

Supplemental Table 2. Primer sequences used in study.

shRNA Primer Sequences for cloning into pLKO.1

shAPE1-497 (5' → 3')	
Forward	CCGGCCTGGATTAAGAAGAAAGGATCTCGAGATCCTTTCTTCTTAATCCAGGTTTTTG
Reverse	AATTCAAAAACCTGGATTAAGAAGAAAGGATCTCGAGATCCTTTCTTCTTAATCCAGG
shAPE1-660 (5' → 3')	
Forward	CCGGGCCTGGACTCTCTCATCAATACTCGAGTATTGATGAGAGAGTCCAGGCTTTTTG
Reverse	AATTCAAAAAGCCTGGACTCTCTCATCAATACTCGAGTATTGATGAGAGAGTCCAGGC
shNEIL2-149 (5' → 3')	
Forward	CCGGGGTGAGGAAATTTACCATTCTCGAGAAATGGTGAAATTCCTCACCTTTTTG
Reverse	AATTCAAAAAGGTGAGGAAATTTACCATTCTCGAGAAATGGTGAAATTCCTCAC
shNEIL2-550 (5' → 3')	
Forward	CCGGGCGTTTGGGTGAACGATTTCTCTCGAGAGAAATCGTTCACCCAAACGCTTTTTG
Reverse	AATTCAAAAAGCGTTTGGGTGAACGATTTCTCTCGAGAGAAATCGTTCACCCAAACGC
shXPC-203 (5' → 3')	
Forward	CCGGGGAGGATGCCTTTGAAGATGACTCGAGTCATCTTCAAAGGCATCCTCCTTTTTG
Reverse	AATTCAAAAAGGAGGATGCCTTTGAAGATGACTCGAGTCATCTTCAAAGGCATCCTCC
shXPC-503 (5' → 3')	
Forward	CCGGGAAGAGGTTGAAGAACTTAGCTCGAGCTAAGTTCTTCAACCTCTCCTTTTTG
Reverse	AATTCAAAAAGGAAGAGGTTGAAGAACTTAGCTCGAGCTAAGTTCTTCAACCTCTCC

XPC guide RNA primer sequences for cloning into pX330-Venus

	Forward (5' → 3')	Reverse (5' → 3')
5' Exon 1	CACCGATGGCTCGGAAACGCGCGGC	AAACGCCGCGCGTTTCCGAGCCATC
3' Exon 1	CACCGTCGCGGGAGACGCCGCCGGT	AAACACCGGCGGCGTCTCCCGCGAC
5' Exon 2	CACCGTGTGAATATAGACTAGCCGC	AAACGCGGCTAGTCTATATTCACAC
3' Exon 2	CACCGCAACTCAGACCGGTAAGAGC	AAACGCTCTTACCGGTCTGAGTTGC

In vitro TDG glycosylase assay substrates

37mer substrate (5' → 3')

Forward /Cy3/GAGTCATGCCATTGGCCACATXGTGTCAGCTAGGATT
 Reverse CAATCCTAGCTGACACGATGTGGCCAATGGCATGACT

**where X is replaced with T, 5hmU, 5fC, or 5caC

RT-qPCR primer sequences

	Forward (5' → 3')	Reverse (5' → 3')
hActb	TCACCCACACTGTGCCCATCTACGA	CAGCGGAACCGCTCATTGCCAATGG
hApe1	CCAGCCCTGTATGAGGACC	GGAGCTGACCAGTATTGATGAGA
hCripto	AGAAGTGTTCCCTGTGTAAATGCTG	CACGAGGTGCTCATCCATCA
hDnmt1	GGAAGCCGGCAAAGCCT	TCCCCTCGAGCCTTCCATA
hDnmt3b	GCTAAGCTACACACAGGACTTGACAG	AGTTCGGACAGCTGGGCTTT
hGapdh	TCTGCTCCTCCTGTTTCGACA	AAAAGCAGCCCTGGTGACC
hKlf4	GATGAACTGACCAGGCACTA	GTGGGTCATATCCACTGTCT
hNanog	CCAACATCCTGAACCTCAGCTAC	GCCTTCTGCGTCACACCATT
hNeil2	AGCTTCCCCGTAGAAGAGGAT	TTCATGGACCTGGGTGTCC
hOct4	TCGAGAACCGAGTGAGAGGC	CACACTCGGACCACATCCTTC
hRad23b	AGCCTGCAGAAAAGCCAGCAGA	CGTAAGACTGACCCGTCACAAGTGC
hRex1	TGAATAGCTGACCACCAGCACACT	ACAGGCTCCAGCCTCAGTACATTT
hSox2	CACACTGCCCTCTCACACAT	CATTTCCCTCGTTTTTCTTTGAA
hTdg	CTTGCCCAAGAGGATGCAAAG	GGAATGCCACTGAAAGCTGAT
hXPC	ACGCCAGAGCAGGCGAAGAC	AGGTGAACCTTGTGTGTGTCCTCA
mActb	GATCTGGCACCACACCTTCT	GGGGTGTGAAGGTCTCAA
mXPC	CTGGATGACCGCAACCCGCA	GCTGGTCCAGGTGCTTCGCC

h, human; m, mouse