

Supplemental Table S5. Repair templates (*EMX1*, *HEK293*, and *TK1*)

PD	Repair template
EMX1_Bam HI_15pam	CACCTTGGCTTGGCTTTGCTGGGGCTAGAGGAGCTAGGATGCACAGCAGCTCTGTGACCCTTTGTTTGAGAGGAACAGGAAAACCACCCTTCTCTCTGGCCCACTGTGT CCTCTTCTGCCCCTGCCATCCCCTTCTGTGAATGTTAGACCCATGGGAGCAGCTGGTCAGAGGGGACCCCGGCCTGGGGCCCCTAACCCCTATGTAGCCTCAGTCTTCCC ATCAGGCTCTCAGCTCAGCCTGAGTGTGAGGCCCCAGTGGCTGCTCTGGGGCCTCCTGAGTTTCTCATCTGTGCCCTCCCTCCCTGGCCCAAGGTGAAGGTGTGGTT CCAGAACCAGGAGGACAAAGTACAAACGGCAGAAGCTGGAGGAGGAAGGGCCTGAGTCCGAGCAGAAGAAGAAGGGATCCCATCACATCAATTCGGTGGCGCATTGCCACG AAGCAGGCCAATGGGGAGGACATCGATGTCACCTCCAATGACTAGGGTGGGCAACCACAAACCCACGAGGGCAGAGTGTGCTGCTTGTGCTGGCCAGGCCCTGCGTGGG CCCAAGCTGGACTCTGGCCACTCCCTGGCCAGGCTTTGGGGAGGCCTGGAGTCATGGCCCCACAGGGCTTGAAGCCCGGGCCGCCATTGACAGAGGGACAAGCAATGG GCTGGCTGAGGCCTGGGACCACTTGGCCTTCTCCTCGGAGAGCCTGCCTGCCTGGGCGGGCCCGCCGCCACCAGCAGCCTCCCAGCTGCTCTCCGTGTCTCCAATCTCC CTTTTGTGTTTGTATGCATTTCTGTTTTAATTTATTTTCCAGGCACCACTGTAGTT
HEK293_sit e3_XhoI_25 pam	TATAGAATGAGAGTCTCAAACTAATCTTGTAGCTACGCCTGTGATGGGCTAATTGATGAATCAGTGTGGAGAATGGGTACAGTGGCAAATGAGGCTGGAGAGGCC GTGAGCTGCTGTCCCAGAGGGCCTGGGATGTCTGCAGGGAGCTTGGCATGAGAAACCTTGGAGAGTTTTAAGCAAGGGCTGATGTGGGCTGCCTAGAAAGGCATGGAT GAGAGAAGCCTGGAGACAGGGATCCCAGGGAAACGCCATGCAATTAGTCTATTTCTGCTGCAAGTAAGCATGCATTTGTAGGCTTGATGCTTTTTTCTGCTTCTCCA GCCCTGGCCTGGGTCAATCCTTGGGGCCAGACTGAGCACGTGATGGCAGAGGAAAGGAAGCCCTGCTTCCTCGAGAGGGCGTCGAGGACAGCTTTTCATAGACAGGG GCTAGTATGTGCAGCTCCTGCACCGGGATACTGGTTGACAAGTTTGGCTGGGCTGGAAGCCAGCACCTAGGGAGGTCCCTGGAAGGGGCCAGCCTCACCAGGAGAGGAG GGACCTGGCCCTCAGGGTCGAGCTCAACAGAGGAAAAGATCTCAGGGCACCCAGAGCCCAGTGGCTTTGAGCACCTGCATGAAAATCAGAGATCAACCAGATTACCC ATATTGCCCAAGAGAAAAGTGGAGCCAGAAAAGTATGGAGCTTGGCCAGGACCCAGAGGGTGTAGAGGCAGGCCAGAACCAGAGGACAGCTCTGTCCCAGCACTTGC CCTCCTTAATTAGGTGGGTGGTCATATCGCAGTGGTCAGAGACATTGCAAACAATAATAAT
TK (ex4)	GGGCCCTGGTACCTGATGAAGTTGGCCTAGTCTGCCCCAGCTCCTGAACAGTGGAAAGAGTTTTTAGTCTCATTGAGCTTTGTAAGTGGACATTACTAATTTCTAATCCA AAGCATCAAGTGAAGTGGCTTGTATAAATAACTGGTTTTCTCTGGGAGGCTAAGGCGGGTGGATCACTTAAAAGTTAGGAGTCTGAGACCAGCCTGGCCAACATGGTG AAACCCCATGTCTGCTAAAAATACAAAATTAGCTGGGTGTGATGGTGTGTGCCAGTAGTCCCAGCTACTCTTGTGGCTGAGGTGGGAGAATCGCTTGAGACCCTTGAG AATTGGGAGGTAGAGATTGCAGGGAGCCGAGATGGCGCCACTGCACTCCAGCCTGGGTGACAGAGCAAGACTCTGTTTTATAAAAAATAAATAAATAACTGGTTTTCTG GACGAGGGCCTTTCCCATAGGTGCTAACTTCTCAAAGCCCCGGCTGGGTGAACACTGAGCCTGCTTTGCAGGTAGCAGGTGGTCACGACAGTGCCATTCCCTGGCCCTG CATTGTGGCTTCTGGCCTCCCTGGCCCTGCTCACGCTCTGGCTTTCTCTTCCCAGGAACACCATGGAGGCACTGCCCGCCTGCCTGCTCCGAGACGTGGCCCAAGGAGGC CCTGGGCGTGGCTGTCATAGGCATCGACGAGGGGAGTTTTGTAAGTTGGCTTGTCTTGGCATCACTTCTCCTGCCAGCTTCCGCTCTGTCTCCCGTTTTCCCTCGCTG ACTTGGAAAGTTATCTGATCTTTTAGTAAAATAACAAGGTTAAATAGCTACAACACTAGTGTGGAATACCCTCTGAAGGCCCTTTCTAGTTTCCCTGTCATAGTGTGATA GTCTTGTAGGATTCGTTTTACTTTTTTTTTTTTTTTTTTTTTTGGAGACGGAGTTTTGCTCTTGTGGCCAGGCCGAGTACGATGGCACAATCTCACCGCAAACCTTTGCTTCC TGGGTTCAAGCAATTCTCTCCTGTCTCAGCCTCCCGAGTAGCTGGGATTACAGGCATGCGCCACCACGCCAGCTAATTTTATATTTTTTAGTAGAGATGGGGTTTCTCC ATGTTGGTCAAGCTGGTCTCAAACCTCCAACTCAGGTGATCCGCCCCGCCTTGAACCTCCAAAGCGCTGGGATTACAGGCATGAGCTACCACACCTGGCCATTGTACC TTTTTAAAAATACATATATCTATTTACTGGCAAGATGCAGTGACTCACACCTGTAATCTCAGCCTGTGGGAGGCCAAGGTGGACAGATCACTTGA

Mutations are indicated in red. The EMX1.13 target (the original target site sequence: GGAGCCCTTCTTCTTCTGCT) and the HEK293 site 3 target are underlined. These sequences were cloned into the pUC57 plasmids and used as plasmid donors.