

Supplemental Table S1. The information of reagents and antibodies.

Reagen or resource	Source	Iden ifier
HMGA1	Abcam	Cat # ab129153
Cyclin-D1	Cell Signaling Technology	Cat # 55506
CDK4	Proteintech Group	Cat # 66950-1-lg
CDK6	Abcam	Cat # ab124821
OCT4	Proteintech Group	Cat # 60242-1-lg
CD44	Proteintech Group	Cat # 60224-1-lg
EMT antibodies kit	Cell Signaling Technology	Cat # 9782 T
RB	Proteintech Group	Cat # 67521-1-lg
p-RB	Cell Signaling Technology	Cat #8516S
PI3K	Cell Signaling Technology	Cat #84249T
p-PI3K	Cell Signaling Technology	Cat #4228S
AKT	Proteintech Group	Cat # 60203-2-lg
p-AKT	Proteintech Group	Cat # 66444-1-lg
mTOT	Proteintech Group	Cat # 66888-1-lg
p-mTOR	Proteintech Group	Cat # 67778-1-lg
PARP	Abcam	Cat # ab191217
C-PARP	Abcam	Cat # ab32064
β -actin	Cell Signaling Technology	Cat # 4970
GAPDH	Santa Cruz	Cat # sc-47724
740 Y-P	MedChemExpress	Cat # HY-P0175
Palbociclib	MedChemExpress	Cat # HY-50767
PF-04691502	MedChemExpress	Cat # HY-15177
CMC-Na	MedChemExpress	Cat # HY-Y0703

Supplemental Table S2 Primers for qPCR

Genes	Forward primer(5'-3')	Reverse primer(5'-3')
HMGA1	GGAAAAGGACGGCACTGAGA	TGGTGGTTTTCCGGGTCTTG
CCND1	GAAGGAGACCATCCCCCTGA	GAAATCGTGCGGGGTTCATTG
EDN1	TCCCACAAAGGCAACAGACC	GCCCTGAGTTCTTTTCCTGCT
MYB	ATAGTCAATGTCCCTCAGCCAG	TTTCCTTCTCAGGGTCTTCATC
MYC	CCCCTACCCTCTCAACGACA	CTTCTTGTTCTCCTCAGAGTCG
RUNX1	CCATCGCTTTCAAGGTGGT	CTCTTCCACTTCGACCGACA
ITGA6	GGAGGTACAGTTGTTGGCGA	TGCTGTGCCGAGGTTTGTA
IL6	CAATGAGGAGACTTGCCTGGT	GCAGGAAGTGGATCAGGACT
FGF2	AAGGAGTGTGTGCTAACCGT	CTGCCCAGTTCGTTTCAGTG
GAPDH	GAGTCAACGGATTTGGTCGT	GACAAGCTTCCCGTTCTCAG
OCT4	TCAGGAGATATGCAAAGCAGAA	TTGCCTCTCACTCGGTTCTC
CD44	CGTGGAGAAAAATGGTCGCT	TGTGGGCAAGGTGCTATTGAA

Supplementary Table S3 The sh/siRNA sequences

Name	The sh/siRNA sequences
shHMGA1-1	CAACTCCAGGAAGGAAACCAA
shHMGA1-2	ACCCAGGAAGGAAACCAATT
Sh-scramble –HMGA1	TTCTCCGAACGTGTCACGT
SiCCND1-1	AACAAGCUCAAGUGGAACCUG
SiCCND1-2	CAGGUUCCACUUGAGCUUGUU
Scrambled CCND1	UUCUCCGAACGUGUCACGUTT

