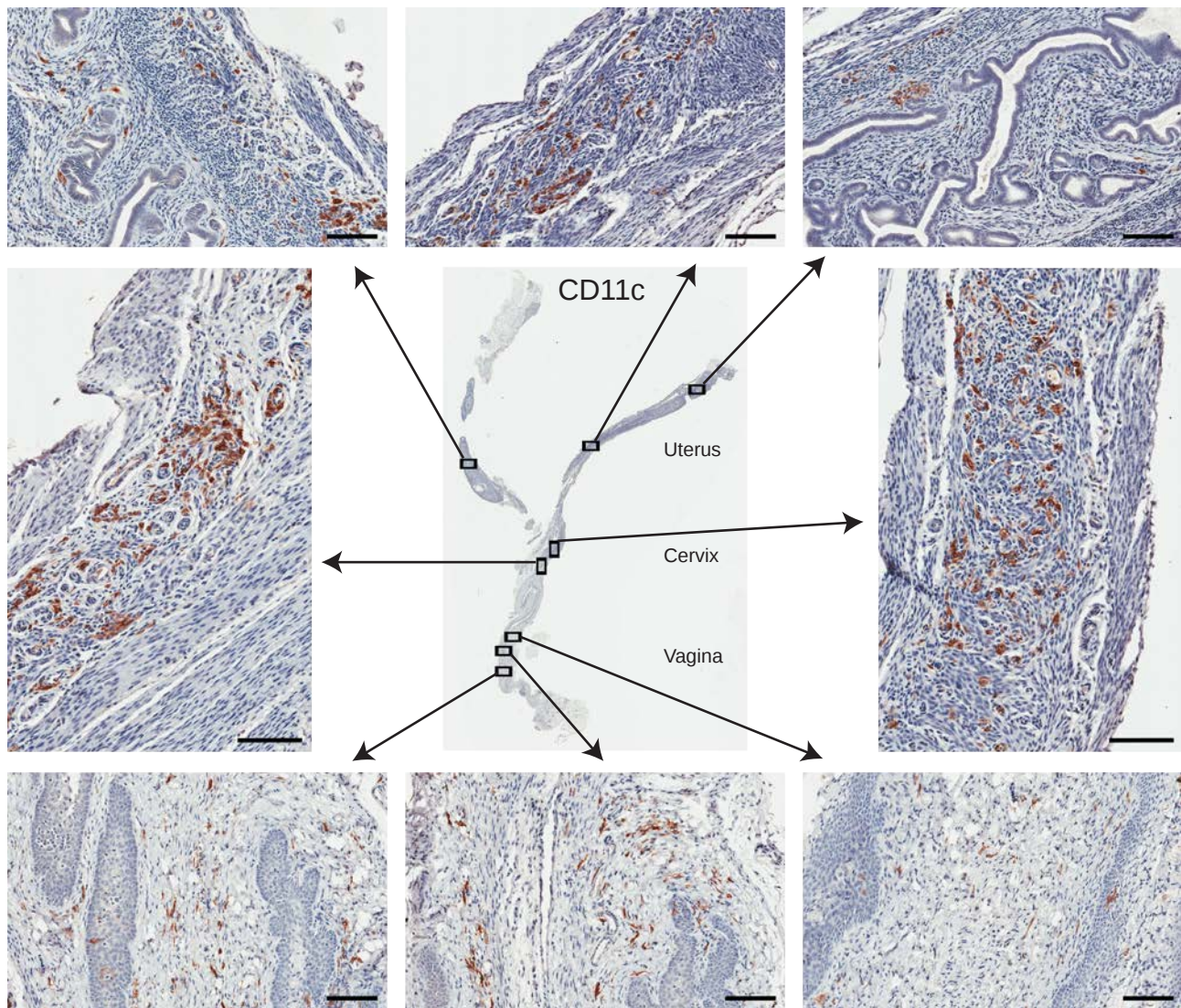
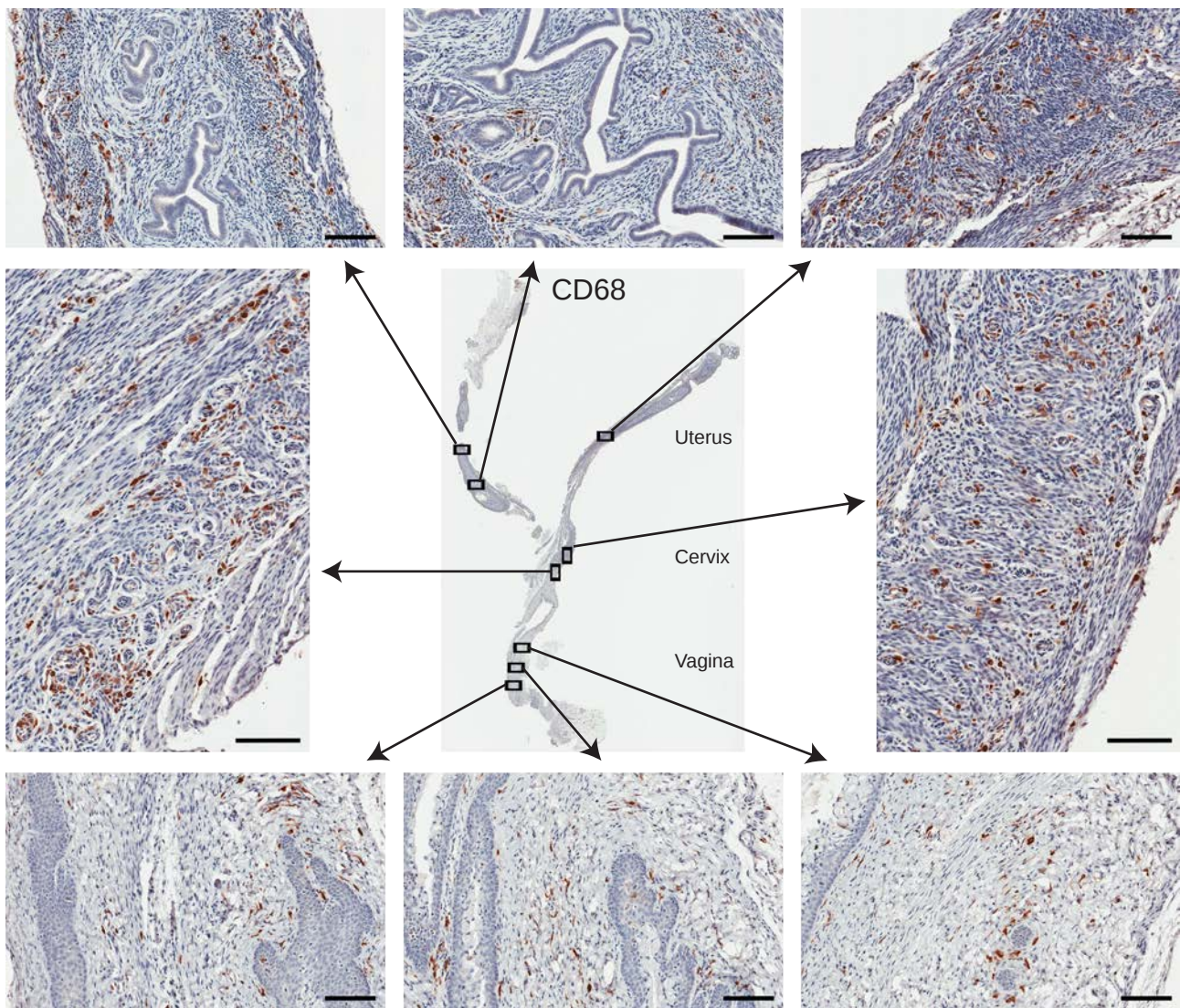
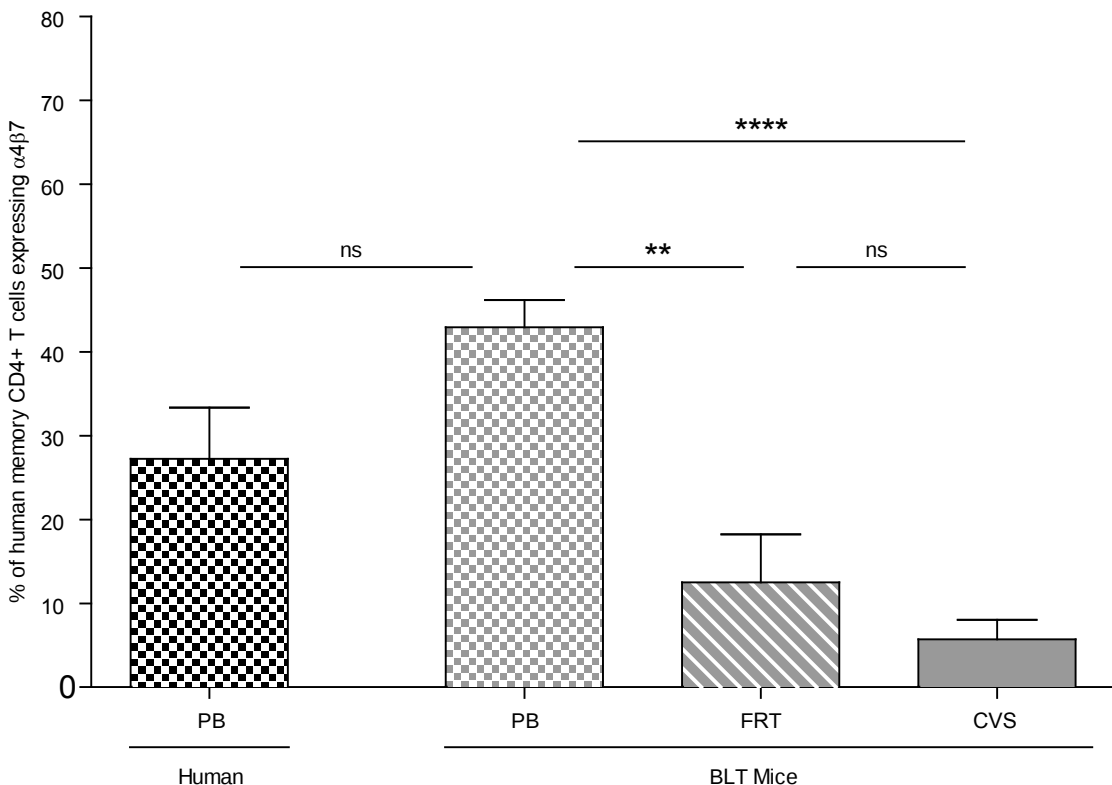




Supplementary Figure 1. Human CD11c⁺ dendritic cells are present throughout the female reproductive tract of BLT mice. Immunohistochemical analysis of the entire FRT of a HIV negative BLT mouse demonstrates the presence of CD11c⁺ cells in the vagina, cervix and uterus (CD11c positive cells are stained brown) (scale bars indicate 100 μm).



Supplementary Figure 2. Human CD68+ macrophages are present throughout the female reproductive tract of BLT mice. Immunohistochemical analysis of the entire FRT of a HIV-negative BLT mouse demonstrates the presence of CD68+ cells in the vagina, cervix and uterus (CD68 positive cells are stained brown) (scale bars indicate 100 μ m). It should be noted that CD68 has conventionally been regarded as a macrophage marker (24, 72) and in this study, we have utilized CD68 as a marker for human macrophages present in the FRT. However, a subset of immature dendritic cells in PB and myeloid dendritic cells in the kidney have been shown to express CD68 and it is important to note that a small proportion of the CD68 expressing cells that we detected could be dendritic cells (72-76).



