**Primary PCR amplification primers**

The following primers were used to amplify the targeted genomic DNA or cDNA. The unique primers were synthesized to include a 33 and 34 base overhang at the 5’ end of the forward and reverse primers, respectively (Forward: 5’-TCGTCGGCAGCGTCAGATGTGTATAAGAGACAG-3’ ; Reverse: 5’-GTCTCGTGGGCTCGGAGATGTGTATAAGAGACAG-3’ ).

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| Name | Forward | Reverse |
| GFP-1 | CCCCTTGAACCTCCTCGTTCG | TGGCGGACTTGAAGAAGTCG |
| GFP-2 | CCTGACCTACGGCGTGCAG | CTCGATGTTGTGGCGGATCT |
| GFP-3 | ACGTCTATATCATGGCCGACAA | CTAGATATCTCGAGTGCGGC |
| AAVS1 | GCCCTATGTCCACTTCAGGA | AGAGGTTCTGGCAAGGAGAGA |
| *ABL* exon 6 | AACACCCTAACCTGGTGCAG | CAAGTGGTTCTCCCCTACCA |
| cMyc | TTTTCTCCCATTCCTGCGCT | AGCAGGAATGTCCGACCGG |
| Bcl6-1 | CAAATGCTTTGGCTCCAAGT | AAGGGAGGGTGGCAAAAG |
| Bcl6-2 | ACGTCTCTCCCACCATAGGA | CAGACTAGCCCGAATCACCC |
| PIM1 | TCCAAAATCAACTCGCTTGC | ACTCCAGGGGCTCCTTCTC |
| Offtarget site-1 of GFP sgRNA-1 | GGAGGGATTTTCGAACGTGCT | GCATCTTGGGGAAGCCGGAA |
| Offtarget site-2 of GFP sgRNA-1 | CTTTCTCTGGGCCTGTTCTG | TCACAGGTGAGTGCAAGGTC |
| Offtarget site-3 of GFP sgRNA-1 | TGGCGTTTGCTCTTACCTTT | CCAGGATTCCTCCTGCATTA |
| Offtarget site-1 of GFP sgRNA-2 | GAGGAGGGCACGTTTCACTA | AGAGGCTGCGGCTATTTAGG |
| Offtarget site-2 of GFP sgRNA-2 | GCTCCTCATTGCCTGAAGAA | TTGCCATCATGAACAAGCAT |
| Offtarget site-3 of GFP sgRNA-2 | CACCTGCGCGTAGTAGAGC | GAGGAGGAGCGAGCAGACT |
| Offtarget site-1 of GFP sgRNA-3 | CAAGGTGGCAGAGATTCCCTT | CCGTTAATTGGGATGCAGGTTC |
| Offtarget site-2 of GFP sgRNA-3 | CTGCTTTGCTCCTGGCTTG | CAGCGGGGTGGTTCCG |
| Offtarget site-3 of GFP sgRNA-3 | CGGTACCTGCAGAGAAGAGG | CGAGCCTTTGACCTTCACA |
| Offtarget site-1 of GFP sgRNA-4 | TCCAGAGAAGTGGCTGGAGT | GTCTCACACCGCCAGTTAGG |
| Offtarget site-2 of GFP sgRNA-4 | AGAAGAAACTTGGGGCAGGG | CTTGCAGCCATCCCGTAGG |
| Offtarget site-3 of GFP sgRNA-4 | AGCATGAGGGTCTCCATCTG | AAGGAGCTGGGACTGAACAA |
| Offtarget site-1 of AAVS1 sgRNA-1 | GAGCAGGCTGTGACCTAGAA | CTCCTCTCATTGCCGTGTGG |
| Offtarget site-2 of AAVS1 sgRNA-1 | TGGTGTGGTTGTCTCCTTCA | TGCTGGGCAGGATATCAAGT |
| Offtarget site-3 of AAVS1 sgRNA-1 | GGTCAGGAGAGCAGAGTGGA | AACCCAGGATTAGGGACTGG |
| Offtarget site-1 of AAVS1 sgRNA-2 | ATTCACTCTGCAGACGCAGC | CCCAACCTGTATGGACCACC |
| Offtarget site-2 of AAVS1 sgRNA-2 | GAATCTGTGTTTCCCATCAGC | GGCTCTAGGCTCTGGGTTCT |
| Offtarget site-3 of AAVS1 sgRNA-2 | GAACACTGGAAAAACCTTTGTTG | GGCCCATATCTTGTCTCAGC |
| Offtarget site-1 of AAVS1 sgRNA-3 | TCCTATAAAAGCAGCTCCTCTGC | CCAACACCAGCTACGCTACA |
| Offtarget site-2 of AAVS1 sgRNA-3 | AGGCAGAGAGAGGCCAATTT | GTGCTTGCTTCACTTTGTGC |
| Offtarget site-3 of AAVS1 sgRNA-3 | GTACCCAGGACAGGGAGTGA | GGCTCCTGTGCTTCATGTCT |

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| N701 | CAAGCAGAAGACGGCATACGAGATTCGCCTTAGTCTCGTGGGCTCGG |
| N702 | CAAGCAGAAGACGGCATACGAGATCTAGTACGGTCTCGTGGGCTCGG |
| N703 | CAAGCAGAAGACGGCATACGAGATTTCTGCCTGTCTCGTGGGCTCGG |
| N704 | CAAGCAGAAGACGGCATACGAGATGCTCAGGAGTCTCGTGGGCTCGG |
| N705 | CAAGCAGAAGACGGCATACGAGATAGGAGTCCGTCTCGTGGGCTCGG |
| N706 | CAAGCAGAAGACGGCATACGAGATCATGCCTAGTCTCGTGGGCTCGG |
| N707 | CAAGCAGAAGACGGCATACGAGATGTAGAGAGGTCTCGTGGGCTCGG |
| N708 | CAAGCAGAAGACGGCATACGAGATCCTCTCTGGTCTCGTGGGCTCGG |
| N709 | CAAGCAGAAGACGGCATACGAGATAGCGTAGCGTCTCGTGGGCTCGG |
| N710 | CAAGCAGAAGACGGCATACGAGATCAGCCTCGGTCTCGTGGGCTCGG |
| N711 | CAAGCAGAAGACGGCATACGAGATTGCCTCTTGTCTCGTGGGCTCGG |
| N712 | CAAGCAGAAGACGGCATACGAGATTCCTCTACGTCTCGTGGGCTCGG |
| N501 | AATGATACGGCGACCACCGAGATCTACACTAGATCGCTCGTCGGCAGCGTC |
| N502 | AATGATACGGCGACCACCGAGATCTACACCTCTCTATTCGTCGGCAGCGTC |
| N503 | AATGATACGGCGACCACCGAGATCTACACTATCCTCTTCGTCGGCAGCGTC |
| N504 | AATGATACGGCGACCACCGAGATCTACACAGAGTAGATCGTCGGCAGCGTC |
| N505 | AATGATACGGCGACCACCGAGATCTACACGTAAGGAGTCGTCGGCAGCGTC |
| N506 | AATGATACGGCGACCACCGAGATCTACACACTGCATATCGTCGGCAGCGTC |
| N507 | AATGATACGGCGACCACCGAGATCTACACAAGGAGTATCGTCGGCAGCGTC |
| N508 | AATGATACGGCGACCACCGAGATCTACACCTAAGCCTTCGTCGGCAGCGTC |