

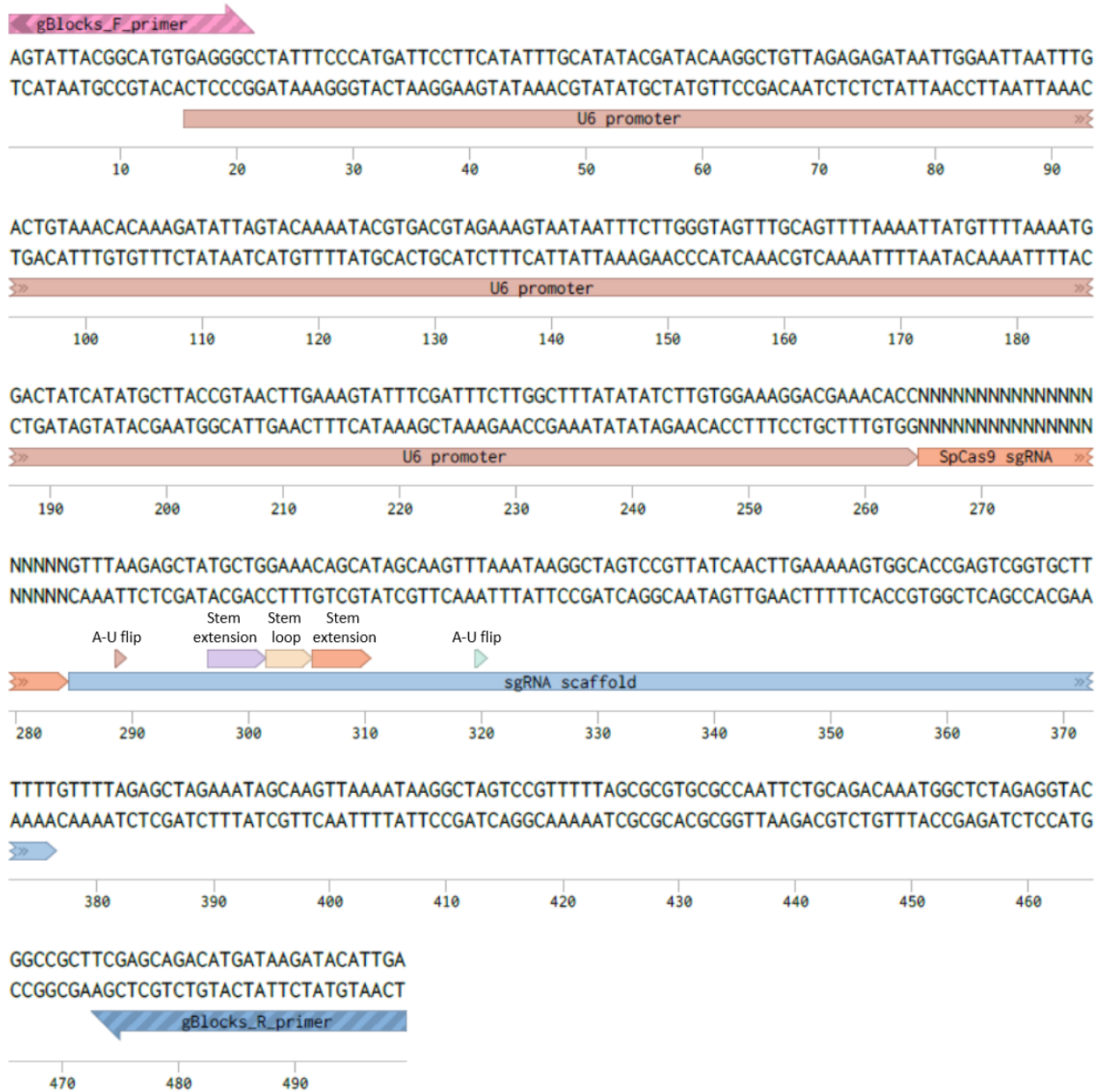
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Supplemental Information