Supplementary Figure 3. Comparable proportions of memory CD4⁺ T cells in PB from humans and BLT mice express α4β7. Flow cytometric analyses of α4β7 expression on memory CD4⁺ T cells of PB from humans (black dots, n=4) and PB (grey dots, n=18), FRT (grey diagonal stripes, n=5) and CVS (grey solid color, n=13) from HIV negative BLT mice. A Mann-Whitney test with a Bonferroni step-down (Holm) correction was used to compare the percentages of memory CD4⁺ T cell expressing α4β7 in the PB of humans and PB, FRT and CVS of BLT mice (*p<0.05, **p<0.01, ***p<0.001, ****p<0.0001). There was no significant difference in the percentage of memory CD4⁺ T cells expressing α4β7 in PB between humans and BLT mice (p=0.13). Further, the proportion of memory CD4⁺ T cell expressing α4β7 in the FRT and CVS in BLT mice were significantly lower than in the PB (PB vs. FRT p=0.003, PB vs. CVS p<0.0001), whereas there was no difference between the FRT and CVS (p=0.13). Bars represent mean values (±SEM).

Supplementary table 1. Exposure route and inoculum used for HIV infected BLT mice

Figure	Total (n)	Exposure route and inoculum
3A	1	Vaginal: Cell-free HIV _{JR-CSF}
3B	21	Vaginal: Cell-free HIV _{JR-CSF} (n=7) Vaginal: Cell-associated HIV _{JR-CSF} (n=12) Vaginal: Cell-free HIV _{RHPA} (n=2)
3C	16	Rectal: Cell-free HIV _{JR-CSF} (n=16)
3D	14	Oral: Cell-free HIV _{JR-CSF} (n=7) Oral: Cell-associated HIV _{JR-CSF} (n=7)
4A	18	Vaginal: Cell-free HIV _{JR-CSF} (n=7) Vaginal: Cell-associated HIV _{JR-CSF} (n=9) Vaginal: Cell-free HIV _{RHPA} (n=2)
4B	11	Rectal: Cell-associated HIV _{JR-CSF} (n=11)
4C	12	Oral: Cell-free HIV _{JR-CSF} (n=12)
4D	7	Vaginal: Cell-free HIV _{JR-CSF} (n=4) Rectal: Cell-free HIV _{JR-CSF} (n=2) Oral: Cell-free HIV _{JR-CSF} (n=1)
5A	18	Vaginal: Cell-free HIV _{JR-CSF} (n=7) Vaginal: Cell-associated HIV _{JR-CSF} (n=9) Vaginal: Cell-free HIV _{RHPA} (n=2)
5B	11	Rectal: Cell-associated HIV _{JR-CSF} (n=11)
5C	1	Oral: Cell-free HIV _{JR-CSF}
6A, B and C	6	Vaginal: Cell-associated HIV _{JR-CSF} (n=6)
7A, left panel	8	Vaginal: Cell-free HIV _{JR-CSF} (n=1) Vaginal: Cell-associated HIV _{JR-CSF} (n=4) Rectal: Cell-free HIV _{JR-CSF} (n=2) Oral: Cell-associated HIV _{JR-CSF} (n=1)
7A, right panel	5	Vaginal: Cell-associated HIV _{JR-CSF} (n=4) Oral: Cell-associated HIV _{JR-CSF} (n=1)
7B	16	Vaginal: Cell-free HIV _{JR-CSF} (n=9) Rectal: Cell-free HIV _{JR-CSF} (n=2) Vaginal: Cell-associated HIV _{JR-CSF} (n=4) Oral: Cell-associated HIV _{JR-CSF} (n=1)
7C	13	Vaginal: Cell-free HIV _{JR-CSF} (n=13)
7D	9	Vaginal: Cell-free HIV _{JR-CSF} (n=9)
7E	8	Vaginal: Cell-associated HIV _{JR-CSF} (n=8)