



**Supplementary Figure 12** Recognition of HLA-A\*11:01 and GTS1 mutants by NS3<sub>133</sub> DENV-specific CD8<sup>+</sup> T cell clones. **(a)** Avidity of the NS3<sub>133</sub> DENV-specific CD8<sup>+</sup> T cell clones 44-173 13 (D13) and 44-173 30 (D30) for the indicated HLA-A\*11:01-GTS1 mutant tetramers. The TRBV7-6<sup>+</sup> NS3<sub>133</sub> DENV-specific CD8<sup>+</sup> T cell clone E5 was included as a control. Data represent three independent experiments. Error bars indicate SD. gMFI, geometric mean fluorescence intensity. **(b)** Functional sensitivity of the NS3<sub>133</sub> DENV-specific CD8<sup>+</sup> T cell clones 44-173 13 (D13) and 44-173 30 (D30) for the indicated GTS1 mutant peptides in IFN- $\gamma$  ELISpot assays. The TRBV7-6<sup>+</sup> NS3<sub>133</sub> DENV-specific CD8<sup>+</sup> T cell clone E5 was included as a control. Data represent three independent experiments. Error bars indicate SD. **(c)** Effector function profiles for the NS3<sub>133</sub> DENV-specific CD8<sup>+</sup> T cell clones 44-173 13 (D13) and 44-173 30 (D30) stimulated with the indicated GTS1 mutant peptides. The TRBV7-6<sup>+</sup> clone E5 was included as a control. Five readouts were measured by flow cytometry (CD107a, MIP-1 $\beta$ , TNF- $\alpha$ , IFN- $\gamma$ , and IL-2). Data represent two independent experiments. Pie chart segments depict the fraction of cells expressing the number of functions indicated in the key.