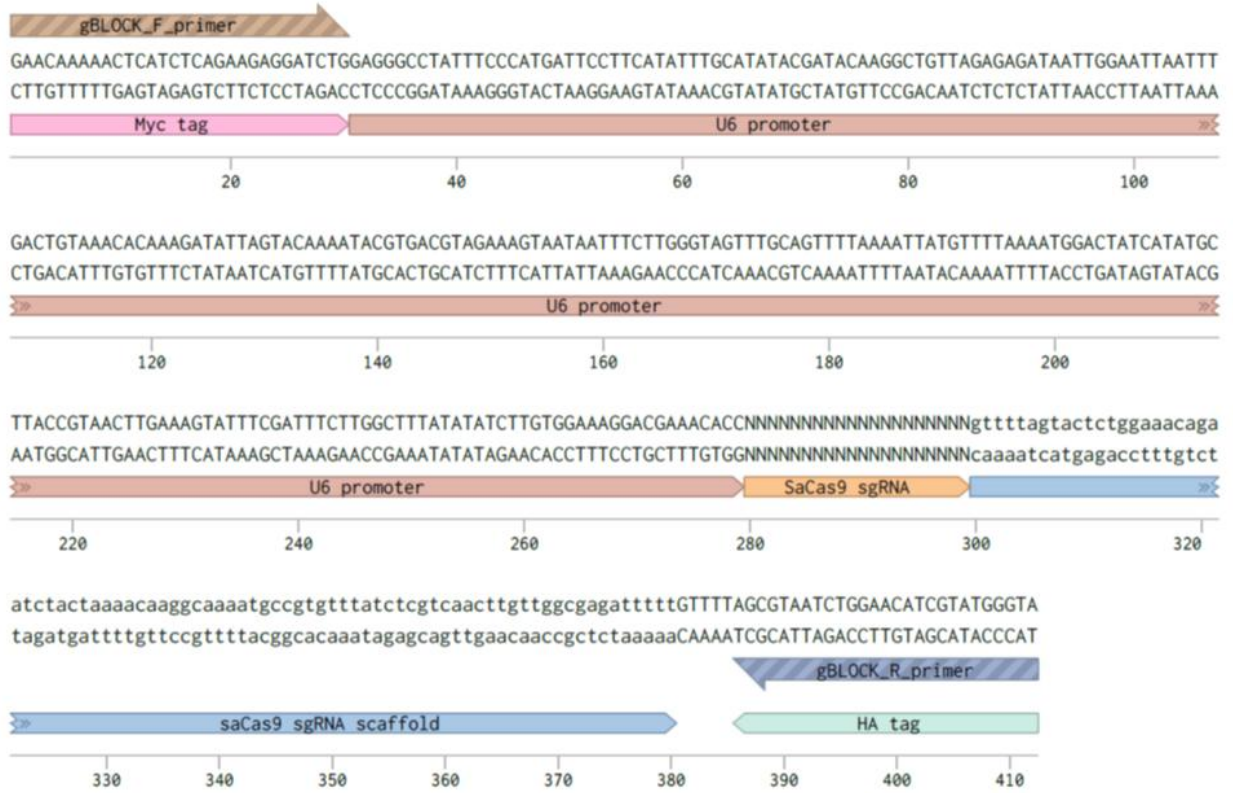
A Simple Cloning-free Method to Efficiently Induce Gene Expression Using CRISPR/Cas9

Lyuji Fang, Sandy S.C. Hung, Jennifer Yek, Layal El Wazan, Tu Nguyen, Shahnaz Khan, Shiang Y. Lim, Alex W. Hewitt, and Raymond C.B. Wong

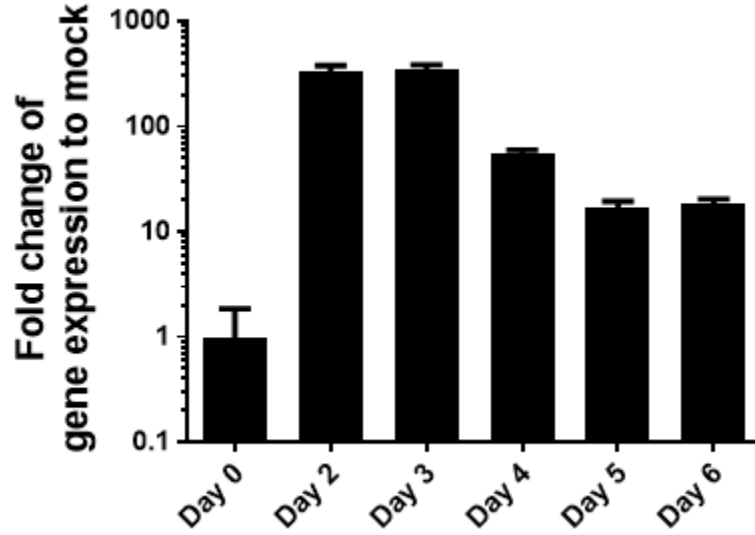
Supplementary information:



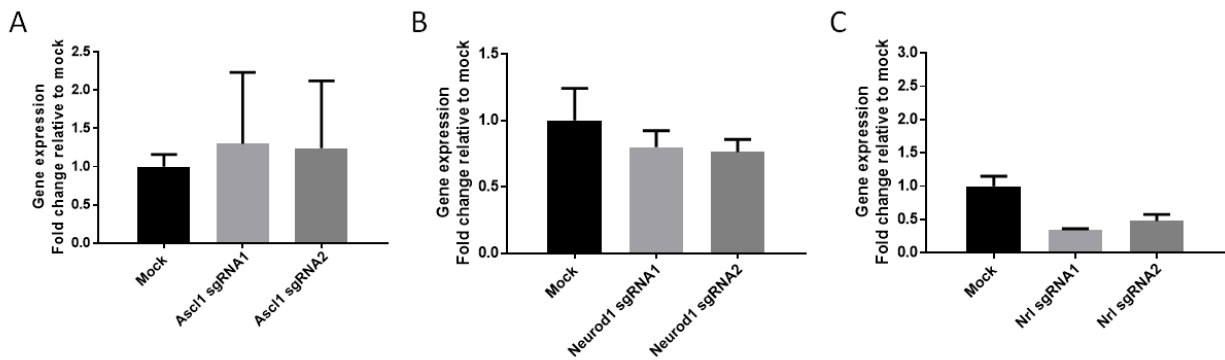
Supplementary figure 1: Design of sgRNA expression cassette for SpCas9.



