**Supplementary Table 6: Oligonucleotides**

Genotyping primers

mKras\_F4: GTTACCTCTATCGTAGGGTC

mKras\_R4: ACACAAAGGTGAGTGTTAAAATATTGA

mKras\_R3: AGTTTTTGATAATCTTGTGTGAGACA

LSL-Kras (Y118-wt): ATGTCTTTCCCCAGCACAGT

LSL-Kras (Y117-LSL): CTAGCCACCATGGCTTGAGT

LSL-Kras (Y116-common): TCCGAATTCAGTGACTACAGATG

Cre-F: CCATCTGCCACCAGCCAG

Cre-R: TCGCCATCTTCCAGCAGG

ROSA A (common): AAAGTCGCTCTGAGTTGTTAT

ROSA B (transgene): GCGAAGAGTTTGTCCTCAACC

ROSA C5 (wt): CCTCCAATTTTACACCTGTTC

LSL-dTomato A (oIMR9020): AAG GGA GCT GCA GTG GAG TA

LSL-dTomato B (oIMR9021): CCGAAAATCTGTGGGAAGTC

LSL-dTomato C (oIMR9103): GGCATTAAAGCAGCGTATCC

LSL-dTomato D (oIMR9105): CTGTTCCTGTACGGCATGG

Trp53\_F: TTTTGAAGGCCCAAGTGAAG

Trp53\_R: CCACTCACCGTGCACATAAC

Complementary oligonucleotides used for cloning sgRNAs

mKras-G12D-A: CACCGTGGTTGGAGCTGATGGCGT

mKras-G12D-B: AAACACGCCATCAGCTCCAACCAC

mKras-wt2-A: CACCGAACTTGTGGTGGTTGGAGC

mKras-wt2-B: AAACGCTCCAACCACCACAAGTTC

TP53-α-A: CACCGACCCTGTCACCGAGACCCC

TP53-α-B: AAACGGGGTCTCGGTGACAGGGTC

HDR ssDNA templates

G12R:

AGTTGTATTTTATTATTTTTATTGTAAGGCCTGCTGAAAATGACTGAGTATAAGCTTGTGGTGGTAGGAGCTCGAGGCGTAGGCAAGAGCGCCTTGACGATACAGCTAATTCAGAATCACTTTGTGGATGAGTATGACCC

G12C:

AGTTGTATTTTATTATTTTTATTGTAAGGCCTGCTGAAAATGACTGAGTATAAGCTTGTGGTGGTTGGAGCATGCGGTGTAGGCAAGAGCGCCTTGACGATACAGCTAATTCAGAATCACTTTGTGGATGAGTATGACCC

G12V:

AGTTGTATTTTATTATTTTTATTGTAAGGCCTGCTGAAAATGACTGAGTATAAGCTTGTGGTGGTTGGCGCCGTAGGCGTAGGCAAGAGCGCCTTGACGATACAGCTAATTCAGAATCACTTTGTGGATGAGTATGACCC

G12S:

AGTTGTATTTTATTATTTTTATTGTAAGGCCTGCTGAAAATGACTGAGTATAAGCTTGTGGTGGTTGGCGCTTCCGGAGTAGGCAAGAGCGCCTTGACGATACAGCTAATTCAGAATCACTTTGTGGATGAGTATGACCC

G12A:

AGTTGTATTTTATTATTTTTATTGTAAGGCCTGCTGAAAATGACTGAGTATAAGCTTGTGGTGGTTGGCGCCGCGGGCGTAGGCAAGAGCGCCTTGACGATACAGCTAATTCAGAATCACTTTGTGGATGAGTATGACCC

G13D:

AGTTGTATTTTATTATTTTTATTGTAAGGCCTGCTGAAAATGACTGAGTATAAGCTTGTGGTGGTTGGAGCAGGAGACGTCGGCAAGAGCGCCTTGACGATACAGCTAATTCAGAATCACTTTGTGGATGAGTATGACCC

shRNA sequences

Nf1: TGCTGTTGACAGTGAGCGCAGGAATTATAATGCTTATCTATAGTGAAGCCACAGATGTATAGATAAGCATTATAATTCCTATGCCTACTGCCTCGGA

Renilla\_713: TGCTGTTGACAGTGAGCGCAGGAATTATAATGCTTATCTATAGTGAAGCCACAGATGTATAGATAAGCATTATAATTCCTATGCCTACTGCCTCGGA