

Supplementary Table 1. Characteristics of HIV-2-infected patients

Patient #	Gender	Age (years)	CD4 count (cell/ul)	Nadir CD4 count (cell/ul)	Time since Diagnosis (years)	Viral load (copies/mL)	Viral DNA (copies/ 10 ⁶ PBMC)	Country of birth
1	M	44	707	444	20.5	1.3	187	Ivory Coast
2	F	54	1 118	539	27.3	2.4	10	Guinea Conakry
3	F	43	858	706	22.7	<1	10	France
4	M	52	891	602	11.3	<1	131	Ivory coast
5	F	50	1 776	971	8.8	<1	53	Ghana
6	M	70	502	390	7.4	58.0	127	Senegal
7	F	34	1 212	711	12.5	5.6	88	The Gambia
8	F	48	859	601	9.2	75.0	40	Guinea Conakry
9	M	59	1 300	712	8.8	<1	nd	Colombia
10	F	52	604	618	25.6	<1	10	Guinea Conakry
11	M	46	904	359	7.5	1.1	nd	Ivory coast
12	F	40	1 170	597	15.4	<1	484	Ivory coast
13	F	49	812	513	10.2	<1	nd	Guinea Conakry
14	F	49	895	528	11.3	<1	28	Ivory coast
15	M	55	927	588	9.0	<1	nd	Ivory coast
16	F	49	836	528	10.4	<1	nd	Ghana
17	F	39	1 036	800	12.7	<1	53	Ivory coast
18	M	53	1 228	1165	17.6	<1	170	Guinea Bissau
19	F	21	1125	465	nd	<1	nd	Ivory coast
20	F	59	1123	520	16.0	<1	nd	Ivory coast
21	F	50	887	485	16.2	<1	517	Ivory coast
22	M	48	399	434	14.4	<1	nd	France
23	M	52	413	314	18.2	5.7	342	France
24	M	57	1 090	562	23.0	<1	107	Ivory coast

