

Supplementary Figure 1. Gating strategy for the analysis of HIV-specific CD8+ T cell responses (A) and intracellular cytokine staining in different conditions (B) in the case patient.

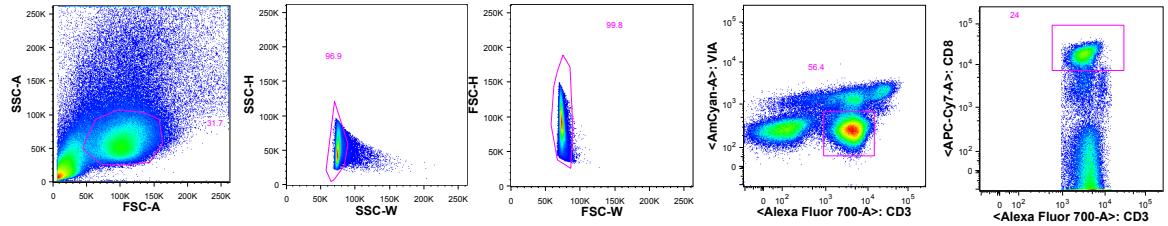
Supplementary Figure 2. Gating strategy for the analysis of HIV-specific CD4+ T cell responses (A) and intracellular cytokine staining in different conditions (B) in the case patient.

Supplementary Figure 3. Frequency of CD8+ T cells (top) and CD8- T cells (bottom) in