

Genome editing using the CRISPR-Cas9 system (Ran *et al.*)

Supplementary Sequences

All sequences are in the 5' to 3' direction. For U6 transcription, the string of underlined Ts serve as the transcriptional terminator.

Supplementary Table 1 | Cas9 target sites for SURVEYOR and RFLP assay

primer name	target sequence (5' to 3')
DYRK1A (1)	GCTGCTGGCCTTCAGATGGC
GRIN2B (2)	GGAGAACAGCACTCCGCTCT
EMX1 (3.1)	GTAGCCTCAGTCTTCCCATC
EMX1 (3.2)	GAGGCCCCAGTGGCTGCTCT
EMX1 (4.1)	GGGCAACCACAAACCCACGA
EMX1 (4.2)	GGCAGAGTGCTGCTTGCTGC
EMX1 (5)	GTCACCTCCAATGACTAGGG

Supplementary Table 2 | SURVEYOR and RFLP assay primers

primer name	primer sequence (5' to 3')
DYRK1A Fwd (1)	GGAGCTGGTCTGTTGGAGAA
DYRK1A Rev (1)	TCCCAATCCATAATCCCACGTT
GRIN2B Fwd (2)	CAGGAGGGCCAGGAGATTG
GRIN2B Rev (2)	TGAAATCGAGGATCTGGGCG
EMX1 (5) SURV Fwd	CCATCCCCTTCTGTGAATGT
EMX1 (5) SURV Rev	GGAGATTGGAGACACGGAGA
EMX1 (5) RFLP Fwd	GGCTCCCTGGGTTCAAAGTA
EMX1 (5) RFLP Rev	AGAGGGGTCTGGATGTCGTAA

Supplementary Table 2 | Sanger sequencing primers

primer name	primer sequence (5' to 3')
CBh-Fwd	TTTATGGCGAGGCGGCGG
SXRP002	TGGAAGAGGATAAGAAGCACGAGCG
SXRP003	AGCGCCTCTATGATCAAGAGATACG
SXRP004	ACGTGACCGAGGGAATGAGAAAGCC
SXRP005	CAGACAGTGAAGGTGGTGGACGAGC
SXRP006	TGATCCGGGAAGTGAAAGTGATCAC
SXRP007	GTGTGAAAGAGCTGCTGGGGATCAC
pUC19-Fwd	CGCCAGGGTTTTCCCAGTCACGAC

>U6-Fwd primer
GAGGGCCTATTTCCTATGATTCC

> Rev primer for PCR cassette encoding sgRNA(+85)
AAAAAAGCACCGACTCGGTGCCACTTTTTCAAGTTGATAACGGACTAGCCTTATTTTAACTTGCTATT
TCTAGCTCTAAACNNNNNNNNNNNNNNNNNNNNcGGTGTTTCGTCCTTTCCACAAG

> sgRNA containing +85 tracrRNA (for *Streptococcus pyogenes* SF370)
gagggcctatttcccatgattccttcatttgcataacgatacaaggctgtagagagataattggaattaattgactgtaaacacaaagatattagtaaaaacgtgac
gtagaaagtaataatttctgggtagttgcagttttaaattatgttttaaatggactatcatatgcttaccgtaacttgaaagtattcgatttctggctttatatacttggaa
aggacgaaacaccgNNNNNNNNNNNNNNNNNNNNgttttagagctagaaatagcaagttaaataaggctagtcggttatcaactgaaaaagtgg
caccgagtcggtgcTTTTTTT
(U6 promoter sequence is highlighted in green; guide sequence is highlighted in blue and the tracrRNA fragment is highlighted in red)

>pSpCas9
See GenBank file online.

>pSpCas9(BB)
See GenBank file online.

>pSpCas9(BB)-2A-GFP
See GenBank file online.

>pSpCas9(BB)-2A-Puro
See GenBank file online.

>pSpCas9n(BB)
See GenBank file online.

>pSpCas9n(BB)-2A-GFP
See GenBank file online.

>pSpCas9n(BB)-2A-Puro
See GenBank file online.