

Figure S1

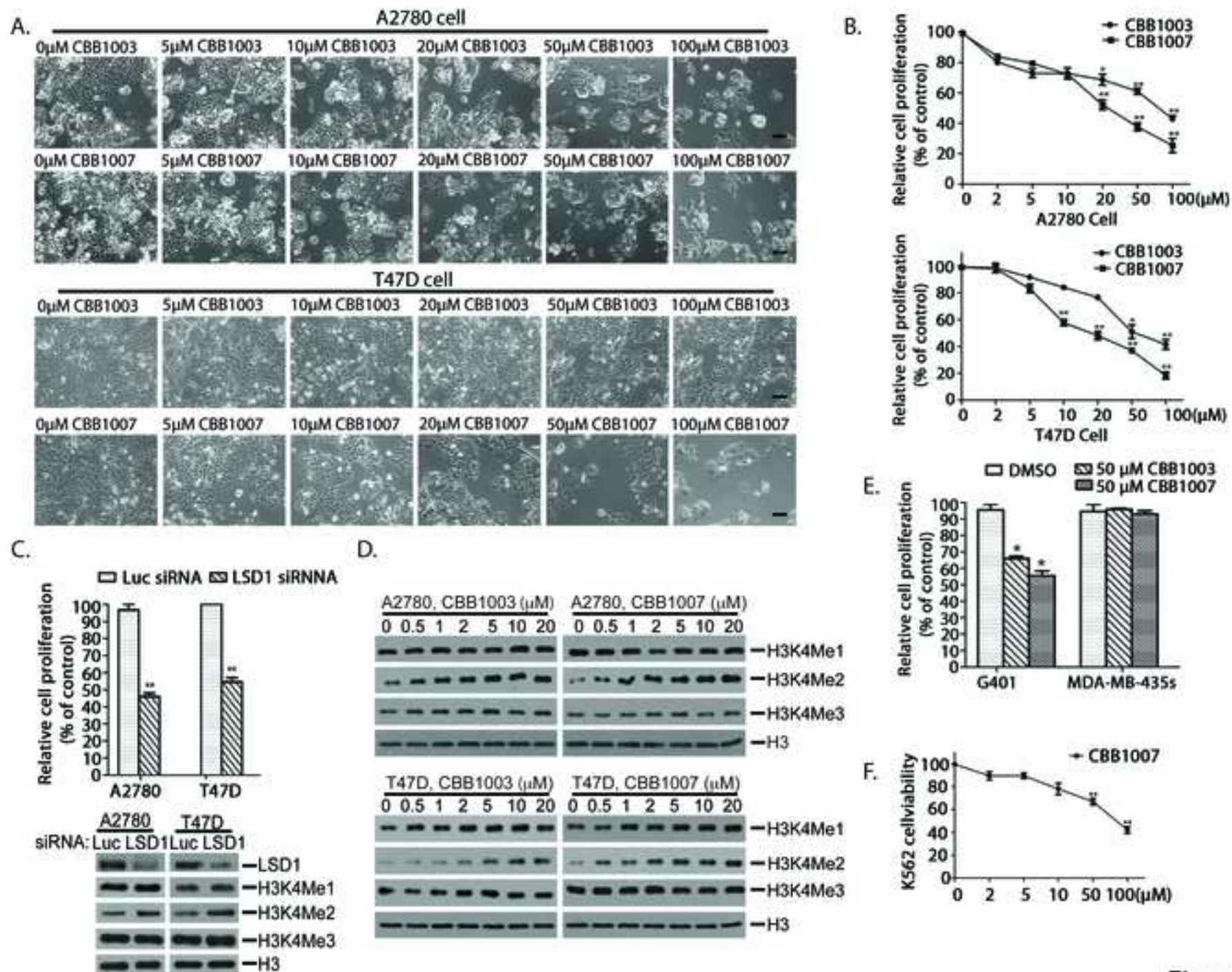


Figure S2

