

Supplementary Table 1. SgRNAs and Primers in the study.

sgRNA sequence

Name	5'-3'
RB1CC1-KO	GGCCGACTCTGACTGAGCCT
CHCHD3-KO	GATTGACACAGTGCATATAC
ELP3-KO	GGCACGGATAGCTCTCATGG

Primers used for plasmid construction

Name	5'-3'
RB1CC1-OV-F	GCGCGAATTCATGAAGTTATATGTATTTCTGGTTA
RB1CC1-OV-R	GCGCGGTACCTTATTTTCAGCATCTTCACCATGTAC
CHCHD3-OV-F	GCGCGAATTCATGGGTGGGACCACCAGCACCCGCC
CHCHD3-OV-R	GCGCGGTACCTTATCCTCCCTTCTCAAGCATGCTC
RWT-RB1CC1-FLAG-F	GCGCGGTACCATGAAGTTATATGTATTTCTGGTTA
RWT-RB1CC1-FLAG-R	GCGCGAATTCTCACTTATCGTCGTCATCCTTGTAATCTTATACTTTCTTATTCCATGATACG
R Δ 1-RB1CC1-FLAG-F	GCGCGGTACCATGAAGTTATATGTATTTCTGGTTA
R Δ 1-RB1CC1-FLAG-R	GCGCGAATTCTCACTTATCGTCGTCATCCTTGTAATCTTATACTTTCTTATTCCATGATACG

R Δ 2-RB1CC1-FLAG-F	GCGCGGTACCATGAAGTTATATGTATTTCTGGTTA
R Δ 2-RB1CC1-FLAG-R	GCGCGAATTCTCACTTATCGTCGTCATCCTTGTAATCTTATACTTTCTTATTCCATGATACG
R Δ 3-RB1CC1-FLAG-F	GCGCGGTACCATGAAGTTATATGTATTTCTGGTTA
R Δ 3-RB1CC1-FLAG-R	GCGCGAATTCTCACTTATCGTCGTCATCCTTGTAATCTTATACTTTCTTATTCCATGATACG
R Δ 4-RB1CC1-FLAG-F	GCGCGGTACCATGAAGTTATATGTATTTCTGGTTA
R Δ 4-RB1CC1-FLAG-R	GCGCGAATTCTCACTTATCGTCGTCATCCTTGTAATCTTATACTTTCTTATTCCATGATACG
R Δ 5-RB1CC1-FLAG-F	GCGCGGTACCATGAAGTTATATGTATTTCTGGTTA
R Δ 5-RB1CC1-FLAG-R	GCGCGAATTCTCACTTATCGTCGTCATCCTTGTAATCTTATACTTTCTTATTCCATGATACG
R Δ 6-RB1CC1-FLAG-F	GCGCGGTACCATGAAGTTATATGTATTTCTGGTTA
R Δ 6-RB1CC1-FLAG-R	GCGCGAATTCTCACTTATCGTCGTCATCCTTGTAATCTTATACTTTCTTATTCCATGATACG
Y513A-RB1CC1-FLAG-F1	GCGCGGTACCATGAAGTTATATGTATTTCTGGTTA
Y513A-RB1CC1-FLAG-R1	CCCTGGCGTGTTTTATGAAC
Y513A-RB1CC1-FLAG-F2	GTTCATAAAACACGCCAGGG
Y513A-RB1CC1-FLAG-R2	GCGCGGATCCATGGAGCAGAACTCATCTCTGAAGAGGATCTGATGAAGTTATATGTATTTCTGGTTA
Y528A-RB1CC1-FLAG-F1	GCGCGGTACCATGAAGTTATATGTATTTCTGGTTA
Y528A-RB1CC1-FLAG-R1	TGCTTCAGCTAATCTCTTTC
Y528A-RB1CC1-FLAG-F2	GAAAGAGATTAGCTGAAGCA
Y528A-RB1CC1-FLAG-R2	GCGCGGATCCATGGAGCAGAACTCATCTCTGAAGAGGATCTGATGAAGTTATATGTATTTCTGGTTA
S533A-RB1CC1-FLAG-F1	GCGCGGTACCATGAAGTTATATGTATTTCTGGTTA