a natural HIV controller (HIC, blue), the case patient (light grey) and a viremic perinatally infected adolescent (Case B, dark gray columns) exerting concomitantly one, two, three or four of the following functions: IFN γ , IL2 and TNF α production and of degranulation marker CD107 α expression.

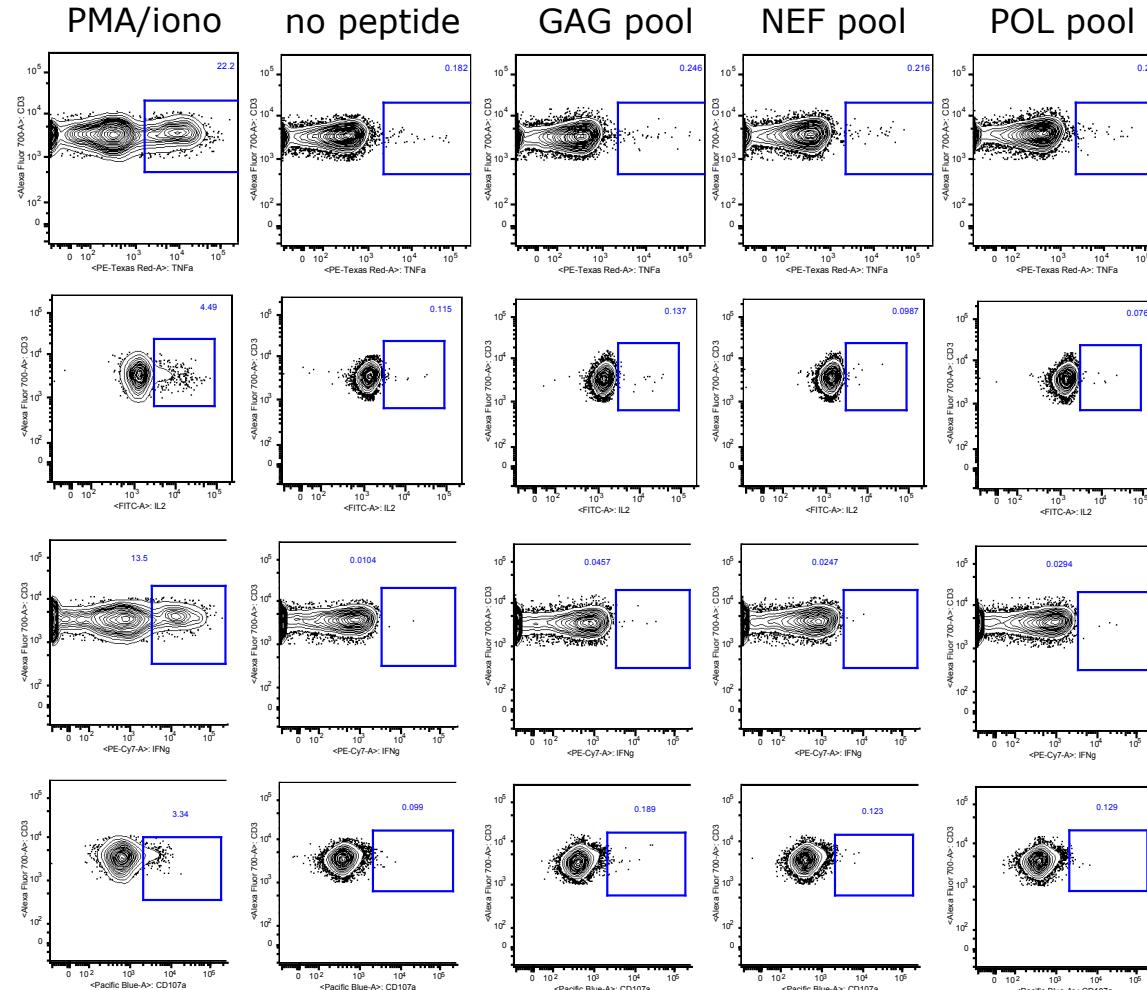
Supplementary Table 1. Virological and immunological monitoring of the child, and summary of antiretroviral treatments received from birth to age 18.6 years.