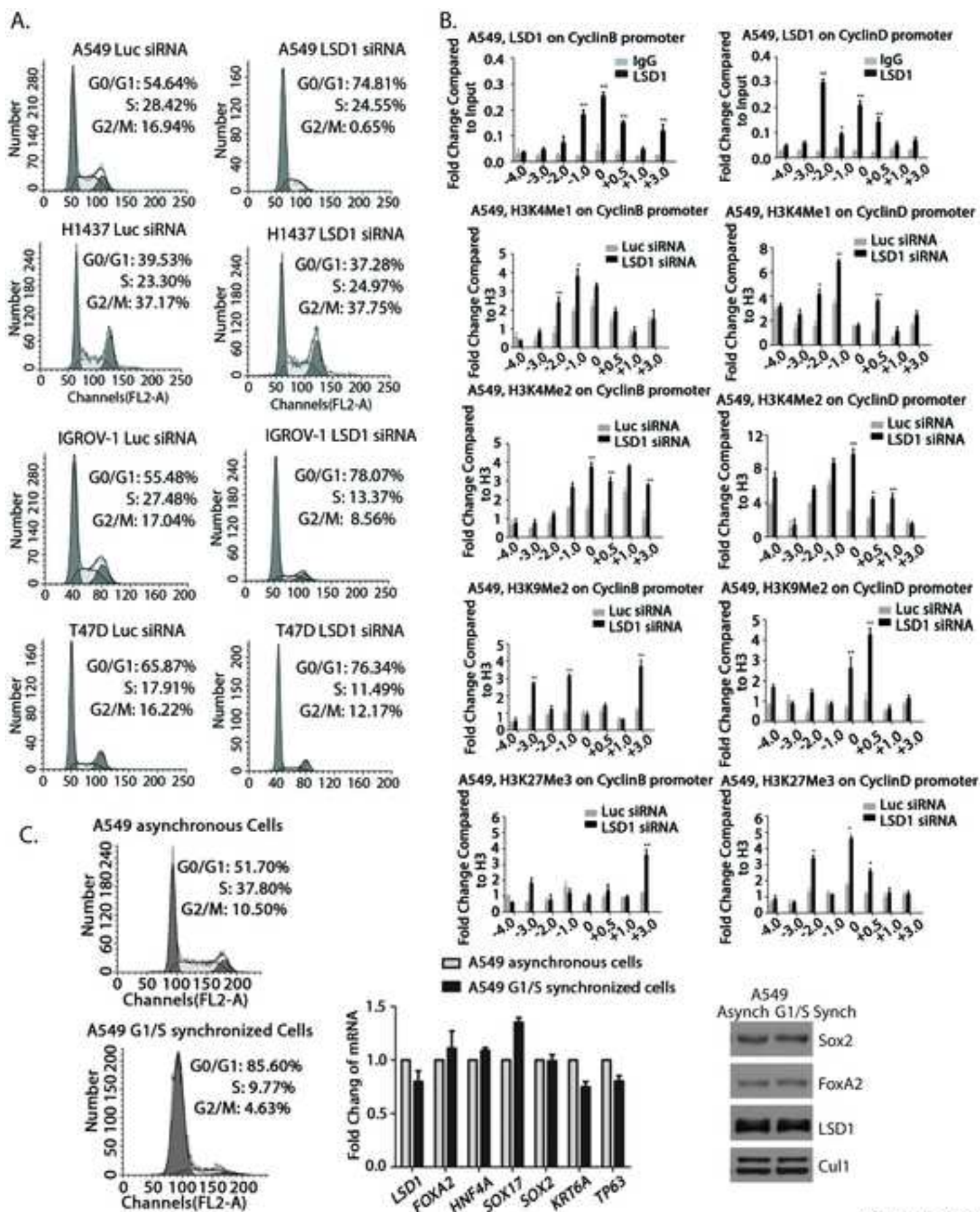


Figure S3

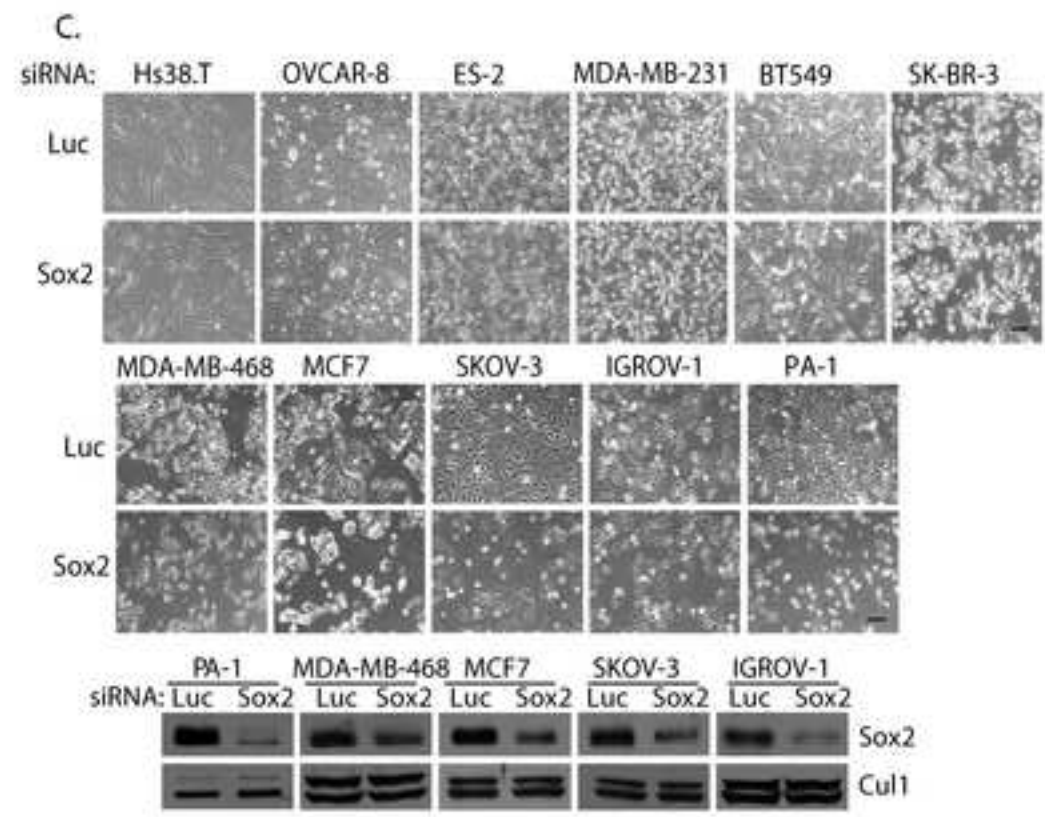
