

**Supplementary information Table S2.**

sgRNA- <i>HS3ST1</i> #1	5'-GGGCGACGTGAAATACGCGGGGG-3'
sgRNA- <i>HS3ST1</i> #2	5'-CGCCATCGCGGACGTCATCCTGG-3'
sgRNA- <i>PDCD1</i> #1	5'-TGTAGCACCGCCCAGACGACTGG-3'
sgRNA- <i>PDCD1</i> #2	5'-CACCGCCCAGACGACTGGCCAGG-3'

**Supplementary information Table S2. sgRNA sequences used in Fig. 4d and Fig. 4f**