Supplemental Figure 1

A

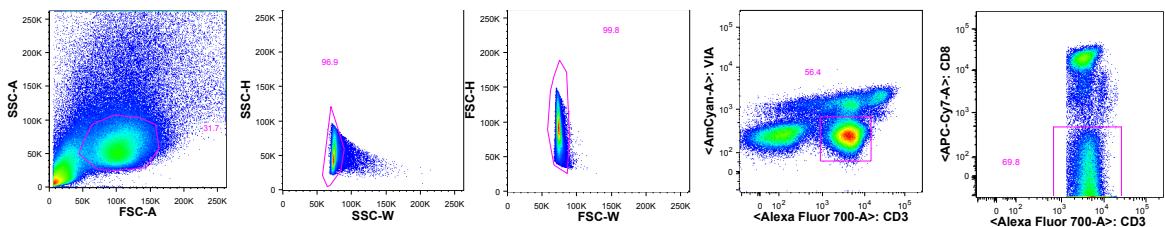


B

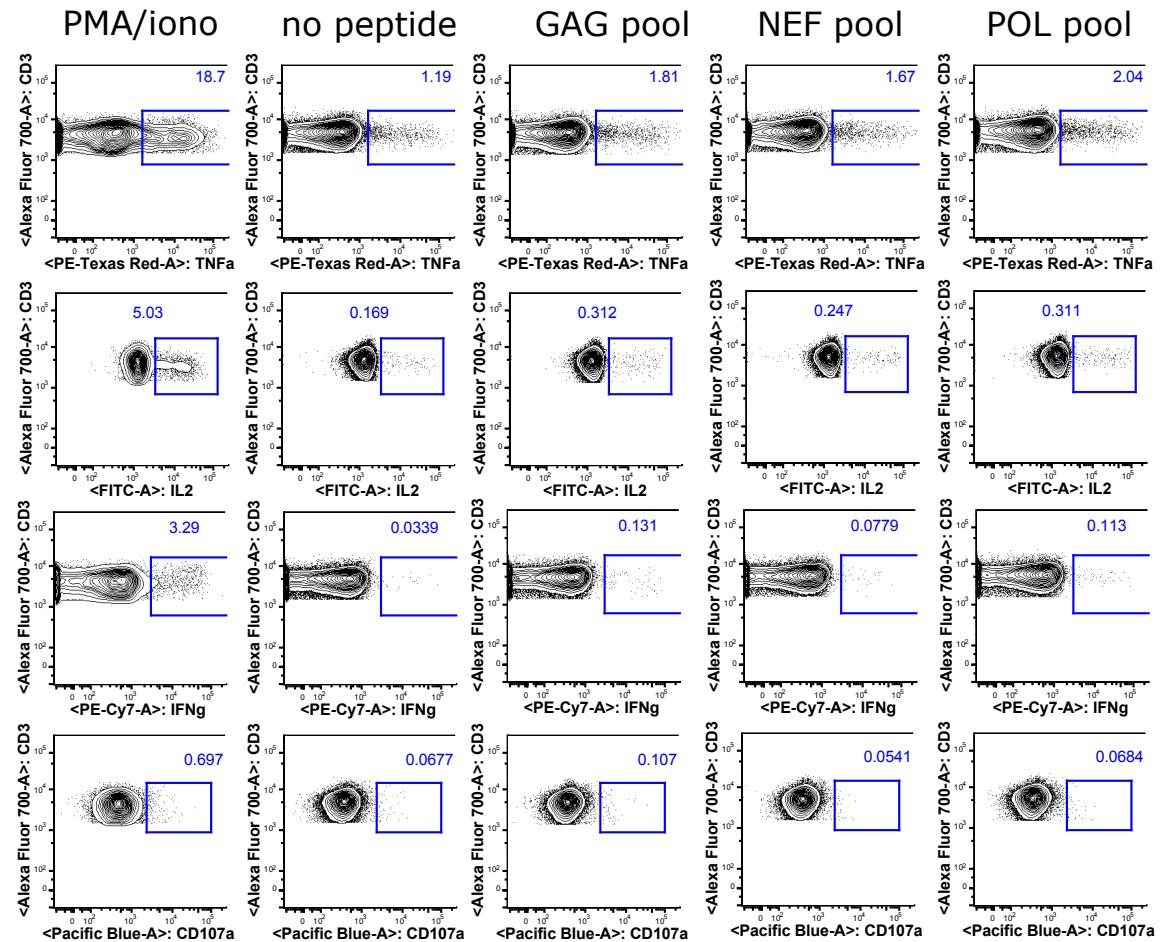


Supplemental Figure 2

A

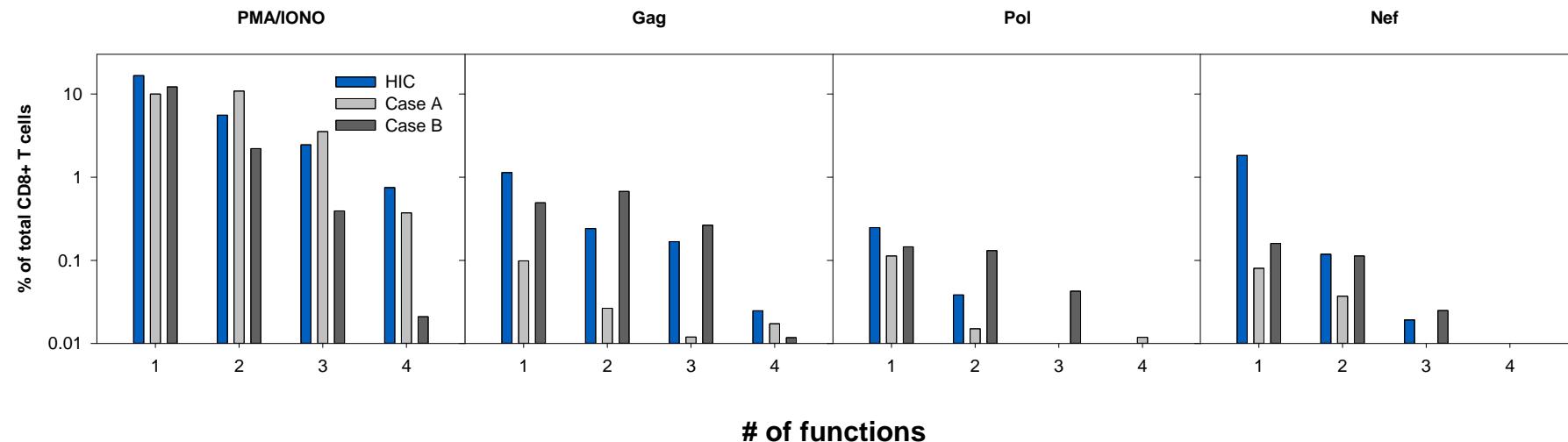


B

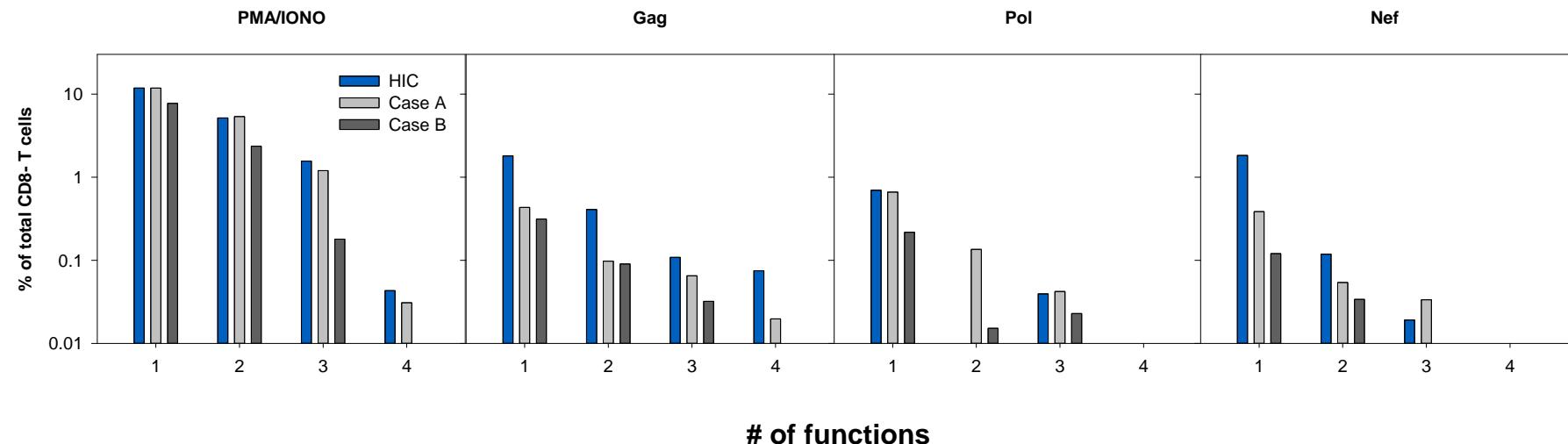


Supplementary Figure 3

HIV-specific CD8+ T cell response



HIV-specific CD8- (CD4+) T cell response



Supplementary Table 1. Results of the virological and immunological monitoring of the child and summary of the antiretroviral treatment received from birth to the age of 18.6 years.

