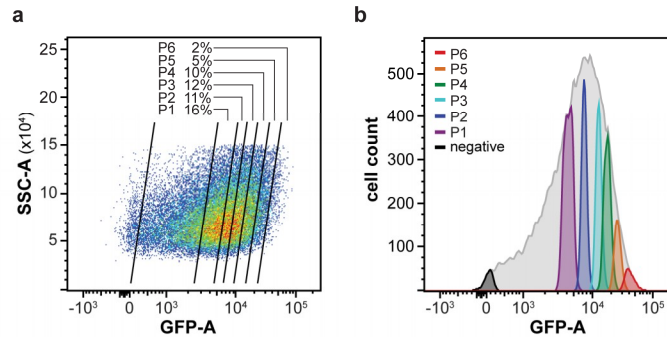
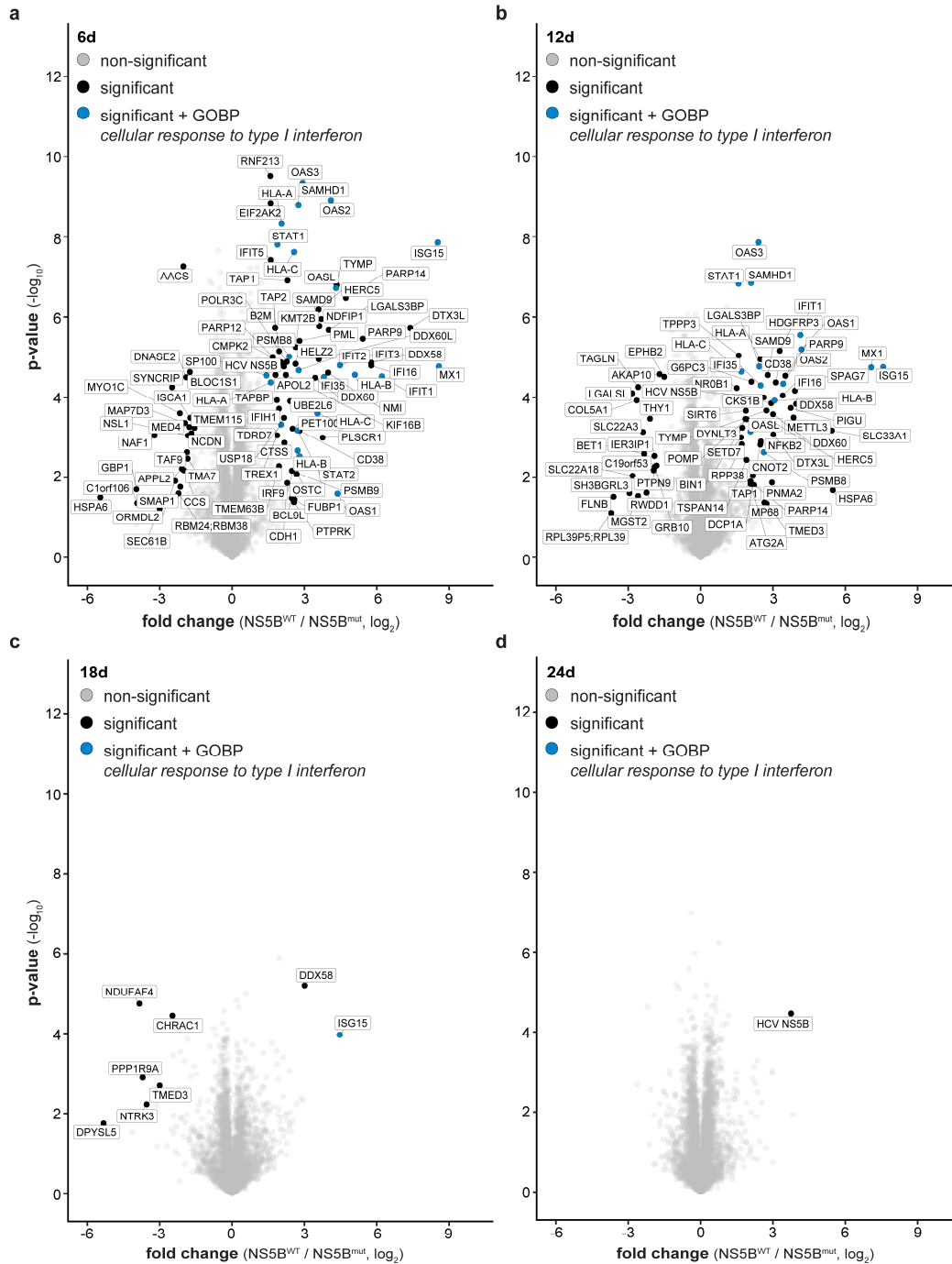


