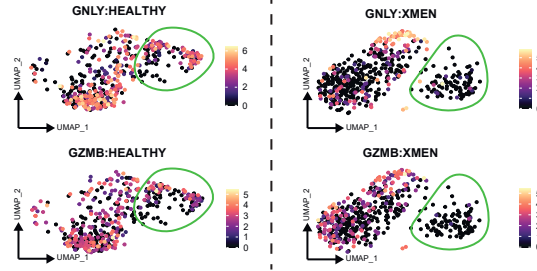
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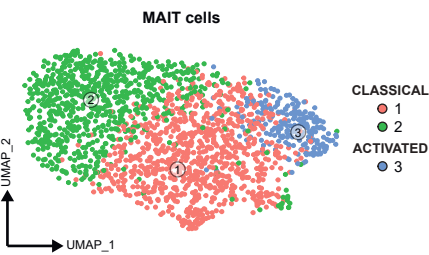
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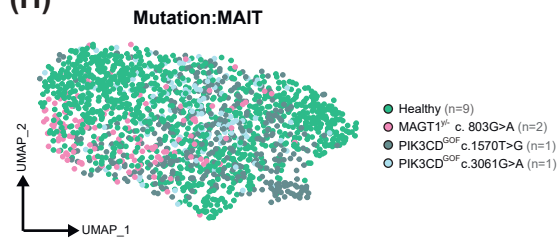
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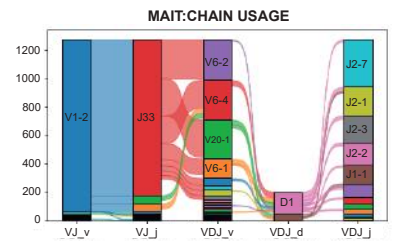
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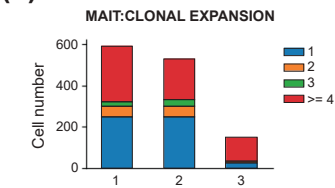
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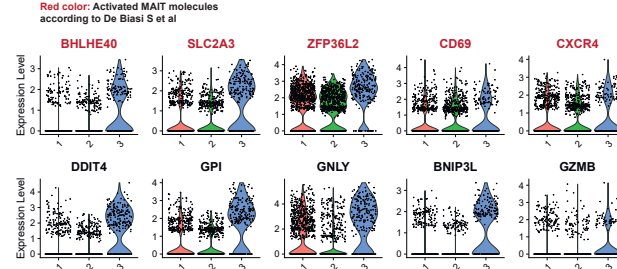
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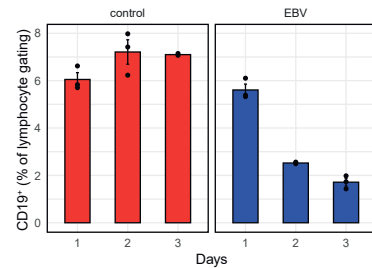
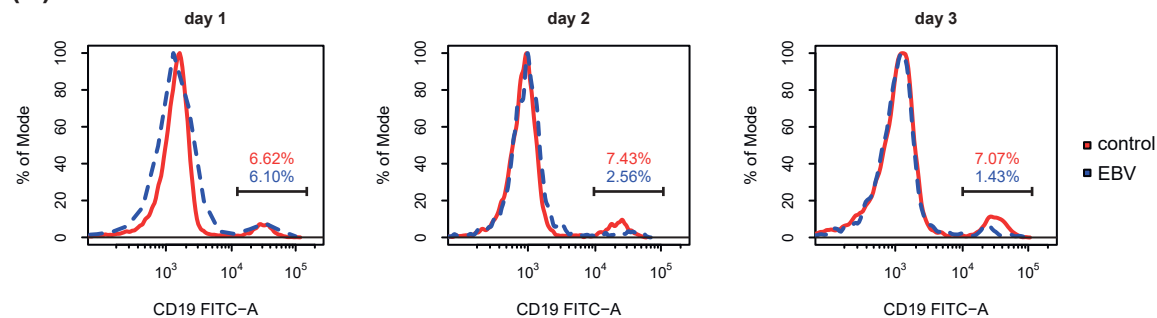
(J)



(K)

