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Supplemental Information

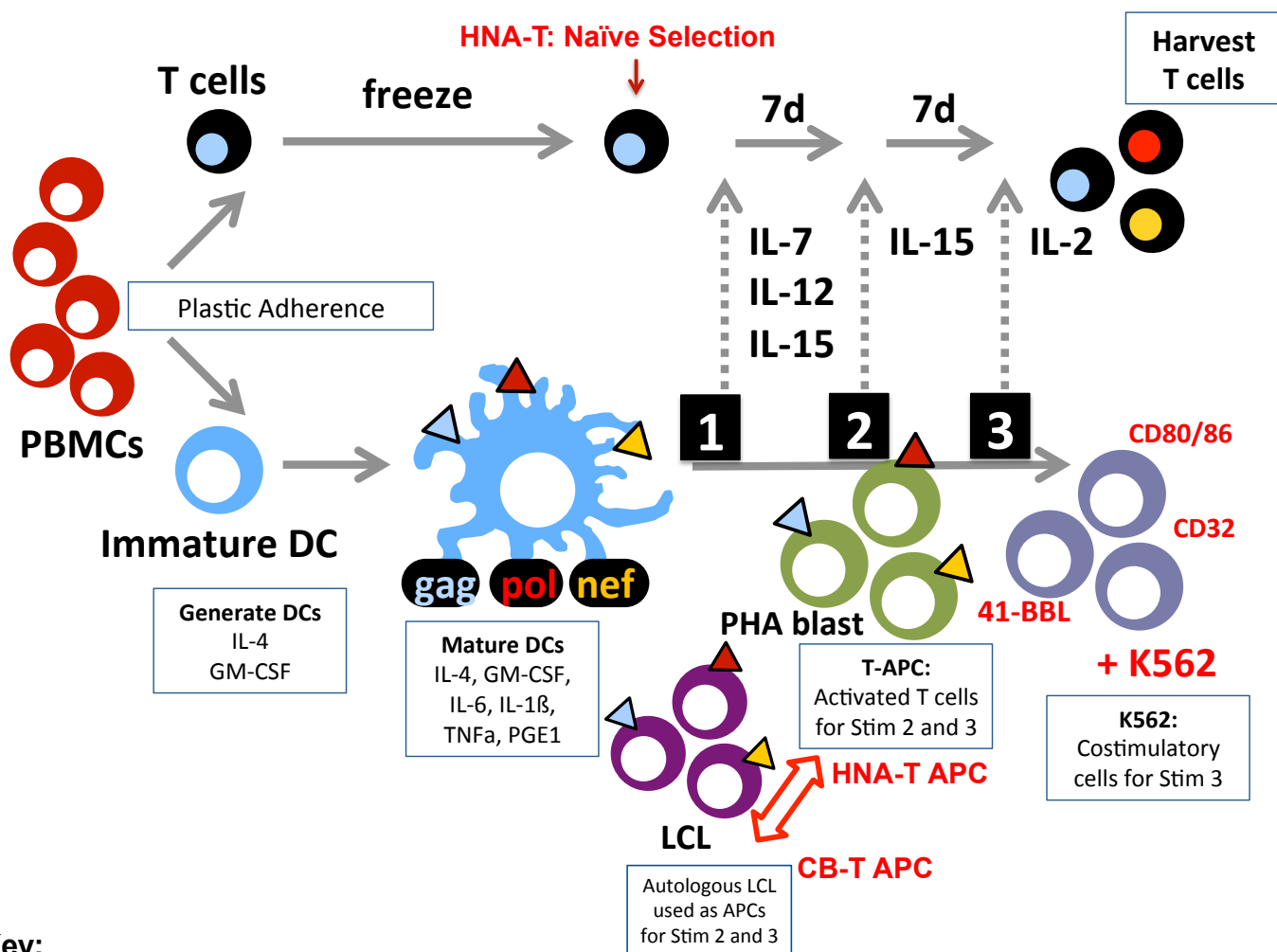
HIV-Specific T Cells Generated from Naive T

Cells Suppress HIV *In Vitro* and Recognize

Wide Epitope Breadths

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Supplemental Figure 1



Key:

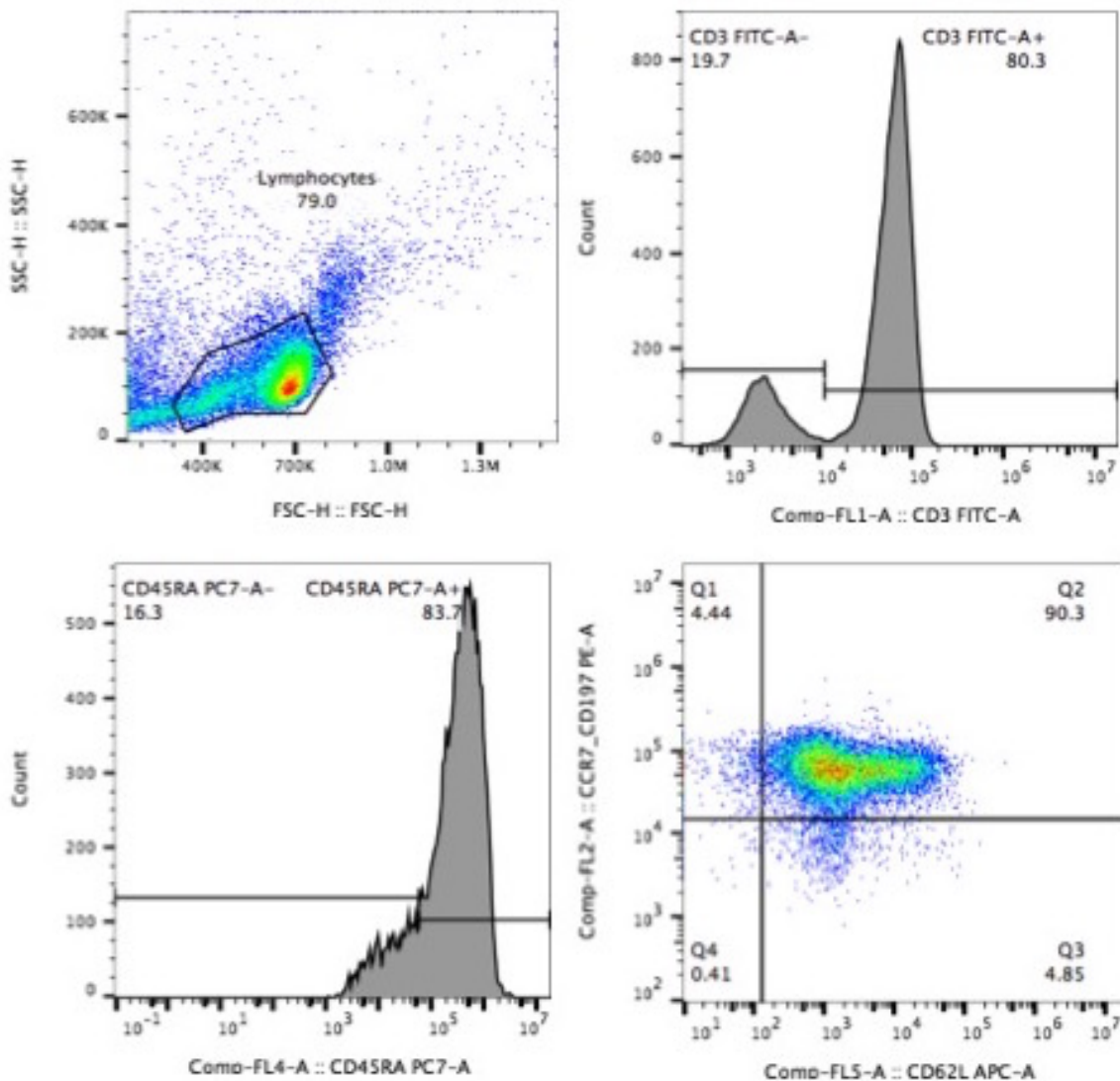
HNA-T (HIV-Negative Adult-derived HIV-Specific T cells)