S533A-RB1CC1-FLAG-R1	GATTCCCTTTTTGCTTTTTTC
S533A-RB1CC1-FLAG-F2	GAAAAAGCAAAAAGGGAATC
S533A-RB1CC1-FLAG-R2	GCGCGGATCCATGGAGCAGAACTCATCTCTGAAGAGGATCTGATGAAGTTATATGTATTTCTGGTTA
S537A-RB1CC1-FLAG-F1	GCGCGGTACCATGAAGTTATATGTATTTCTGGTTA
S537A-RB1CC1-FLAG-R1	AATTTCCCAAAGGCTTCCCT
S537A-RB1CC1-FLAG-F2	AGGGAAGCCTTTGGGAAATT
S537A-RB1CC1-FLAG-R2	GCGCGGATCCATGGAGCAGAACTCATCTCTGAAGAGGATCTGATGAAGTTATATGTATTTCTGGTTA
S545A-RB1CC1-FLAG-F1	GCGCGGTACCATGAAGTTATATGTATTTCTGGTTA
S545A-RB1CC1-FLAG-R1	TCTTAAAAAAGCCTTCCTAA
S545A-RB1CC1-FLAG-F2	TTAGGAAGGCTTTTTTAAGA
S545A-RB1CC1-FLAG-R2	GCGCGGATCCATGGAGCAGAACTCATCTCTGAAGAGGATCTGATGAAGTTATATGTATTTCTGGTTA
S537E-RB1CC1-FLAG-F1	GCGCGGTACCATGAAGTTATATGTATTTCTGGTTA
S537E-RB1CC1-FLAG-R1	AATTTCCCAAACCTTCCCT
S537E-RB1CC1-FLAG-F2	AGGGAAGAGTTTGGGAAATT
S537E-RB1CC1-FLAG-R2	GCGCGGATCCATGGAGCAGAACTCATCTCTGAAGAGGATCTGATGAAGTTATATGTATTTCTGGTTA
RB1CC1 ^{ΔC} -FLAG-F	GCGCGGTACCATGAAGTTATATGTATTTCTGGTTA
RB1CC1 ^{ΔC} -FLAG-R	GCGCGAATTCTCACTTATCGTCGTCATCCTTGTAATCAGATACTGAAGACATGCTCT
ELP3 ^{WT} -MYC-F	GCGCAAGCTTATGAGGCAGAAGCGGAAAGG
ELP3 ^{WT} -MYC-R	GCGCGAATTCAGATCCTCTTCAGAGATGAGTTTCTGCTCTTATTTTCAGCATCTTCACCA

ELP3 ^{ΔC} -MYC-F	GCGCAAGCTTATGAGGCAGAAGCGGAAAGG
ELP3 ^{ΔC} -MYC-R	GCGCGAATTCCAGATCCTCTTCAGAGATGAGTTTCTGCTCGGCTAGGATCCGAGCCACCA

Primers for qPCR

Name	5'-3'
TPBG-qPCR-F	CTGAAGATGAGCGGCAGAACCGGAG
TPBG-qPCR-R	CAGTCGCAGACCCAGGGATTGTTGT
EPRS1-qPCR-F	TCATTGCCTGTCTCTGAGAACATAC
EPRS1-qPCR-R	GTGCCACTCGAGCTTTGGTTGTTGA
NAMPT -qPCR-F	AATCCAGGAAGCCAAAGATGTCTAC
NAMPT -qPCR-R	TGGCCACTGTGATTGGATAACCAGGA
FOSL1-qPCR-F	TGGTGCCAAGCATCAACACCATGAG
FOSL1-qPCR-R	CCGGGCTGATCTGTTTACAAGGCCT
LZTFL1-qPCR-F	AGAGTTGGGCCTAAATGAGCA
LZTFL1-qPCR-R	CACAGCTTGTAATCCATTGAGGA
RB1CC1-qPCR-F	GAAAGAGCTTGCTCAGGGATT
RB1CC1-qPCR-R	TCATCAACTGATTTGCGTGACT
RB1-qPCR-F	CTCTCGTCAGGCTTGAGTTTG
RB1-qPCR-R	GACATCTCATCTAGGTCAACTGC

CHCHD3-qPCR-F	GAGGCGGACGAGAATGAGAAC
CHCHD3-qPCR-R	ACCAGAATACCGCTGAGACTTC
VRK3-qPCR-F	AAGTTCTCACTCAAACCTGGATGC
VRK3-qPCR-R	TGGGGTTCGAGTACAGCTTCTT
TPD52-qPCR-F	AGCATCTAGCAGAGATCAAGCG
TPD52-qPCR-R	AGCCAACAGACGAAAAAGCAG
SLC25A32-qPCR-F	TCCCCACACCGACAATATAAAGG
SLC25A32-qPCR-R	CCATGCGATGTTCCAAACAGC
MYC-qPCR-F	GTCAAGAGGGCGAACACACAAC
MYC-qPCR-R	TTGGACGGACAGGATGTATGC
CYTH3-qPCR-F	GTGCTACGTGCTGTCATTTCG
CYTH3-qPCR-R	TGGCGATGAACCGTTCTGC
MEPCE-qPCR-F	ACACCTGAGTATGATGTGGTGC
MEPCE-qPCR-R	GTAGATCCGGCGAAACATGC
CYREN-qPCR-F	AGGACTGTGTACTGCATGAATG
CYREN-qPCR-R	AACTTGTGTGAGGCGACACG
SEC13-qPCR-F	CCTGGCATCGTGCTCCTATG
SEC13-qPCR-R	GGATCAGGCCGTAGTCATGG
GAPDH-qPCR-F	GGAGCGAGATCCCTCCAAAAT