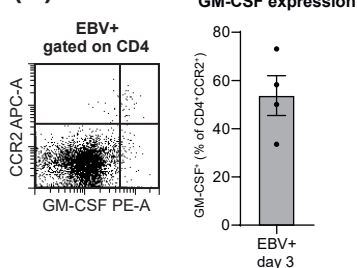


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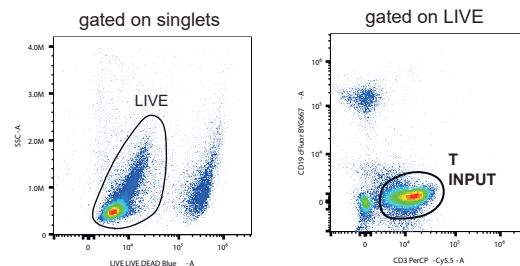


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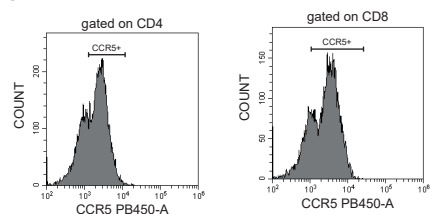
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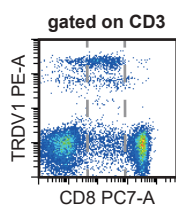
T CELL PANEL
Fix Blue (UV6)
CD38 (NIR685)
CD19 (BYG667)
HLA-DR (APC/Cy7)
CD27 (FITC)
CD3 (PerCP5.5)
CD8 (PC7)
KLRG1 (APC)
CCR5 (PB)
CD161 (AF700)
CD25 (PE)
CD4 (v500)
GZMB (PE/Dazzle)



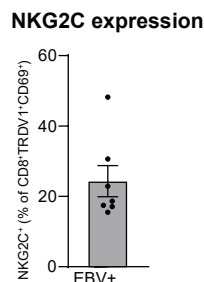
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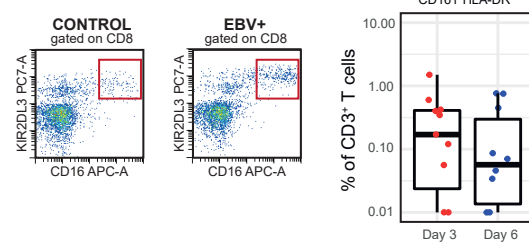
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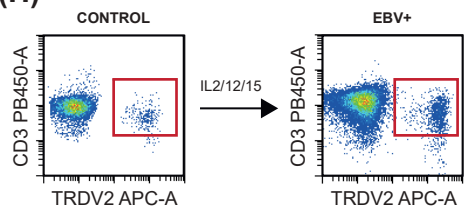
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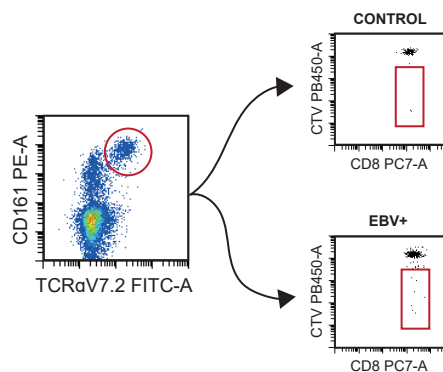
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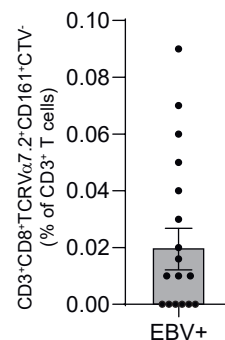
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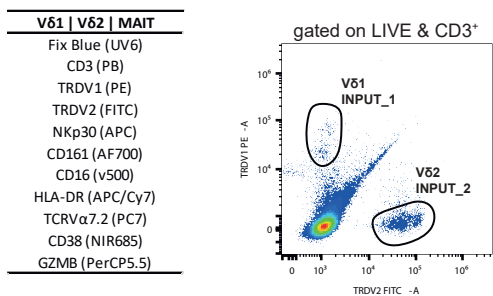
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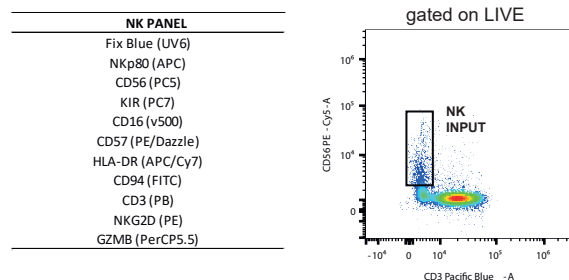
MAIT proliferation



