

## **Fig.1 Supplementary**

**Figure S1**. Immunophenotype of the HIV-1 specific-CD8<sup>+</sup> T-cell response after 24h of pembrolizumab administration from week 18 (w18+1). (**A**) Changes in total CD8+ T-cell population (left graph) and, in CD8+ T-cell subsets (right graph) after 24h from the administration at week 18. T<sub>N</sub>, naïve; T<sub>CM</sub>, central memory; T<sub>TM</sub>, transitional memory; T<sub>EM</sub>, effector memory; T<sub>E</sub>, effector; (**B**) The graphs represent the changes in total CD8<sup>+</sup> T cells expressing HLA-DR<sup>+</sup>/CD38<sup>+</sup> (left graph) and, in CD8<sup>+</sup> T-cell subsets (right graph). T<sub>N</sub>, naïve; T<sub>CM</sub>, central memory; T<sub>EM</sub>, effector memory; T<sub>EM</sub>, effector memory; T<sub>E</sub>, effector; (**C**) Changes of TNF,

IFN $\gamma$ , CD107a and, IL-2 expression for HIV-1 specific-CD8<sup>+</sup> T cells in response to HIV-Gag (left graph) and in response to SEB (right graph); (**D**) Frequency of TNF $\alpha$ , IFN $\gamma$ , CD107a and, IL-2 combinations expressing 1, 2, 3 or 4 cytokines in total HIV-1 specific-CD8<sup>+</sup> T cells; (**E**) Detailed poly-functional profiles of HIV-1 specific-CD8<sup>+</sup> T cells. The bars in purple represent the changes on TNF frequency and in pink it is represented the changes of IL-2<sup>+</sup> and IL-2<sup>+</sup>IFN $\gamma^+$ . (**F**) Total HIV-1 DNA (squares) and cell-associated HIV-1 RNA (circles) in CD4<sup>+</sup> T cells at week 18+1.