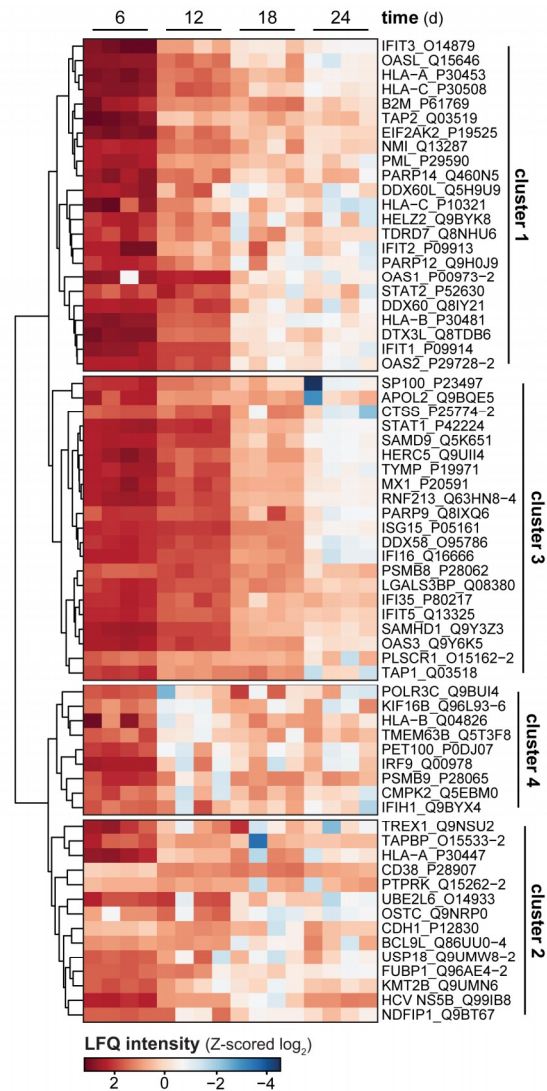
## Supplementary Figures S1-4



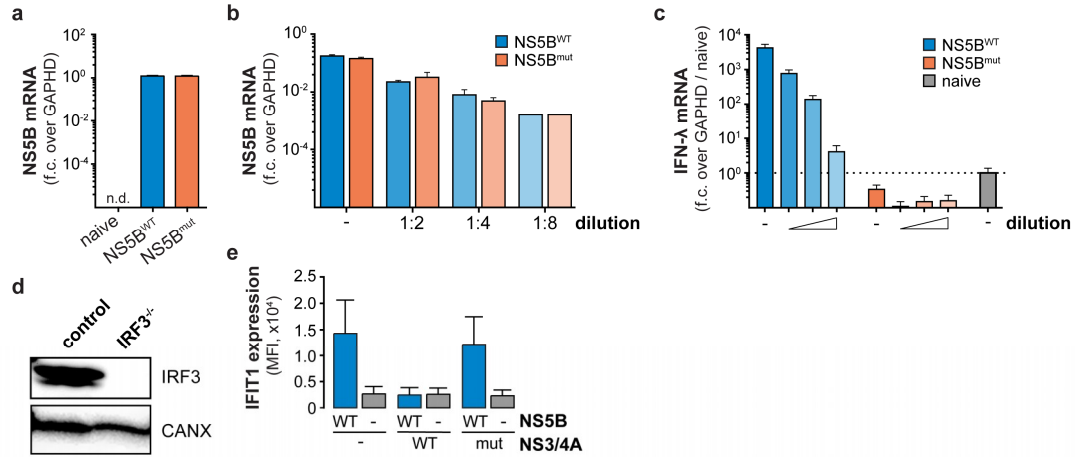
**Figure S1.** Fluorescence-activated cell sorting of NS5B<sup>WT</sup>-eGFP transduced A549 cells. **(a)** Scatter plot showing the side scatter area (SSC-A) and eGFP fluorescence intensity area (GFP-A) 6 days after NS5B<sup>WT</sup>-eGFP transduction. Non expressing (negative) cells or six populations of cells (P1-6) expressing increasing NS5B<sup>WT</sup>-eGFP levels are separated by vertical lines. The total percentage of cells for each sub-population is indicated. **(b)** Histograms show the GFP-A for negative (black) and NS5B<sup>WT</sup>-eGFP expressing sub-populations.



**Figure S2.** Total cell proteomics of NS5B-transduced A549 cells. Total cell proteomics of A549 cells 6 (a), 12 (b), 18 (c) and 24 (d) days post transduction of NS5B<sup>WT</sup> versus NS5B<sup>mut</sup>. Significantly up- or down-regulated proteins (two-tailed Student's T-test, S0 = 1, permutation-based FDR < 0.01, n=4 technical replicates) are shown in black and proteins annotated with the GOBP term “cellular response to type I interferon” are highlighted in blue.



**Figure S3.** Hierarchical clustering of NS5B<sup>WT</sup> upregulated proteins. Hierarchical clustering of Z-scored log<sub>2</sub> LFQ intensities of proteins, significantly upregulated 6 days after NS5B<sup>WT</sup> as compared to NS5B<sup>mut</sup> transduced cells. Clustering was performed for all time points after NS5B<sup>WT</sup> transduction using Euclidean distances and Ward as agglomeration method. Four main clusters of differentially regulated proteins were identified and gene names including majority protein IDs for each protein are shown.



**Figure S4.** (a) NS5B mRNA levels in naïve, NS5B<sup>WT</sup> or NS5B<sup>mut</sup> transduced PH5CH8 cells, 5 days post transduction. NS5B fold change (f.c.) over GAPDH was calculated (mean + s.d. of n=3 technical replicates). NS5B (b) and IFN-λ (c) mRNA levels in naïve, NS5B<sup>WT</sup> or NS5B<sup>mut</sup> transduced A549 cells, 5 days post transduction using indicated dilutions of NS5B expressing lentiviruses. NS5B fold change over GAPDH and IFN-λ fold change over GAPDH and naïve control was calculated (mean + s.d. of n=3 technical replicates). (d) Western blot of IRF3 protein expression in control and IRF3 knock-out A549 cells. Calnexin (CANX) was used as loading control. (e) Bar graph shows the mean fluorescence intensity (MFI) of IFIT1 in A549 cells transduced as indicated with NS5B<sup>WT</sup> and/or NS3/4A<sup>WT</sup> or NS3/4A<sup>mut</sup> (mean + s.d. of n > 1.6×10<sup>4</sup> single cell events). One representative of n=2 independent experiments is shown.