Online Resources

CRISPRtools: A flexible computational platform for performing CRISPR/Cas9 experiments in the mouse

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ESM 1.

Screen shot for CRISPRtools web-based submission form. Ensembl exon IDs or genomic coordinates can be used as input. Ensembl exon identifiers can be entered individually or comma separated when attempting to delete two adjacent exons. The user can then select several different parameters to restrict the search region and/or limit filtering to take into account linked off-target hits. In addition, the user can choose which scoring algorithm to use to prioritize guide selection.

ESM 1.
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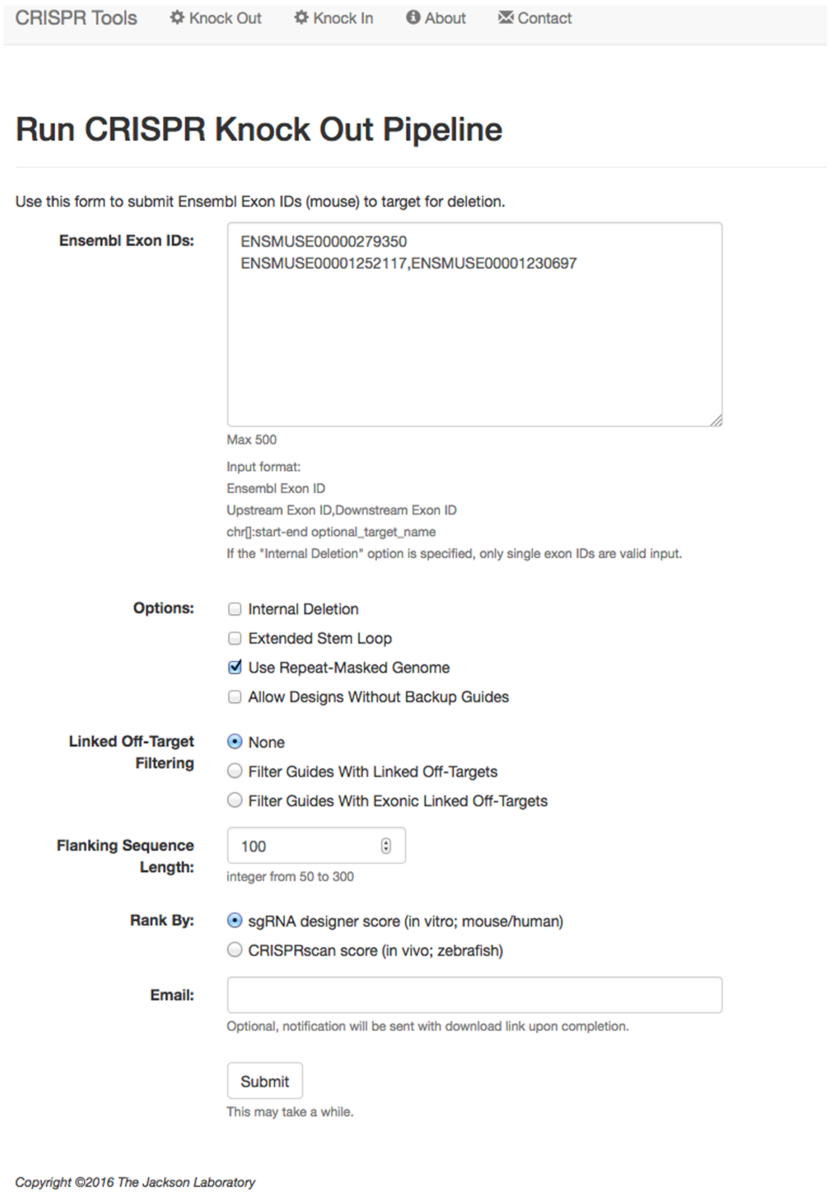

ESM 2

UCSC genome browser view indicating location of paired guides relative to the critical exon of *Pcnx2* with the maximal sized deletion indicated below. The complete genotyping results for each experiment are shown below each locus display with the number of live born animals analyzed for each condition indicated between the arrows. Vertical lines indicate junctions between different gels. The conditions are abbreviated as microinjection (MIJ), electroporation (EP), Cas9 ribonucleoprotein (RNP) and the different EP pulse numbers are indicated as either 1X or 6X iterations of the program.

