



**SUPPLEMENTAL FIGURE 1. Analysis of NK and T cell dynamics in anti-IL-15-treated RM prior to SIV infection.** (A) Absolute NK cell counts, including CD16<sup>+</sup> CD56<sup>-</sup>, CD16<sup>-</sup> CD56<sup>+</sup> and CD16<sup>-</sup> CD56<sup>-</sup> subsets in the blood in the short duration anti-IL-15 mAb (Group A, n = 7), long duration anti-IL-15 mAb (Group B, n = 8) or IgG control mAb (Group C, n = 8) treatment groups prior to SIVmac239 infection. Results (mean + SEM) are shown as percentage of baseline. (B-C) Comparison of CD8<sup>+</sup> and CD4<sup>+</sup> T<sub>CM</sub>, T<sub>TrM</sub>, T<sub>EM</sub> and T<sub>N</sub> dynamics (absolute counts and proliferative fraction) in blood in each RM treatment group. Results (mean + SEM) are shown as absolute counts percentage of baseline or percentage of Ki-67<sup>+</sup>, change (Δ) from baseline. (D) Comparison of CD8<sup>+</sup> and CD4<sup>+</sup> T cell proliferative fraction and percentage of CD4<sup>+</sup> T cells of total T cells in the lung airspace. Results (mean + SEM) are shown as fold change from baseline or percentage of Ki-67<sup>+</sup>, change (Δ) from baseline. Significance of difference in all parameters was assessed as described in Materials and Methods (\*p < 0.05).

**SUPPLEMENTAL TABLE 1:** Characteristics of monkeys in designated treatment groups

<b>RM#</b>	<b>Time-post SIV infection (Days)</b>	<b>Route of infection</b>	<b>Dose (TCID 50)</b>	<b>Plasma viral loads (copies/ml)</b>	<b>Age (Years)</b>	<b>Sex</b>	<b>Treatment group</b>
23164	299	IV	1,000	1,200,000	7.4	M	Anti-IL-15
24293	371	Rectal	1,000	140,000	5.4	M	Anti-IL-15
25745	196	Rectal	300	530,000	3.8	M	Anti-IL-15
26134	203	Rectal	300	1,300,000	3.9	M	Anti-IL-15
25754	210	Rectal	300	9,800,000	3.8	M	Anti-IL-15
26145	210	Rectal	300	9,700,000	3.9	M	Anti-IL-15
25950	294	Rectal	50	570,000	8.1	M	Anti-IL-15
25679	288	Rectal	50	180,000	7.3	M	Anti-IL-15
25609	260	Rectal	100	150,000	8.3	M	Anti-IL-15
24184	203	Rectal	3,000	1,400,000	6	M	IgG control
25228	210	Rectal	3,000	4,600,000	5.4	M	IgG control
20176	266	Vaginal	900	140,000	11.9	F	IgG control
23070	565	IV	1,000	59,000	7.3	M	IgG control
26123	259	Rectal	300	2,000,000	7.2	M	IgG control
25875	301	Rectal	50	1,200,000	7.2	M	IgG control
24753	280	Rectal	50	410,000	9.5	M	IgG control
25692	295	Rectal	50	7,100,000	7.3	M	IgG control
26377	260	Rectal	100	1,500,000	6.4	M	IgG control

