**Supplementary Figure 1: Representative gating strategy for flow cytometric analysis of different leukocyte subsets.** Following doublet exclusion and gating on vital lymphoid cells, monocytes or granulocytes based on forward and sideward scatter, we defined the different leukocyte subsets as followed: CD8+ T cells as CD3+CD8+, CD19+ B cells as CD3-CD19+,(**A**), NK cells as CD3-CD56+CD16+, monocytes as CD3-CD56-CD16+/CD14+ (**B**) and eosinophils as CD16-CCR3+Siglec8+ (**C**). Next we gated on α4+β7+ cells and determined VDZ+ cells in these subsets.

**Supplementary Figure 2: Representative gating of controls for flow cytometry analysis.** For definition of α4+β7+ cells we gated on CD8+ T cells (CD3+CD8+), CD19+ B cells (CD3-CD19+),NK cells (CD3-CD56+CD16+) monocytes (CD3-CD56-CD16+/CD14+) and eosinophils (CD16-CCR3+Siglec8+) and further gated for α4+β7+ in controls without the corresponding antibody (fluorescence minus one, FMO) or stained with the corresponding isotype control.

**Supplementary Figure 3: Concentration-dependent adhesion and transmigration of different leukocyte subsets. (A)** Dynamic adhesion of magnetic activated cell sorting (MACS) purified CD8+ T cells, CD19+ B cells, NK cells, monocytes and eosinophils after treatment with different concentrations of VDZ. Quantification of the background-corrected number of cells incubated with or without the indicated concentrations of VDZ (adhering to MAdCAM-1 (sum of eight counted high-power fields). n = 6-12 . **(B)** Quantitative flow cytometry of transmigrated CD8+ T cells, CD19+ B cells, NK cells and eosinophils after treatment with the indicated concentrations of VDZ or with corresponding isotype control (untreated). n = 5-8

Results depicted as bar graphs with standard error of the mean (SEM) and single data points. Significant outliers were identified using Grubbs test (p = 0.05) and excluded from analysis. Statistical comparisons were performed using one-way ANOVA with Tukey‘s multiple comparison test. \* p < 0.05; \*\* p < 0.01; \*\*\* p < 0.001.



Supplemental Figure 1

Supplemental Figure 2

Supplemental Figure 3