Age	HIV-1 RNA (copies per milliliter)	PBMCs-associated HIV-1 DNA	CD4		Antiretroviral therapy
			count	%	
D+3	<1000 §	undetected°			zidovudine (started at birth)
D+14		undetected°	48	3374	zidovudine
M+1		detected°			zidovudine (stopped at M+1.5)
M+2	144,600 §	detected°	29	2984	0
M+3	2170,000 §				Start of zidovudine + didanosine + lamivudine + ritonavir
M+4	<500 §		40	3868	didanosine + lamivudine + ritonavir
M+6	<500 §		38	2897	dianosine + stavudine + ritonavir
M+8	<500 §		35	3373	dianosine + stavudine + ritonavir
M+10	<500 §				dianosine + stavudine + ritonavir
M+12	<500 §		30	2818	dianosine + stavudine + ritonavir
M+15	75,190 §		37	3145	dianosine + stavudine + ritonavir
M+17	<500 §				dianosine + stavudine + ritonavir
M+18	<500 §		38	3657	dianosine + stavudine + ritonavir
M+21	97,000 §		20	1545	dianosine + stavudine + ritonavir
M+23	<500 §		25	1608	dianosine + stavudine + ritonavir
M+27	<500 §		20	1450	dianosine + stavudine + ritonavir
M+29	<50 ∞		9	619	dianosine + stavudine + ritonavir
M+33	<50 ∞		33	1807	dianosine + stavudine + ritonavir
M+35	<50 ∞		24	726	dianosine + stavudine + ritonavir
Y+3.3	<50 ∞		39	991	dianosine + stavudine + ritonavir
Y+3.8	<50 ∞		30	1150	dianosine + stavudine + ritonavir
Y+4.3	<50 ∞		38	1077	dianosine + stavudine + ritonavir

Y+4.6	<50 ∞	39	1110	didanosine + stavudine + ritonavir
Y+5.3	<50 ∞	38	1165	didanosine + stavudine + ritonavir
Y+5.6	<50 ∞	46	858	didanosine + stavudine + ritonavir
Y+5.8	<50 ∞	32	669	didanosine + stavudine + ritonavir
Y+6.8	<50 ∞	38	795	0
Y+6.9	<50 ∞			0
Y+7.5	<50 ∞	39	890	0
Y+7.8	<50 ∞	42	847	0
Y+8.5	<50 ∞	40	757	0
Y+8.8	<50 *	40	906	0
Y+9.2	<50 *	37	829	0
Y+9.8	<20 ∇	37	534	0
Y+10.2	<20 ∇	38	924	0
Y+10.8	<20 ∇	40	849	0
Y+11.3	<20 ∇	39	693	0
Y+11.6	510 ∇	36	852	0
Y+12.1	<20 ∇	40	673	0
Y+12.5	<20 ∇	38	766	0
Y+12.9	<20 ∇	42	917	0
Y+13.1	<20 ∇	45	605	0
Y+13.3	<20 ∇			0
Y+13.5	<20 ∇	45	893	0
Y+13.9	48 ∇			0
Y+14.1	<20 ∇	39	647	0
Y+14.5	<20 ∇	40	585	0
Y+14.7	<20 ∇	41	733	0
Y+14.8	<20 ∇	41	677	0
Y+15.3	<20 ∇			0
Y+15.6	<40 ∇	44	774	0

Y+15.8	<20 ∇				0
Y+16.2	<40 ∇		44	800	0
Y+16.7	<40 ∇	2.1 \log_{10} copies/ 10^6	42	713	0
		PBMCs †			
Y+16.9	<20 ∇	2.2 \log_{10} copies/ 10^6	45	681	0
	<9 \blacktriangle	PBMCs †			
Y+18.3	<20 ∇	2.2 \log_{10} copies/ 10^6	44	675	0
	<4 \blacktriangle	PBMCs †			
Y+18.6	<7 \blacktriangle	2.5 \log_{10} copies/ 10^6			0
		PBMCs †			

PBMCs = peripheral-blood mononuclear cells; D = day; M = month; Y = year.

HIV-1 DNA and RNA PCR methods used during the follow-up were as follows: \circ PBMC DNA polymerrase chain reaction;⁹ \S Quantiplex HIV-1 RNA (bDNA assay) (version 1.0, Chiron Diagnostics); ∞ Quantiplex HIV-1 RNA (version 3.0, Chiron Diagnostics); * Roche Ultrasensitive AMPLICOR HIV-1 MONITOR test (version 1.5, Roche Diagnostics); ∇ Roche COBAS Taqman HIV-1 test (version 2.0, Roche Diagnostics); \blacktriangle Ultrasensitive Generic HIV-1 RNA Viral Load test (Biocentric, Bandol, France); † Generic HIV DNA Cell kit (Biocentric, Bandol, France).