ESM 2.
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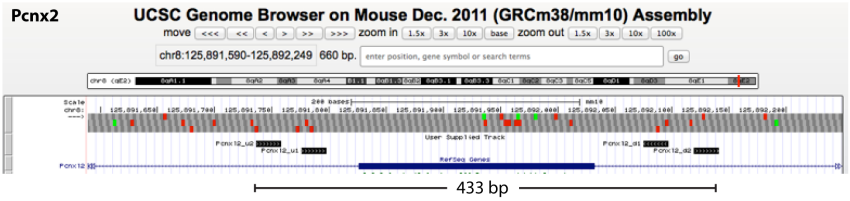
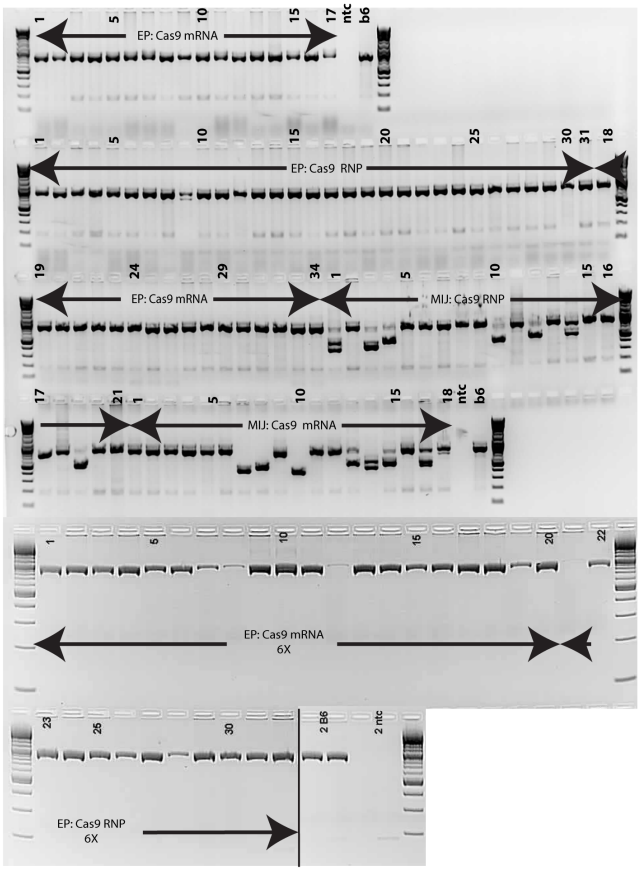
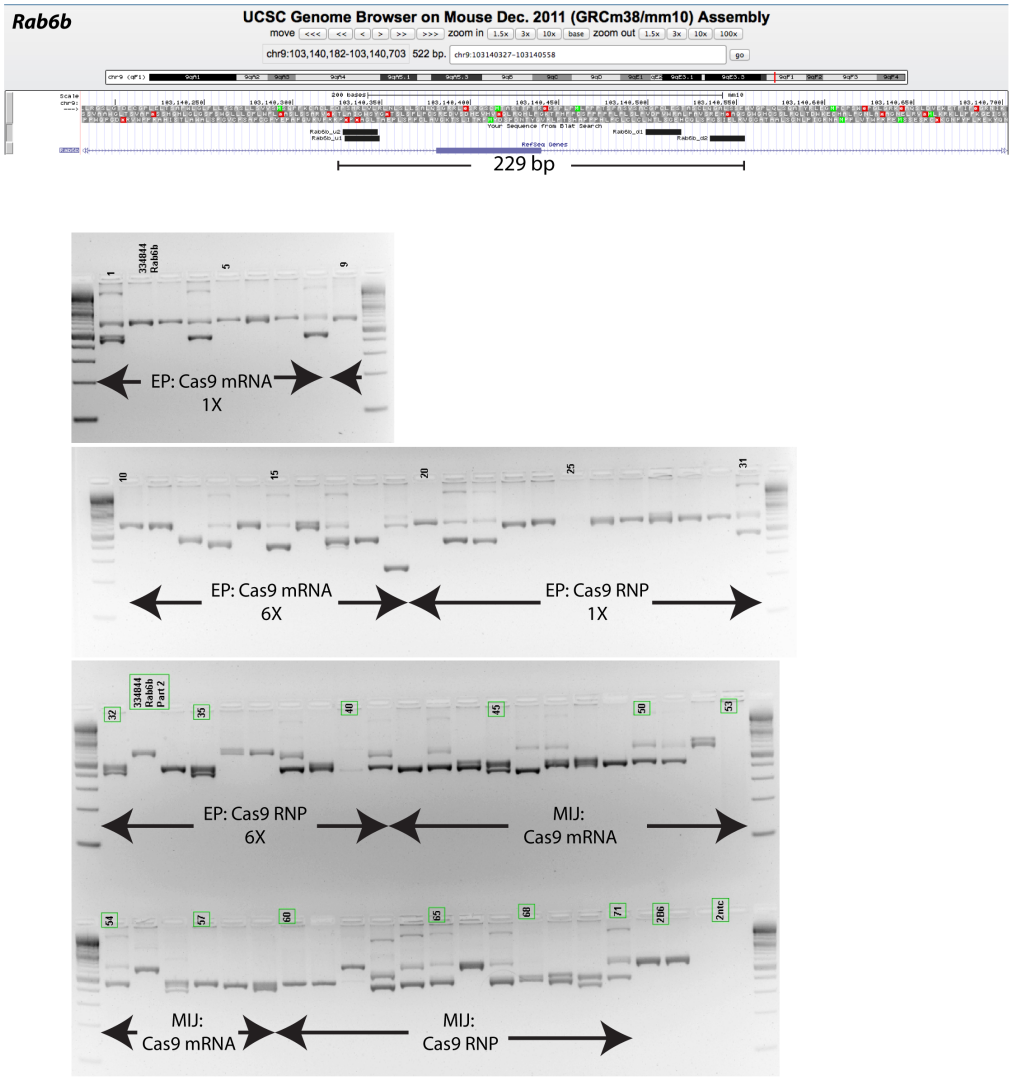




ESM 3

UCSC genome browser view indicating location of paired guides relative to the critical exon of *Rab6b* with the maximal sized deletion indicated below. The complete genotyping results for each experiment are shown below each locus display with the number of live born animals analyzed for each condition indicated between the arrows. The conditions are abbreviated as microinjection (MIJ), electroporation (EP), Cas9 ribonucleoprotein (RNP) and the different EP pulse numbers are indicated as either 1X or 6X iterations of the program.

