## SUPPLEMENTAL SEQUENCES

### The EGFP reporter cell lines

**CMV-EGFP-pA:**

TAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAGTTCCG
CGTTACATAACTTACGGTAAATGGCCCGCCTGGCTGACCGCCCAACGACCCCCGCC
CATTGACGTCAATAATGACGTATGTTCCCATAGTAACGCCAATAGGGACTTTCCATTGA
CGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGGCAGTACATCAAGTGTATC
ATATGCCAAGTACGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTA
TGCCCAGTACATGACCTTATGGGACTTTCCTACTTGGCAGTACATCTACGTATTAGTCA
TCGCTATTACCATGGTGATGCGGTTTTGGCAGTACATCAATGGGCGTGGATAGCGGT
TTGACTCACGGGGATTTCCAAGTCTCCACCCCATTGACGTCAATGGGAGTTTGTTTT
GGCACCAAAATCAACGGGACTTTCCAAAATGTCGTAACAACTCCGCCCCATTGACGC
AAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTGGTTTAGTGA
ACCGTCAGATCCGCTAGCGCTACCGGACTCAGATCTCGAGCTCAAGCTTCGAATTCT
GCAGTCGACGGTACCGCGGGCCCGGGATCCACCGGCCGGTCGCCACCATGGTGA
GCAAGGGCGAGGAGCTGTTCACCGGGGTGGTGCCCATCCTGGTCGAGCTGGACGG
CGACGTAAACGGCCACAAGTTCAGCGTGTCCGGCGAGGGCGAGGGCGATGCCACC
TACGGCAAGCTGACCCTGAAGTTCATCTGCACCACCGGCAAGCTGCCCGTGCCCTG
GCCCACCCTCGTGACCACCCTGACCTACGGCGTGCAGTGCTTCAGCCGCTACCCC
GACCACATGAAGCAGCACGACTTCTTCAAGTCCGCCATGCCCGAAGGCTACGTCCA
GGAGCGCACCATCTTCTTCAAGGACGACGGCAACTACAAGACCCGCGCCGAGGTG
AAGTTCGAGGGCGACACCCTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAA
GGAGGACGGCAACATCCTGGGGCACAAGCTGGAGTACAACTACAACAGCCACAACG
TCTATATCATGGCCGACAAGCAGAAGAACGGCATCAAGGTGAACTTCAAGATCCGCC
ACAACATCGAGGACGGCAGCGTGCAGCTCGCCGACCACTACCAGCAGAACACCCC
CATCGGCGACGGCCCCGTGCTGCTGCCCGACAACCACTACCTGAGCACCCAGTCC
GCCCTGAGCAAAGACCCCAACGAGAAGCGCGATCACATGGTCCTGCTGGAGTTCGT
GACCGCCGCCGGGATCACTCTCGGCATGGACGAGCTGTACAAGTAAAGCGGCCGC
GACTCTAGATCATAATCAGCCATACCACATTTGTAGAGGTTTTACTTGCTTTAAAAAAC
CTCCCACACCTCCCCCTGAACCTGAAACATAAAATGAATGCAATTGTTGTTGTTAACT
TGTTTATTGCAGCTTATAATGGTTACAAATAAAGCAATAGCATCACAAATTTCACAAATA
AAGCATTTTTTTCACTGCATTCTAGTTGTGGTTTGTCCAAACTCATCAATGTATCTTAA
G

**PCR primers for the HPRT homology arms. Only annealing sequences of the primer tails are shown.**

**HPRT_left_forward (HPRT_LF):** CATGTTTGGTACTTGTTCAGC
**HPRT_left_reverse (HPRT_LR):** TTAGCCAGGCATGGTAGC
**HPRT_right_forward (HPRT_RF):** ACTAGTCACCTTGGAGGATAT
**HPRT_right_reverse (HPRT_RR):** CAAAGCATTTCTACCACTCAG

**Screening primers:**

**HPRT_external_forward (HPRT_EF):** AGTATCAGTTGTGGTATAGTGG
**EGFP_internal_reverse (EGFP_IR):** GGTGGTGCAGATGAACTT
**EGFP_internal_forward (EGFP_IF):** CGACAACCACTACCTGAG
**HPRT_external_reverse (HPRT_ER):** ATCAGTTGAGGAGTTCAGC

## The EGFP-BFP conversion

**sgRNA sequences:**

**GFP_S:** CTCGTGACCACCCTGACCTA
**GFP_AS:** GCACTGCACGCCGTAGGTCA
**GFP_PAMout_S:** CTCGTGACCACCCTGACCTA
**GFP_PAMout_AS:** CCAGGGCACGGGCAGCTTGC
**GFP_PAMin_S:** CCGGCAAGCTGCCCGTGCCC
**GFP_PAMin_AS:** GCTGAAGCACTGCACGCCGT