(J)

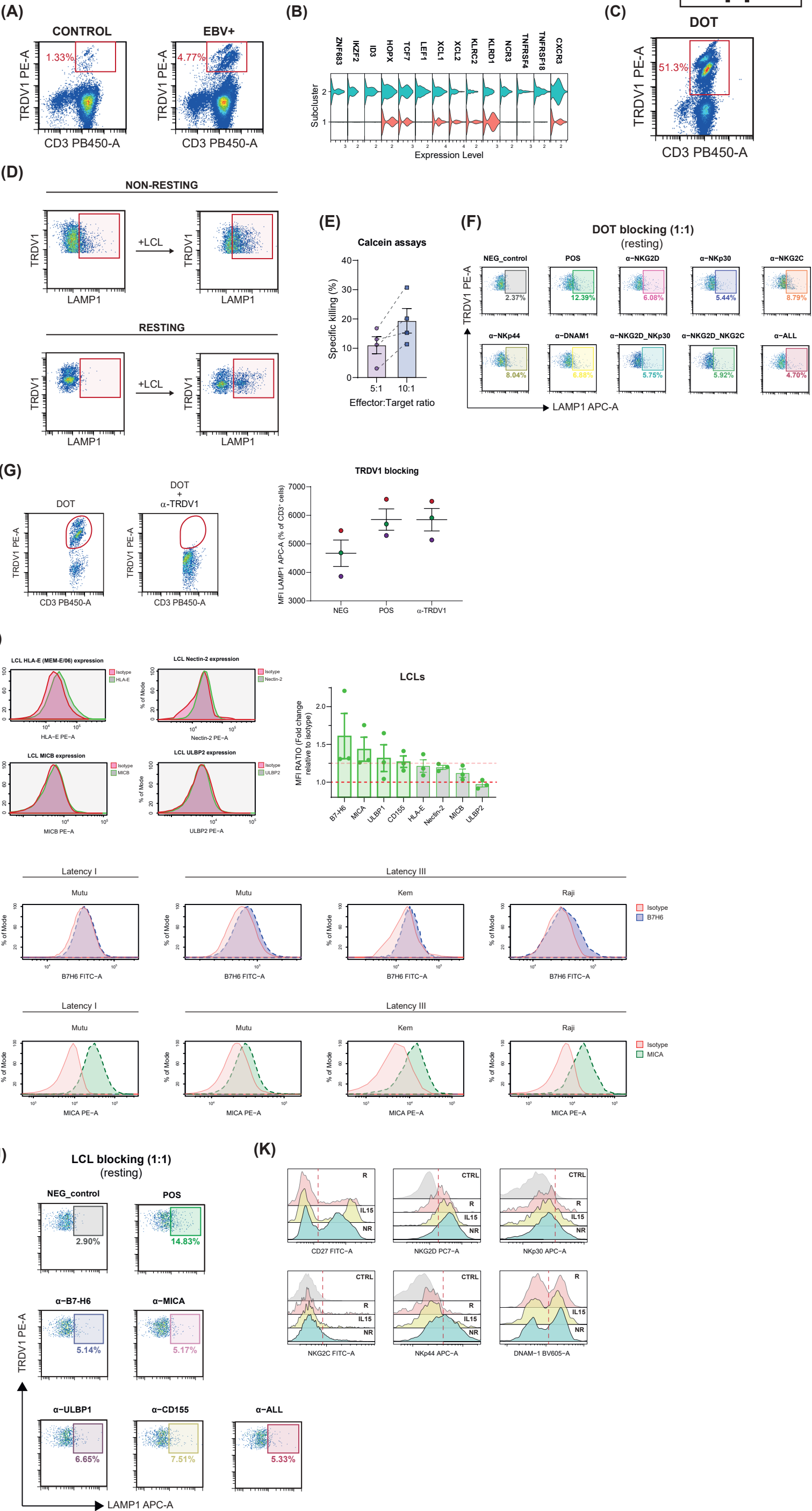


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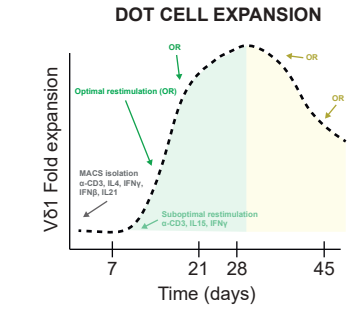