Supplementary Table S4 The promoter region sequences

Name	The promoter region sequence
HMGA1	GAAACCGAACGCCCTCCAGCCACCACCACTCACGGCCTACTAAGCGCGCGCT CCGGGCCAGGGCACAAAGATGGAGGGAGCGGCGGATCCACCCGCCACC CCCACCCACCAGACAAAGGGGAGGCCGCCCTCCCCAGCCTTCTTCGCGG GCCCCGCGCCCTCTGCTCCCCCTCCCCTCGGGCGGCCCTTTGGTGACTTCCTT CCCCCTCAAGGGCGGCCCGGGACTTCTCAGGAAGTGCCTTTCACCTGGACG TGGGGCGGGAGCCGGCGCGCAGAGGGCGGCCTCCGGGCCACCCCTAGGC CGAGCCGGCCCCAGGCCCGCGCCCTCCCCCTTGAACCCGCGCTCCCGGCCCT GGCGCCTTCCCGCCAGGCGCCCCCGCCCCACCCGGTCAAGCACGTGCTGC CCGGGCCCGAGCGCTTCCCGCCGCACGGGTGGGGGCTGGGCCACCCCCG CCCGCTCCCCACCCACCCGGAACATTCTGCCACATTCTGCAACTGCAAG GCCCAGCCCGCGCTCCCCACCCGCTCCGCGCCGGGCCAGGGCTTTCCTG CGTCCCCTCCACCGCCGGCTCGCCCCCTGAGGAGGGGGCTGGGCCAGGGCT CGGCTGACCGGGGAGGAAGAAGGGGAGCAGAGAAAAACATGAGTCACAGCC GTGTGTCACTGGAGCGCATTTCAATTCCCTGCATCACAGGAGGTGTGGAAGGC CGCCTCGGGGACCGGGCGCGGGAGGTGCGCCCGAGAAGGCCCGGGCCGGC CTGCAGGGCGCGCCGCTCCGCCTGCGCCCTTTCCTCCCCACCGCCCTCCCCG CCATCTTCCCCTTTGGCTTCTTCTCGCTCGGTGCAACAAGTCTTTGTTAAGCC GGGCGCGGGCGGGCCAGGCGTGGCGGAGATGGCCTGCGTGCTCGGCCCTG CCCTCAAAGCGCTTCCAGGCGACCTCTGGCCACCTTTTATTTTATTTACAGT CCCAACGGAAGGGCCCAGGTCCCCAAGTGGGCCTGCGTATCTCCAGAACACC ATCTAAGTCACCTCAAGGTATGAAGCCTCCCTTGGGTGTACCTGCCAACGAGC CAATCGTTGGTTTCGCTGGAAGGCTCCACCTTGATCATGGCTCGCTGGTGGCC ATTAATAAAACACTTTGGATTTCAACAAGTTTCACGTTTGAATTTCAAGACTT GTATCTACCAATCAGCCACACGCGGTTGACACTGAAAGGCACATGCTGACA CCTGTCCGCCAGGGGAAATCTACCATCTCTCTATTTTAGTTAGGGGGCGGCGT GTAGGCCGCGGAATTCTCTAACGAGCGCGTTTCTCTTACCCCCCTGGGCCCGC GTGGACCCCCGTCCACCCCCACACGCCCTGGGGGGGGGGCCGGGCCACACG CCCTGGAAGCCCCTAGAGGTGACTCTCCCTGGGACCCCTGTACCAGGGAGGA AGGATACCGCCACCCGTCACCACCCCCCGCCAGAAGCTCCTTCGTGACTCCTC TGC CGTGCCTTCCCACACCTCCTCGTCCGGGACTGCGAGGAGTGGGCGGT CGACTCGAGTTCGCAGCCCAGGCCTCCACACGCCCTCCCTGCCGTACGCAC CCACCCGCGGGCAGCGGCGGCGGGCTGGCGGGCGGCCGCCCTTTTAAAT CCCCGGGCTCATTTGCATGGCCCCGCCCTGAGTGACACGGCTGGCGCGGGC GGGCCCGTCCCCCTGCCCTGGGTGCTCTTTTAAAGCTCCCCTGAGCCGGT GCTGCGCTCCTCTAATTGGGACTCCGAGCCGGGGCTATTTCTGGCGCTGGCGC GGCTCCAAGAAGGCGTGAGTTCGCGGCCGCTCCGGTGGCTCTTTTTTTTATAT CTATAATTAAATTAAATTATTTATTATTGAGGCCGCGCACGGGCCGTGCCAGC TTCTGCCCCCTCGCCATCCTTC