**SUPPLEMENTAL TABLE 2:** Summary of pathological findings at necropsy

Animal ID	Sex	Date of necropsy	Time post-SIV infection (days)	Plasma viral loads (copies/ml)	Pathological findings
20390	Female	11/12/12	67	8,700,000	Florid follicular lymphoid hyperplasia multiple sites.
26503	Male	12/17/12	73	4,900,000	Lymphoma, mesentery; Dermatitis, chronic, thigh.
27056	Male	10/29/12	390	2,700,000	Lymphoma, vertebral canal/spinal cord., Florid follicular lymphoid hyperplasia, multiple sites.
20303	Female	12/1/11	57	130,000,000	Pneumocystis carinii interstitial pneumonia (confirmed with GMS stain); Lymphoid depletion, generalized, marked.
23944	Female	4/24/12	160	13,000,000	Enteric cryptosporidiosis with pancreatic duct involvement; Giant cell pneumonia (probable SIV giant cell pneumonia); Lymphoid depletion, generalized, marked.
26341	Male	2/22/12	140	2,900,000	Pneumocystis carinii, Enterocytozoon bienewisi; lymphoid hyperplasia in multiple sites.
26976	Male	8/3/12	303	140,000	Pulmonary embolism with infraction; Portal vein embolism wqith hepatic necrosis, Mycobacterium avian infection, enteric; Candidiasis, esophageal.
20766	Female	2/14/12	132	21,000,000	Lymphoma, cardiac; Caudal vena cava and iliac vein thrombosis; Follicular lymphoid hyperplasia, spleen and multiple lymph nodes.
22315	Female	11/16/12	408	1,300,000	Lymphoma, thoracic wall; Follicular lymphoid hyperplasia, multiple sites.
27083	Male	7/20/12	289	2,300,000	Lymphoma, gluteal muscle and iliosacral lymph node; Follicular lymphoid hyperplasia, spleen and multiple lymph nodes.
27157	Male	11/20/12	412	240,000	Follicular lymphoid hyperplasia, and multiple lymph nodes, choledochitis.
27213	Male	11/19/12	411	1,400,000	Lymphoma, retrobulbar, left eye; Follicular lymphoid hyperplasia, spleen and multiple lymph nodes; cholangiohepatitis
21574	Female	11/15/12	407	1,800,000	Atherosclerosis, mild thyroid follicular hypertrophy.
27351	Male	1/6/12	96	1,400,000	CMV meningoencephalitis /radiculoneuritis/ganglioneuritis, proliferative choledochitis, Pneumocystis Interstitial pneumonia.
27369	Male	12/7/12	429	1,900,000	Follicular lymphoid hyperplasia, spleen and multiple lymph nodes; choledochitis.
27376	Male	8/24/12	324	460,000	Lymphoma, retrobulbar, right eye; Florid follicular lymphoid hyperplasia, multiple sites.
27705	Male	12/12/12	434	270,000	Lymphoma, thymus; Follicular lymphoid hyperplasia spleen and multiple lymph nodes; Endocarditis, vegetative, aortic valve.
27989	Male	12/13/12	435	2,000,000	Lymphoma, gastric, Follicular lymphoid hyperplasia, spleen and multiple lymph nodes.
26303	Female	11/14/12	406	3,200,000	Amyloidosis, enteric; Colitis, chronic; Cholangiohepatitis
26310	Female	4/17/12	195	12,000,000	Pneumocystis carinii Interstitial pneumonia Candidiasis, esophageal; Follicular lymphoid hyperplasia, multiple sites.
27617	Male	7/5/12	274	16,000,000	CMV, Enterocytozoon bienewisi; Lymphoid hyperplasia in multiple sites; Amyloidosis, enteric
27972	Male	12/17/12	439	810,000	Florid follicular lymphoid hyperplasia, multiple sites
29412	Female	11/28/12	420	350,000	Follicular lymphoid hyperplasia, spleen and multiple lymph nodes; Cholangiohepatitis.

**SUPPLEMENTAL TABLE 3**

Monkey ID	Anti-IL15	Tumor	LCV in tumor <sup>1</sup>	RRV in tumor <sup>2</sup>	LCV (spleen) <sup>1</sup>	RRV (spleen) <sup>2</sup>
26503	Short (3 doses)	Mesenteric lymph node	+	-	+	-
27056	Short (3 doses)	Vertebral canal/spinal cord	+	-	-	+
20766	Long (8 doses)	Heart	+	-	-	-
22315	Long (8 doses)	Thoracic wall	+	-	-	+
27083	Long (8 doses)	Iliosacral lymph node	+	-	+	+
27213	Long (8 doses)	Retrobulbar	+	-	-	+
27376	Control	Retrobulbar	+	-	+	-
27705	Control	Thymus	+	-	-	+
27989	Control	Stomach	+	-	-	+

1: LCV was detected by immunohistochemistry stained with anti-EBNA2 antibody.

2: RRV was detected by RNAscope with a probe set as described in methods.