V61 V62 MAIT
Fix Blue (UV6)
CD3 (PB)
TRDV1 (PE)
TRDV2 (FITC)
NKp30 (APC)
CD161 (AF700)
CD16 (v500)
HLA-DR (APC/Cy7)
TCRaV7.2 (PC7)
CD38 (NIR685)
GZMB (PerCP5.5)

NK PANEL
Fix Blue (UV6)
NKp80 (APC)
CD56 (PC5)
KIR (PC7)
CD16 (v500)
CD57 (PE/Dazzle)
HLA-DR (APC/Cy7)
CD94 (FITC)
CD3 (PB)
NKG2D (PE)
GZMB (PerCP5.5)



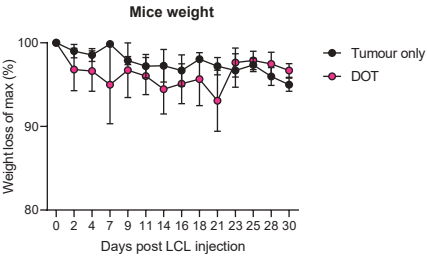
(A)



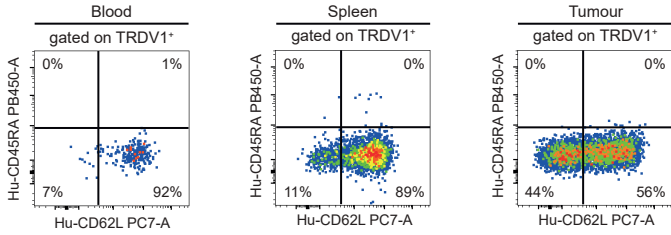
(B)

Donor	CD3 ⁺ TRDV1 ⁺ (% of CD3 ⁺)	CD27 ⁺ (% of CD3 ⁺ TRDV1 ⁺)	NKp30 ⁺ (% of CD3 ⁺ TRDV1 ⁺)	NKG2D ⁺ (% of CD3 ⁺ TRDV1 ⁺)	Mice injected
D1	21.3	93.5	31.9	65.4	2
D2	43.3	58.8	26.1	59.3	1

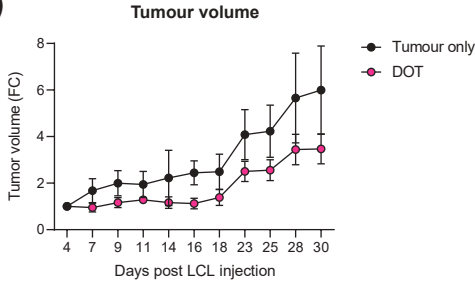
(C)



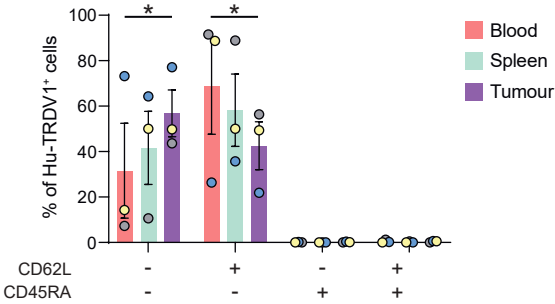
(D)



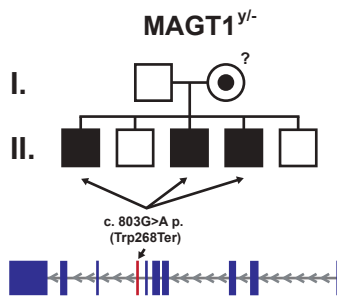
(E)



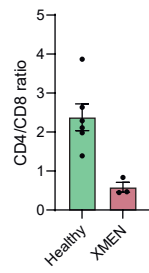
DOT memory populations at sacrifice



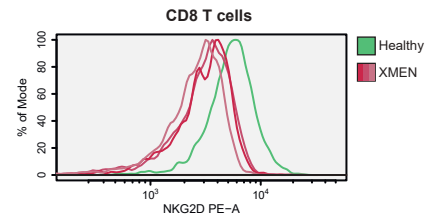
(A)



(B)



(C)



(D)