M: male; F: Female

Supplementary Table 2. HLA class I typing of HIV-2-infected patients

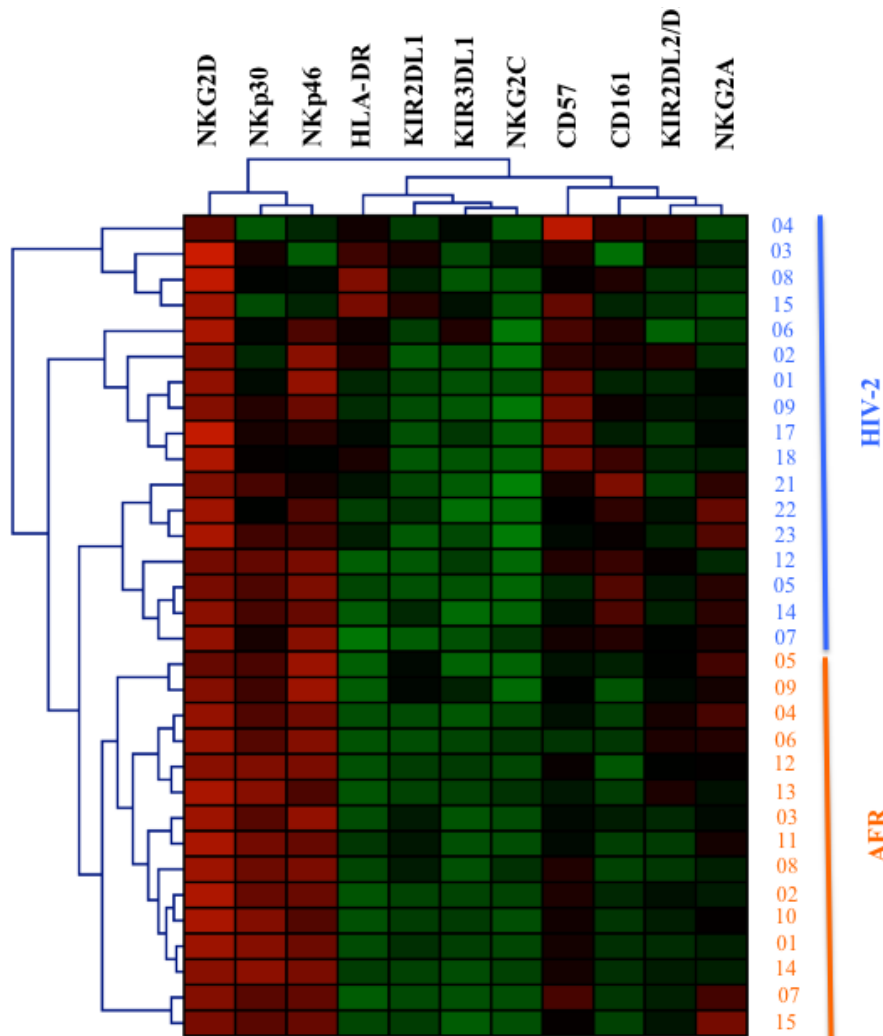
Patient #	HLA-A	Bw4	HLA-B	Bw4/Bw6	HLA-C	C1/C2
1	03:01:01/23:01:01		35:01:01/53:01:01	Bw6/Bw4	04:01:01/04:01:01	C2/C2
2	03:01:01/74:01		14:02:01/15:52	Bw6/Bw6	07:01:01/08:02:01	C1/C1
3	01:23/33:79		15:16:01/35:03:01	Bw4/Bw6	04:01:01/14:02:01	C2/C1
4	02:05:01/03:01:01		49:01:01/57:03:01	Bw4/Bw4	07:01:01/18:01	C1/C2
5	68:01:01/68:02:01		07:02:01/52:01:02	Bw6/Bw4	nd	
6	02:05:01/02:05:01		27:03/53:01:01	Bw4/Bw6	02:02:01/04:01:01	C2/C2
7	03:01:01/26:01:01		58:01:01/58:01:01	Bw4/Bw4	03:02:01/07:01:01	C1/C1
8	34:02:01/68:02:01		15:03:01/53:01:01	Bw6/Bw4	02:10/04:01:01	C2/C2
9	01:01:01/29:02:01		44:03:01/57:01:01	Bw4/Bw4	06:02:01/16:01:01	C2/C1
10	02:01:01/23:01:01	Bw4	15:03:01/52:01:02	Bw6/Bw4	02:03/16:01:01	C2/C1
12	33:03:01/68:02:01		53:01:01/53:01:01	Bw4/Bw4	04:01:01/04:01:01	C2/C2
13	34:02:01/34:02:01		07:05:01/53:01:01	Bw6/Bw4	04:01:01/07:02:01	C2/C1
14	02:01:01/68:01:01		15:16:01/51:01:01	Bw4/Bw4	14:02:01/16:01:01	C1/C1
17	03:01:01/03:01:01		35:01:01/53:01:01	Bw6/Bw4	04:01:01/04:01:01	C2/C2
18	23:01:01/23:01:01		07:02:01/14:02:01	Bw6/Bw6	07:02:01/08:02:01	C1/C1
21	33:03:01/33:03:01		53:01:01/53:01:01	Bw4/Bw4	04:01:01/04:01:01	C2/C2
22	02:01:01/29:02:01		39:01:01/44:03:01	Bw6/Bw4	07:02:01/16:01:01	C1/C1
23	24:01:01/25:01:01	Bw4/Bw4	35:01:01/44:02:01	Bw6/Bw4	nd	
24	23:01:01/34:02:01		53:01:01/53:01:01	Bw4/Bw4	04:01:01/04:01:01	C2/C2