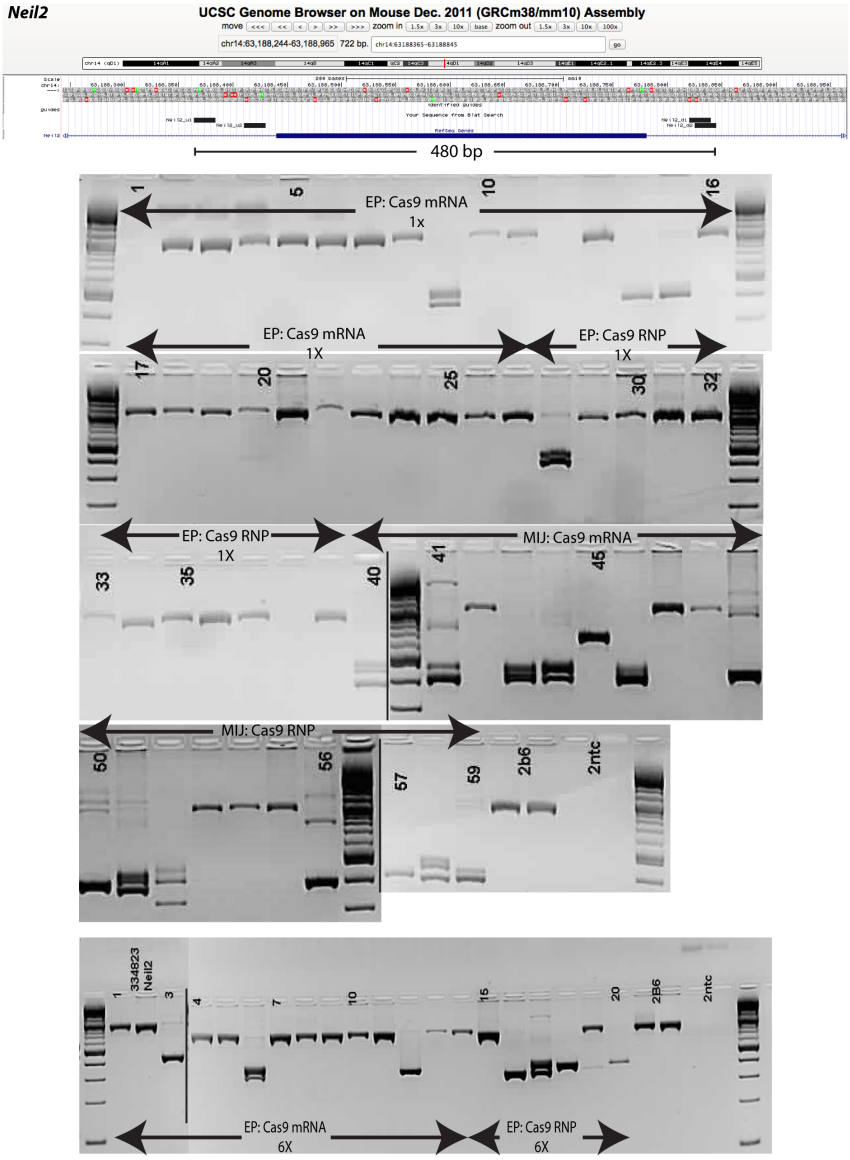
ESM 3.
Peterson et al.



ESM 4

UCSC genome browser view indicating location of paired guides relative to the critical exon of *Neil2* with the maximal sized deletion indicated below. The complete genotyping results for each experiment are shown below each locus display with the number of live born animals analyzed for each condition indicated between the arrows. Vertical lines indicate junctions between different gels. Note, a subset of the results are shown in main Figure 3d. The conditions are abbreviated as microinjection (MIJ), electroporation (EP), Cas9 ribonucleoprotein (RNP) and the different EP pulse numbers are indicated as either 1X or 6X iterations of the program.

ESM 4.
Peterson et al.



ESM 5.

Examples of deletion breakpoints obtained from founders injected with four guides targeting *Rab6b* exon ENSMUSE00000320561 and Cas9 mRNA. Individual guide sequences are shown in turquoise and PAM sequences are colored red. Alignments were obtained using BLAT. Founder animal numbers correspond to numbers in ESM 3. Note the variability in deletion sizes and evidence of small indels not resulting in deletion events for founder #55.

ESM 5.
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