GAPDH-qPCR-R

GGCTGTTGTCATACTTCTCATGG

Primers for ChIP-qPCR

Name	5'-3'
RBR-ChIP-F	CCGCCCAAGGAGGGAGAGTG
RBR-ChIP-R	CGGGCTGGGACGCTAAGTCA
NCR-ChIP-F	TCCTGCAAAGGACATGATCTCATTC
NCR -ChIP-R	GTAGGGATGGCAGGAAAGTGAAGGA
Chr3-p-ChIP-F	CAATCTCGCCAGCGTCTGAT
Chr3-p-ChIP-R	TTCCACAGTGGCTTCACTGA
Chr7-p1-ChIP-F	ACAGAGTGAGACTCCATCTC
Chr7-p1-ChIP-R	CTTCTTACTTGAGTTTCCTG
Chr7-p2-ChIP-F	ATCCATATGTACCAAATGAC
Chr7-p2-ChIP-R	TTCCTTAATGTGCATTTCTT
Chr8-p-ChIP-F	GTTTGGAAATAGTCTGGCAC
Chr8-p-ChIP-R	CTTTGGGACAATAGTTTGCA
Chr19-p-ChIP-F	GTAAGGCTACCAGGCACCAT
Chr19-p-ChIP-R	ATAGTTAACGGTAAGACTTA

ATP6V0A-ChIP-F	GTGGACTTTTCTCTGTGCAT
ATP6V0A-ChIP-R	CGTGGTGGTGCATGCCTGTA

Primers for 3C assays

Name	5'-3'
Chr3/SEC13-3C-F	CTTCACAATCTCGCCAGCGTCTGAT
Chr3/SEC13-3C-R	CTTGGCCTTATCACCTAGAAAGTCA
Chr7p1/MEPCE-3C-F	TAAGGCAGGAGAATTGCTTGAATCT
Chr7p1/MEPCE-3C-R	CTGCCGCGCGATCCCACCCACCGTA
Chr7p1/CYREN-3C-F	TAAGGCAGGAGAATTGCTTGAATCT
Chr7p1/CYREN-3C-R	GGAGTCTGCAGGACCTGGCTGCGAA
Chr7p1/CHCHD3-3C-F	TAAGGCAGGAGAATTGCTTGAATCT
Chr7p1/CHCHD3-3C-R	CAGAATATAACCCTTCACCTGGAATG
Chr7p2/CYTH3-3C-F	GTACTIONAAGATTTTTAAGTGCCATA
Chr7p2/CYTH3-3C-R	AAGCATTATAATTGATAGTATCTT
Chr8p/TPD52-3C-F	ACCAGTCATTGATGAATAGATGATG
Chr8p/TPD52-3C-R	GATGTTTATTTCTATACAATAGATCTC
Chr8p/SLC25A32-3C-F	CTGTAAAGACAGCACCTAGCACATA
Chr8p/SLC25A32-3C-R	TCACAAGACTCAATTATCTGTTTCA

Chr8p/MYC-3C-F	GTGCGTCTCCGAGATAGCAGGGGAC
Chr8p/MYC-3C-R	TCACAAGACTCAATTATCTGTTTCA
Chr19/VRK3-3C-F	CAGGTCCCCTTGGCACCAAGGCAAT
Chr19/VRK3-3C-R	GTATTGAGTACAGAGGTTTAGTATG

Primers for luciferase reporter gene experiments

Name	5'-3'
WT-Chr3p-Luc-F	GCGCGGTACCCAATCTCGCCAGCGTCTGAT
WT-Chr3p-Luc-R	GCGCCTCGAGTTCCACAGTGGCTTCACTGA
WT-Chr7p1-Luc-F	GCGCGGTACCTGTAGTCCATGTA CTCAAGA
WT-Chr7p1-Luc-R	GCGCCTCGAGAGCAAACAGCTGTTTGCTGC
WT-Chr7p2-Luc-F	GCGCGGTACCCTGGGTGACAGAGTGAGACT
WT-Chr7p2-Luc-R	GCGCCTCGAGCTTCTTACTTGAGTTTCCTG
WT-Chr8p-Luc-F	GCGCGGTACCCTTGCATCCAGGTAGGAGGT
WT-Chr8p-Luc-R	GCGCCTCGAGCATGCTCTCTAGGCAGGTAG
WT-Chr19p-Luc-F	GCGCGGTACCACAGTGAGTGATATGCAATG
WT-Chr19p-Luc-R	GCGCCTCGAGATCATGTATTGAGTACAGAG