Nd: not done

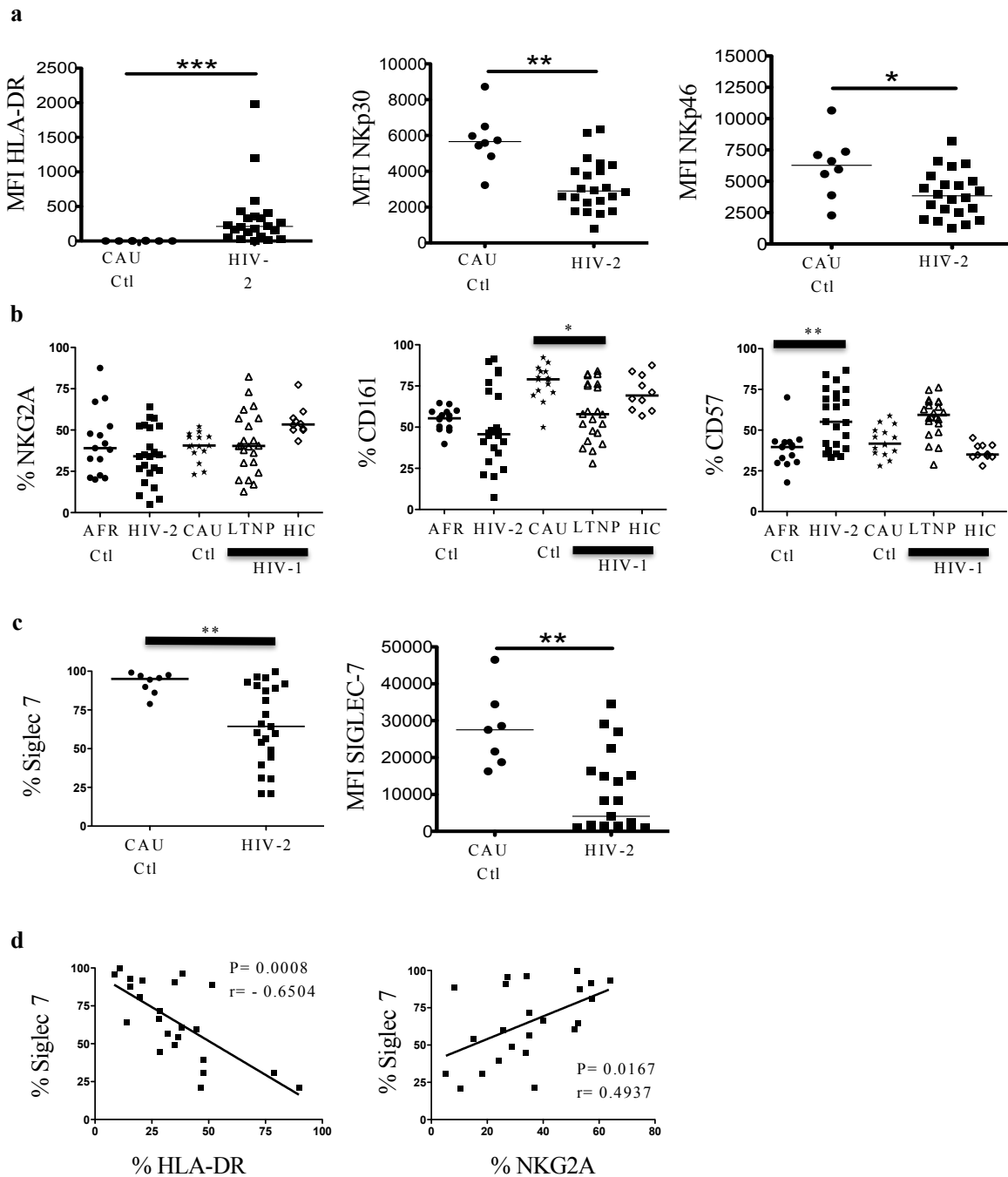
Supplementary Table 3. List of markers used in the study

Marker	Clone	Fluorochrom	Company
CD45	J.33	Krome Orange	Coulter
CD3	UCHT1	efluor780	eBioscience
anti-CD56	N901	PC7	Coulter
HLA-DR	Immu-357	AlexaFluor 700	BioLegend
NKG2A	Z199	Phycoerythrin	Coulter
NKG2C	134591	Allophycocyanin	R&D systems
NKG2D	ON72	Allophycocyanin	Coulter
NKp30	AF29-4D12	Allophycocyanin	Miltenyi Biotech
NKp46	BAB281	Phycoerythrin	Coulter
DNAM-1	Tx25	Florescein isothiocyanate	BioLegend
KIR2DL1	HP-3E4	Florescein isothiocyanate	BD Pharmingen
KIRDL2/DL3	REA1006	Phycoerythrin	Miltenyi Biotech
KIR3DL1	DX9	AlexaFluor700	BioLegend
CD161	DX12	Phycoerythrin	BD Pharmingen
CD57	NC1	Pacific Blue	Coulter
Siglec-7	Z176	Phycoerythrin	Coulter
IFN- γ	B27	AlexaFluor700	BD Pharmingen
TNF- α	Mab11	Allophycocyanin	eBioscience