CCND1	TGTCTTGCGCCCGGGATGGGGGGGTGAAGCTCCCTCCTGGACCCAGAGCCGG TTGTGCCGGAGTGGGCGAGCCTCTTTATGCCCTGCTGCCCCTAGCCGACTTCG GCCCCGCTTCGCGCCTCGGGCTGGGCCAGGGCGCACGCGGGGCTCGGGGCCCC TCGCCCCACGGGATGGGAGAGGCCGGGTGATAGCTCCGGGCCCCATAATCAT CCAGGCGGCCGCCGGGTCTGGGATTTTATGAATGAAAAAGCAGCTGGGCCGCC CTTGTGCGCGGGCTGATGCTCTGAGGCTTGCTATGCGGGGGCCAACGCGATT GTGGGTGCTCGGGGAGTGGGGGGGGGCACGACCGTAGGTGCTCCCTGCTGGG GCAACCCATCGCTCCCCATGCGGAATCCGGGGGTAATTACCCCCCAGGACCC GGAATATTAGTAATCCTAATTCCCGCGGGGGAGGGGGCGCGGGAGGAATTCA CCCTGAAAGGTGGGGGTGGGGGGGGTTCGCATCTTGCTGTGAGCACCTGGCG AAGGGGAGAGGGCTTTTTCTATCAGTTTTCTTTGAGCTTTTACTGTAAAGAGG TACGGTGGTTTGATGACACTGAACTATATTCAAAGGAAGTAAATGAACAG TTTTCTTAATTTGGGGCAGGTACTGTAAAAATAAAAACAAAAGTTAAGACAGT AAAATGTCCTTTTATTTTTTAATGCACCAAAGAGACAGAACCTGTAATTTAAA AACTGTGTATTTAATTTACATCTGCTTAAGTTTTCGATAATATTGGGGACCCTC TCATGTAACCACGAACACCTATCGATTTTGCTAAAAATCAGATCAGTACACTCG TTTGTTTAATTGATAATTGTTCTGAATTATGCCGGCTCCTGCCAGCCCCCTCACG CTCACGAATTCAGTCCCAGGGCAAATTCTAAAGGTGAAGGGACGTCTACACCC CCAACAAAACCAATTAGGAACCTTCGGTGGTCTTGTTCCAGGCAGAGGGGAC TAATATTTCCAGCAATTTAATTTCTTTTTTAATTAAAAAAATGAGTCAGAATGG AGATCACTGTTTCTCAGCTTTCCATTAGAGGTGTGTTTCTCCCGTTAAATTG CCGGCACGGGAAGGGAGGGGGTGCAGTTGGGGACCCCCGCAAGGACCGACT GGTCAAGGTAGGAAGGCAGCCCGAAGAGTCTCCAGGCTAGAAGGACAAGAT GAAGGAAATGCTGGCCACCATCTTGGGCTGCTGCTGGAATTTTCGGGCATTTAT TTTATTTATTTTTTGAGCGAGCGCATGCTAAGCTGAAATCCCTTTAACTTTTAG GGTTACCCCCCTTGGGCATTTGCAACGACGCCCTGTGCGCCGGAATGAACTT GCACAGGGGTTGTGTGCCCGTCTCCCCGTCCTTGCAATGCTAAATTAGTTCTT GCAATTTACACGTGTTAATGAAAATGAAAGAAGATGCAGTCGCTGAGATTCTT TGGCCGTCTGTCCGCCCCTGGGTGCCCTCGTGGCGTTCTTGGAATGCGCCCA TTCTGCCGGCTTGGATATGGGGTGTGCGCCGCGCCCCAGTCACCCCTTCTCGTG GTCTCCCCAGGCTGCGTGTGGCCTGCCGGCCTTCCTAGTTGTCCCCTACTGCA GAGCCACCTCCACCTACCCCCCTAAATCCCGGGGGACCCACTCGAGGCGGAC GGGGCCCCCTGCACCCCTCTTCCCTGGCGGGGAGAAAGGCTGCAGCGGGGCG ATTTGCATTTCTATGAAAACCGGACTACAGGGGCAACTCCGCCGCAGGGCAGG CGCGGCGCCTCAGGGATGGCTTTTGGGCTCTGCCCCCTCGCTGCTCCCGGCGTT TGCGCGCCGCGCCCCCTCCCCCTGCGCCCGCCCCCGCCCCCTCCCGTCCCA TTCTCTGCCGGGCTTTGATCTTTGCTTAACAACAGTAACGTACACGGACTA CAGGGGAGTTTGTGAAGTTGCAAAGTCCTGGAGCCTCC
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