CB-T (Cord Blood-derived HIV-Specific T cells)

HPA-T (HIV+ Adult-derived HIV-specific T cells)

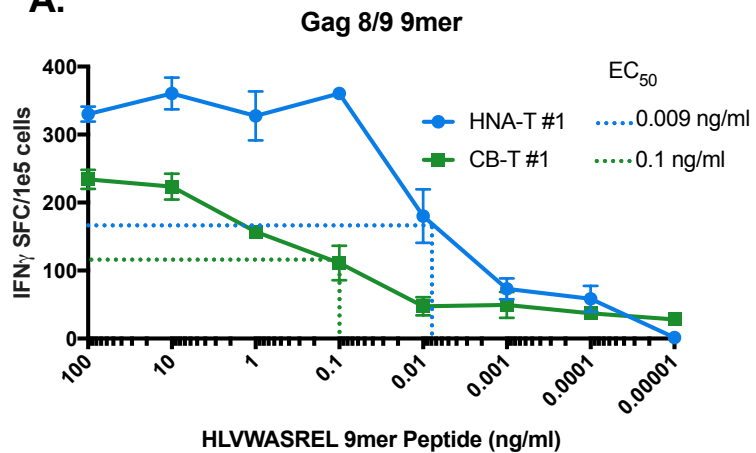
Supplemental Figure 2

Naïve cells: CD3+CD45RA+CCR7+CD62L+

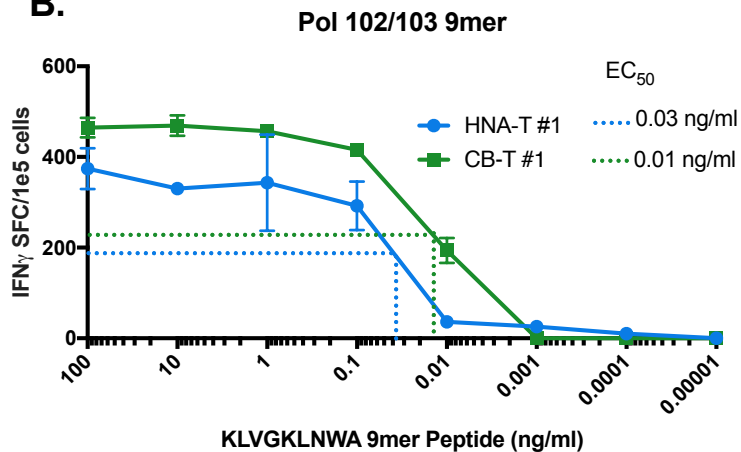


Supplemental Figure 3

A.



B.



Supplemental Figure 1. *Flowchart of HNA-T and CB-T GMP-Compliant Manufacturing Platform.* HNA-T and CB-T products were manufactured over ~27 days per product, as described in the methods. The significant difference between the two manufacturing platforms is HNA-Ts are manufactured with autologous PHA blasts for APCs, whereas CB-Ts are generated with autologous LCLs for APCs.

Supplemental Figure 2. *Magnetic Naïve T-cell Selection from HIV Seronegative Adults.* HNA-Ts undergo magnetic selection (CD3+CD45RA+CCR7+CD62L+) prior to stimulation, to ensure products are generated from the naïve adult T-cell compartment. Naïve-selected cells are phenotyped by flow cytometry to ensure purity.

Supplemental Figure 3. *HLA A02-restricted HIV-specific T-cells derived from virus-naïve donors do not recognize Gag SL9, but have high functional avidity.* Functional avidity on ELISPOT revealed HNA-T and CB-T products have high functional avidity for their cognate epitope, compared to an HIV positive-derived product for SL9. **A.** Two products recognizing Gag 9mer HLVWASREL demonstrate high functional avidity (HNA-T EC_{50} =0.009 ng/ml and CB-T EC_{50} =0.1 ng/ml). **B.** Similarly, two products recognizing Pol 9mer KLVGKLNWA demonstrate high functional avidity (HNA-T EC_{50} =0.03 ng/ml and CB-T EC_{50} =0.01 ng/ml). In this figure, error bars represent the standard deviation.