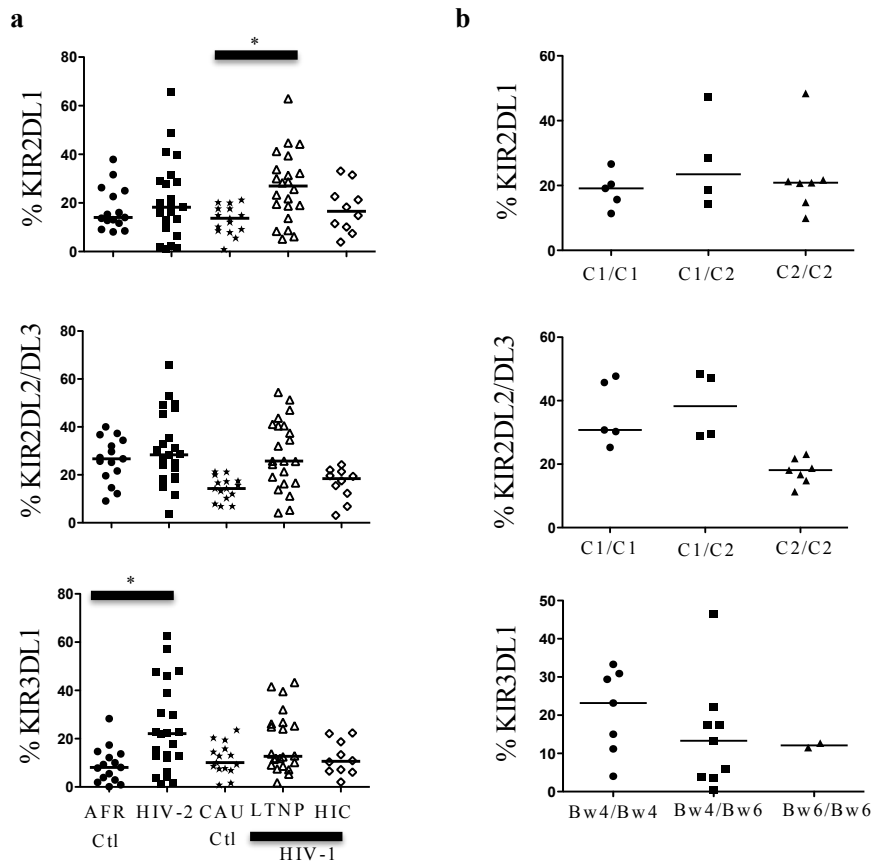
Supplementary Fig. 1



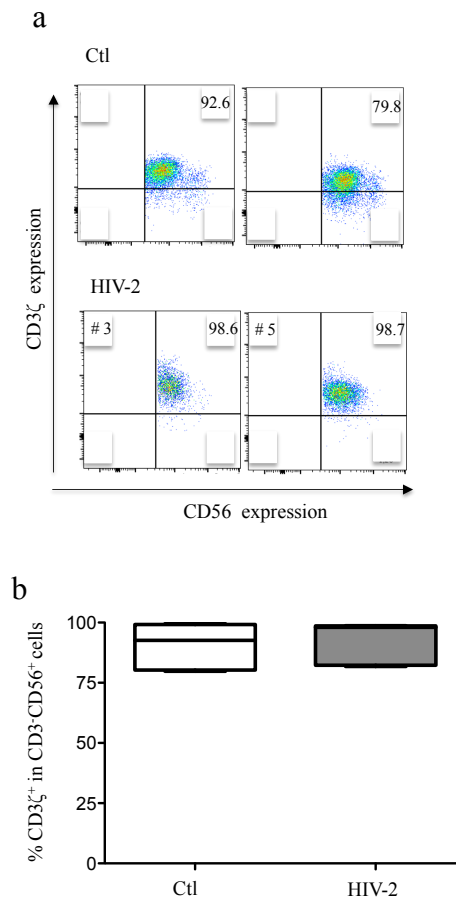
Supplementary Fig. 1. Hierarchical clustering of the 11 combinations of NK cell markers from HIV-2⁺ patients. Characteristics of each HIV-2⁺ patient are reported in Supplementary Table 1. This analysis was performed with 17 HIV-2-infected patients and 15 healthy controls of the same origin (AFR). Each horizontal line is dedicated to a definite NK marker, with the color of each square reflecting the percentage of expression of the corresponding marker in each NK sample. The values measured for samples are color displayed and rank ordered: green colors are inferior to median, and red superior to median. Analysis was performed with the Genesis program (available at www.genome.tugraz.at), as described (Vieillard et al., 2010).