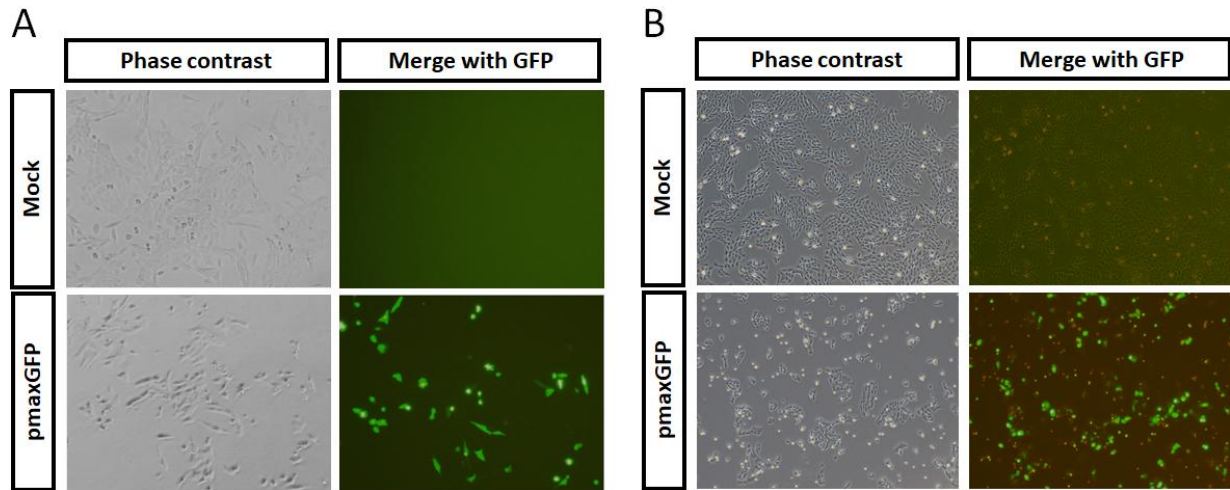
Supplementary figure 2: Design of sgRNA expression cassette for SaCas9.



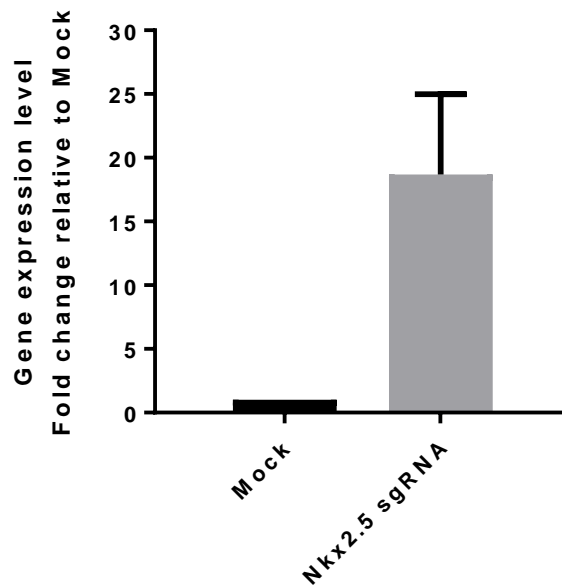
Supplementary figure 3: Kinetics of *ASCL1* gene activation using dSpCas9VPR in HEK293A. Results are displayed as the mean of technical triplicates \pm SEM.



Supplementary figure 4: Assessment of multiple sgRNAs for dSpCas9VPR to induce gene activation in rat fibroblast R12 cells. Results are displayed as the mean of three technical repeats \pm SEM.



Supplementary figure 5: Lipofectamine 3000 allows efficient transfection in A) rat Müller glial cells rMC1 and B) rat fibroblasts R12.



Supplementary figure 6: Efficient gene activation using dSpCas9VPR in mouse embryonic fibroblasts. qPCR analysis of gene activation for *Nkx2.5*, results are displayed as the mean of three independent biological repeats \pm SEM

Supplementary table 1: Success rate of designing sgRNAs for SpCas9 and SaCas9 in human cells

Cas9 activator	Species	Genes/sgRNA	Number of genes	Success rate
dSpCas9VPR	Human	Total genes tested	15	100%
		Gene activation with first sgRNA	13	86.7%
		Gene activation with second sgRNA	1	6.7%
		Gene activation with third sgRNA	1	6.7%
dSaCas9VPR	Human	Total genes tested	1	100%
		Gene activation with first sgRNA	1	100%