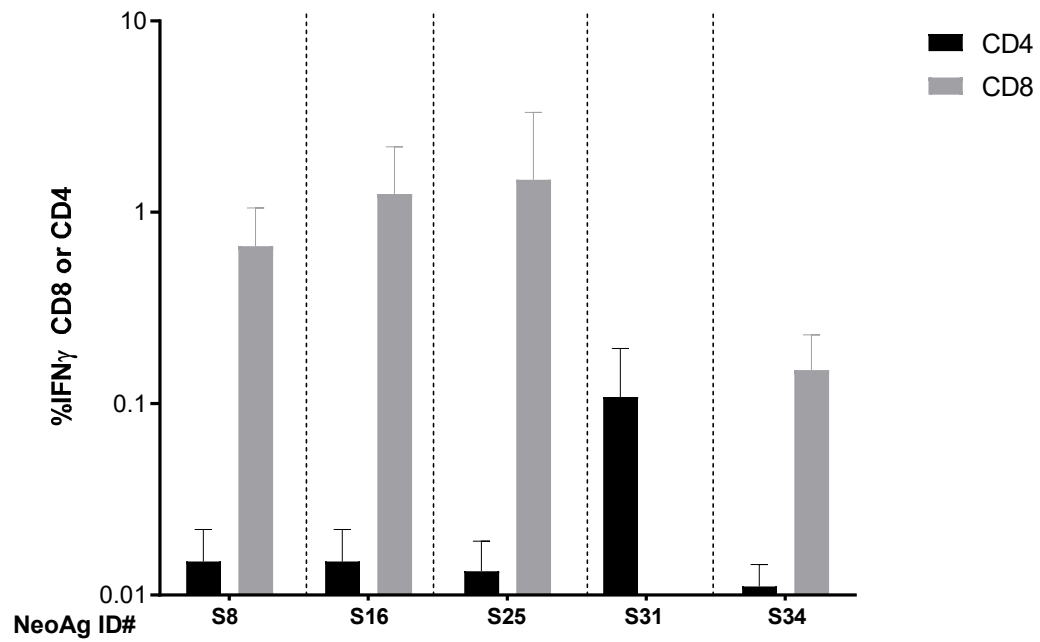


**Figure 1.** “Tailoring” procedure applied to FSPs: In figure is schematized the procedure followed by the algorithm to split and rank the neo peptides derived from FSPs A) Whenever possible, to the N terminus of each long FSP sequence are added 12 wild type aminoacids. A windows of 9 aminoacids length is slid along the entire FSP to generate all the possible 9 mers peptides. For each peptide are performed MHC-I binding predictions and in case of multiple binding alleles is selected the best prediction. B) Each 9-mer peptide is then extended into a 25mer by adding 8 amino acids to both ends. All FSP-derived 25mers are finally added to the list of SNV-derived 25mer and subjected to the ranking procedure.



**Figure S2:** Vaccine-encoded immunogenic neoantigens induce CD8<sup>+</sup> and CD4<sup>+</sup> T cell responses. Characterization of T cell subtypes induced by immunogenic nAgs after GAd-MC38-62 vaccination evaluated by intracellular cytokine staining (ICS) and fluorescence-activated cell sorting (FACS). 3 weeks post vaccination splenocytes were stimulated with individual immunogenic peptides. Data (means  $\pm$  SEM) show the percentages of IFN- $\gamma$  + CD4<sup>+</sup> and CD8<sup>+</sup> T cells and are representative of 2 experiments.