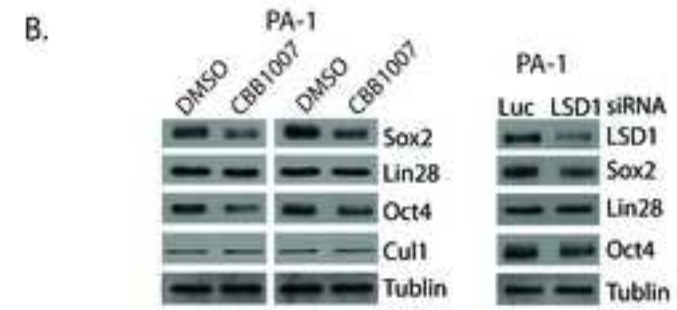
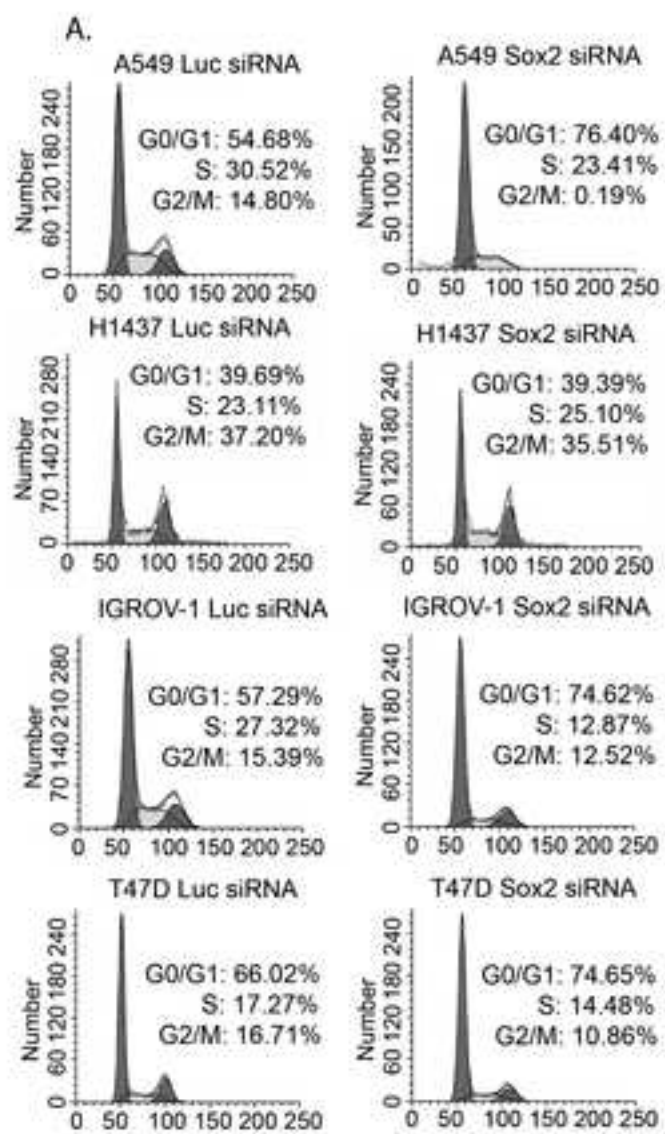
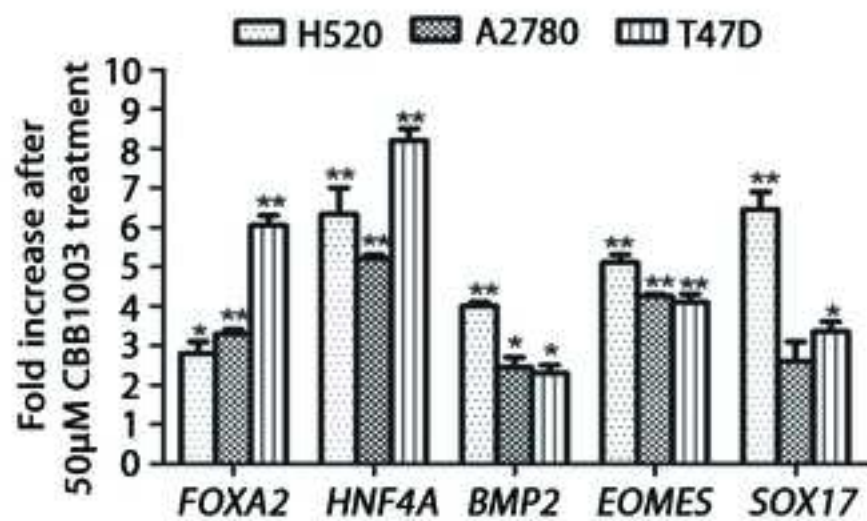