**ODN donors:**

**BFP_S160:**
ACGGCAAGCTGACCCTGAAGTTCATCTGCACCACCGGCAAGCTGCCCGTGCCCTG
GCCCACCCTCGTGACCACCCTG**TCTCAT**GGCGTGCAGTGCTTCAGCCGCTACCCCG
ACCACATGAAGCAGCACGACTTCTTCAAGTCCGCCATGCCCGAAGGCTA
**BFP_AS160:**
TAGCCTTCGGGCATGGCGGACTTGAAGAAGTCGTGCTGCTTCATGTGGTCGGGGTA
GCGGCTGAAGCACTGCACGCC**ATGAGA**CAGGGTGGTCACGAGGGTGGGCCAGGG
CACGGGCAGCTTGCCGGTGGTGCAGATGAACTTCAGGGTCAGCTTGCCGT
**BFP_S160_6SNP_A (S_6SNP_A):**
ACGGCAAGCTGACCCTGAA**A**TTCATCTGCACCACCGGCAA**A**CTGCCCGTGCCCTGG
CCCAC**A**CTCGTGACCACCCTG**TCTCAT**GGCGTGCAGTGCTTCAG**T**CGCTACCCCGA
CCACATGAA**A**CAGCACGACTTCTTCAAGTC**T**GCCATGCCCGAAGGCTA
**BFP_S160_6SNP_B (S_6SNP_B):**
ACGGCAAGCTGACCCTGAAGTTCATCTGCACCACCGGCAAGCTGCCCGT**C**CCCTGG
CCCACCCTCGT**C**ACCAC**G**CTG**TCTCAT**GGCGT**C**CAGTG**T**TTCAGCCGCTACCC**T**GA
CCACATGAAGCAGCACGACTTCTTCAAGTCCGCCATGCCCGAAGGCTA
**BFP_AS160_6SNP_A (AS_6SNP_A):**
TAGCCTTCGGGCATGGC**A**GACTTGAAGAAGTCGTGCTG**T**TTCATGTGGTCGGGGTA
GCG**A**CTGAAGCACTGCACGCC**ATGAGA**CAGGGTGGTCACGAG**T**GTGGGCCAGGG
CACGGGCAG**T**TTGCCGGTGGTGCAGATGAA**T**TTCAGGGTCAGCTTGCCGT
**BFP_AS160_6SNP_B (AS_6SNP_B):**
TAGCCTTCGGGCATGGCGGACTTGAAGAAGTCGTGCTGCTTCATGTGGTC**A**GGGTA
GCGGCTGAA**A**CACTG**G**ACGCC**ATGAGA**CAG**C**GTGGT**G**ACGAGGGTGGGCCAGGG

GACGGGCAGCTTGCCGGTGGTGCAGATGAACTTCAGGGTCAGCTTGCCGT

**BFP_S90_Biotin:**

CACCGGCAAGCTGCCCGTGCCCTGGCCCACCCTCGTGACCACCCTG**TC/iBiodT/CA**TGGCGTGCAGTGCTTCAGCCGCTACCCCGACCACATGAA

**PCR primers:**

**BFP_external_forward (BFP_EF):** CACAAGTTCAGCGTGTCC
**BFP_external_reverse (BFP_ER):** GGTGCTCAGGTAGTGGTT
**BFP_confirmation_forward (BFP_CF):** CCACCCTGTCTCATGGC
**BFP_quantification_reverse (BFP_QR):** TGTGGCTGTTGTAGTTGTA

## The PIGA targeting system

**sgRNA sequences:**

**PIGA_S:** GGTATATGACCGGGTATCAG
**PIGA_AS:** ACACAGCTTCCACTGATACC

**ODN donors:**

**PIGA_KO**_S160:

TGTTTATCATGGGACAGGTGATGGGGTGATGGGTGATAGTGCTCACACTTGGCTTGTCTCCCTCCAGGTTTATGATCGGTGATCAGTGGAGGCTGTGTTGCCTATGGACAAACGACTGGATAGACTTATTTCTCACTGCGGCCCAGTAACAGGCTACATC

**PIGA_KO**_AS160:

GATGTAGCCTGTTACTGGGCCGCAGTGAGAAATAAGTCTATCCAGTCGTTTGTCCATAGGCAACACAGCCTCCACTGATCACCGATCATAAACCTGGAGGGAGACAAGCCAAGTGTGAGCACTATCACCCATCACCCCATCACCTGTCCCATGATAAACA

**PCR primers:**

PIGA_**Nextera**_forward **(PIGA_NextF):**

TCGTCGGCAGCGTCAGATGTGTATAAGAGACAGTGCAGGATCGGGTCATT

PIGA_**Nextera**_reverse **(PIGA_NextR):**

**GTCTCGTGGGCTCGGAGATGTGTATAAGAGACAG**TGAGGAAGAGGAAGTTGAA

**Supplemental Fig. S10.** Supplemental Sequences. This file contains the relevant nucleotide sequences of all plasmids, ODN donors and primers generated in this study. The features of the plasmids and ODN donors are internally color coded as indicated by their names.