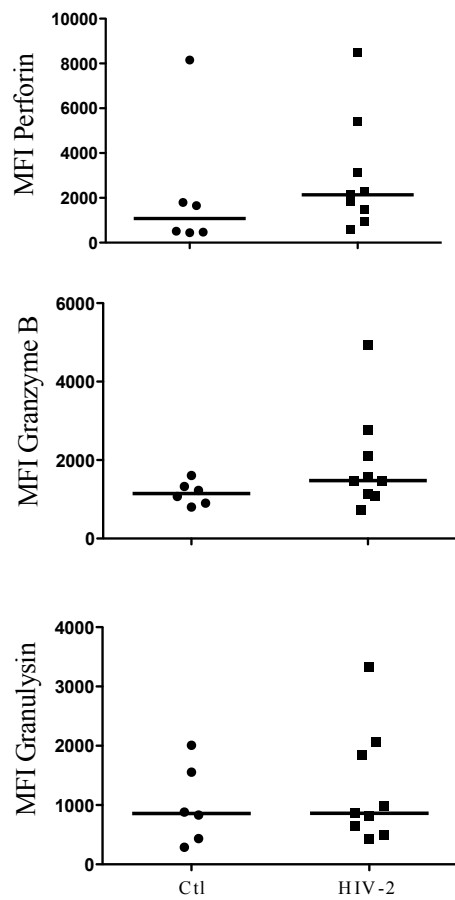
Supplementary Fig. 2. Complementary analysis of phenotypic NK cell markers from HIV-2⁺ patients. (a) Median fluorescence intensity (MFI) of HLA-DR, NKp30, and NKp46 on CD3⁺CD56⁺ NK cells. (b) Percentage of differentiation markers (NKG2A, CD161, and CD57) among the CD3⁺CD56⁺ NK cells. Data are shown for healthy African donors (AFR, solid circles), HIV-2⁺ patients (solid squares), LTNP HIV-1⁺ patients (open triangles), HIC HIV-1⁺ patients (open diamonds), and healthy Caucasian controls (CAU, stars). Horizontal bars represent the median. Intergroup comparisons were assessed with the Kruskal-Wallis test and Dunn's post-test. * $p < 0.05$; ** $p < 0.01$. (c) Percentage and MFI of Siglec-7 expression among the CD3⁺CD56⁺ NK cells. Data are shown for HIV-2⁺ patients (solid squares) and healthy controls (solid circles). Unpaired comparison was assessed with the Mann-Whitney test; ** $p = 0.0072$. (d) Correlation of Siglec



Supplementary Fig. 3. Analysis of inhibitory KIR markers in NK cells from HIV-2⁺ patients. (a) Percentage of CD3⁺CD56⁺ NK cells expressing KIR2DL1, KIR2DL2/DL3, and KIR3DL1. Data are shown for healthy African donors (AFR, solid circles), HIV-2⁺ patients (solid squares), LTNP HIV-1⁺ patients (open triangles), HIC HIV-1⁺ patients (open diamonds) and healthy Caucasian controls (CAU, stars). Horizontal bars represent the median. Intergroup comparisons were assessed with the Kruskal-Wallis test and Dunn's post-test. **p* < 0.05. (b) Analysis of the recognition of inhibitory KIR (KIR2DL1, KIR2DL2/DL3, and KIR3DL1) and their respective HLA class-1 group ligands (Supplementary Table 2).



Supplementary Fig. 4. Expression of CD3 ζ in NK cells from HIV-2⁺ patients. (a) Representative Dot-plots of intracellular CD3 ζ expression in NK cells from 2 HIV-2-infected patients (HIV-2; patients # 3, and 5) and 2 healthy donors (Ctl). Frequency of CD3 ζ ⁺ NK cells is noted for each sample. (b) Quantification of intracellular CD3 ζ frequency in NK cells from 5 HIV-2-infected patients and 5 healthy donors (Ctl). CD3⁺CD56⁺ NK cells were stained with the CD247 (CD3 zeta) monoclonal Ab (6B10.2), PercP-eFluor 710 from eBioscience.



Supplementary Fig. 5. Analysis of cytolytic markers in NK cells from HIV-2⁺ patients. Median fluorescence intensity (MFI) of intracellular expression of perforin, granzyme B, and granulysin, among the CD3⁺CD56⁺ NK cells. Data are shown for HIV-2⁺ patients (solid squares) and healthy controls (Ctl, solid circles). Horizontal bars represent the median.