Figure S4

A.



B.

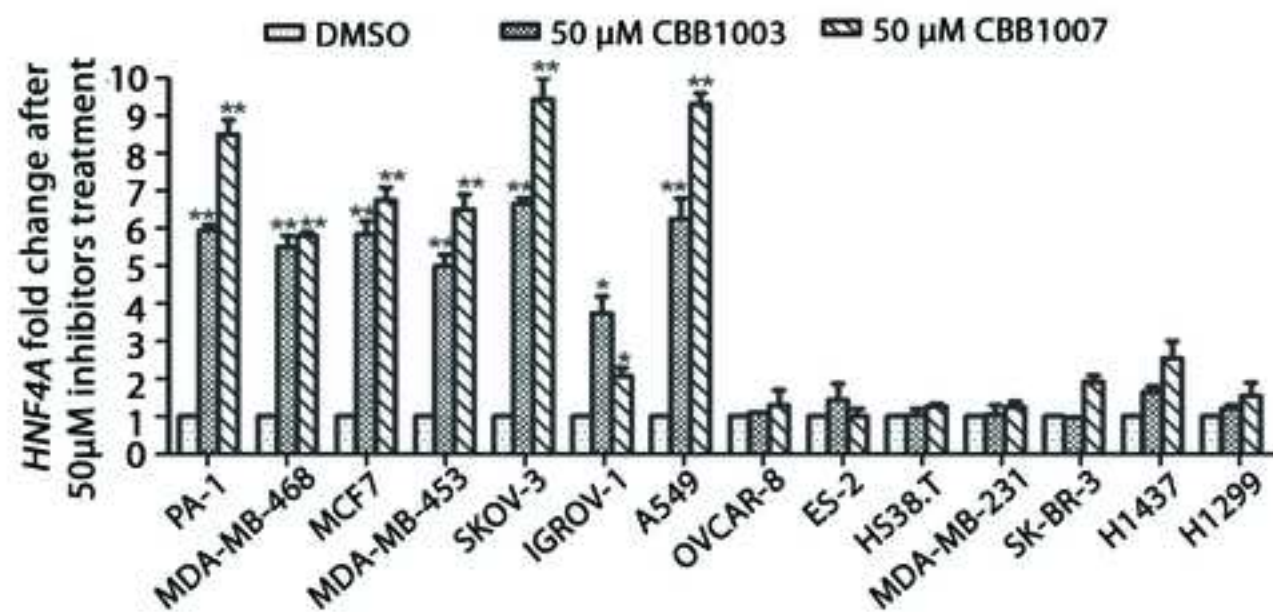


Figure S5

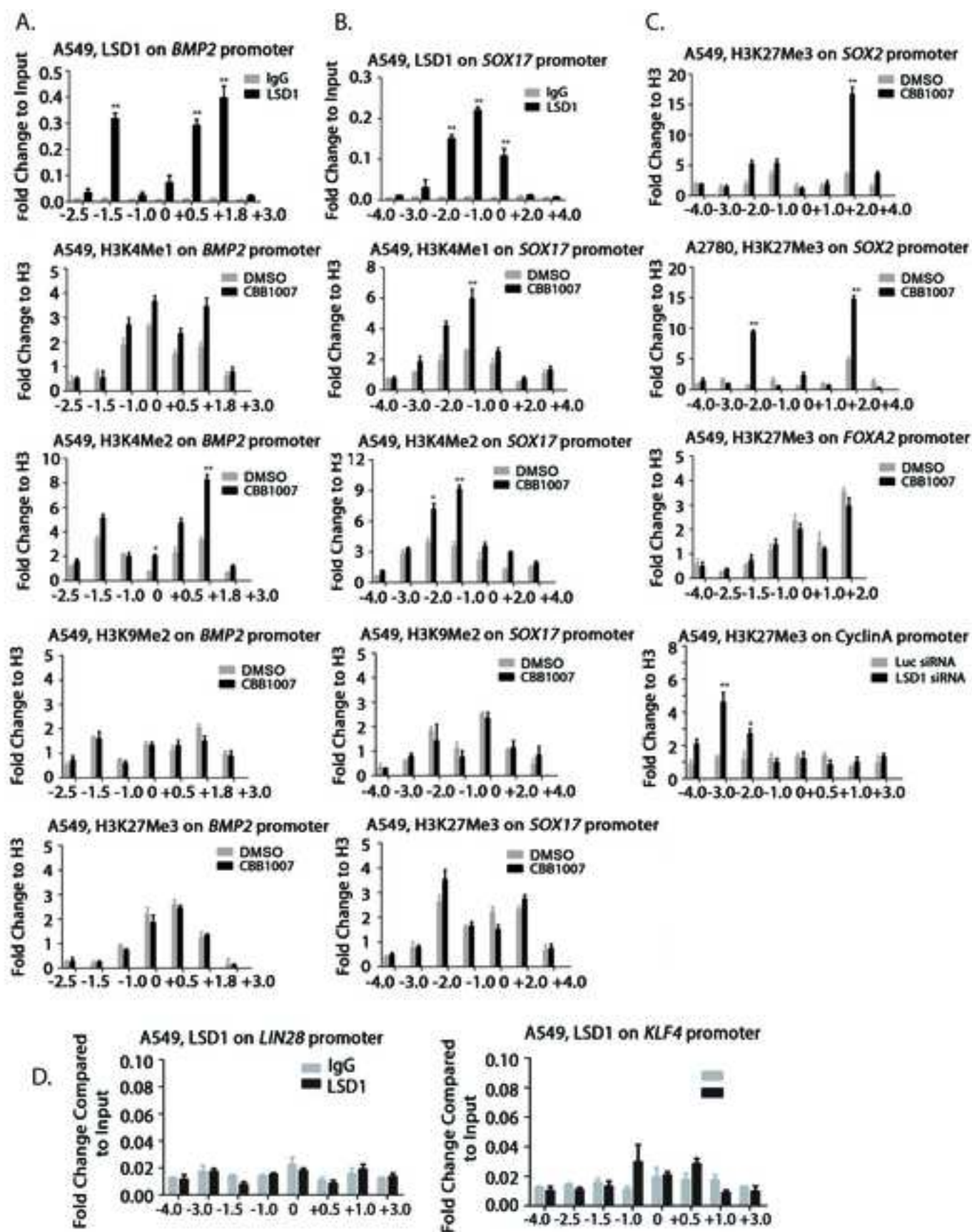


Figure S6

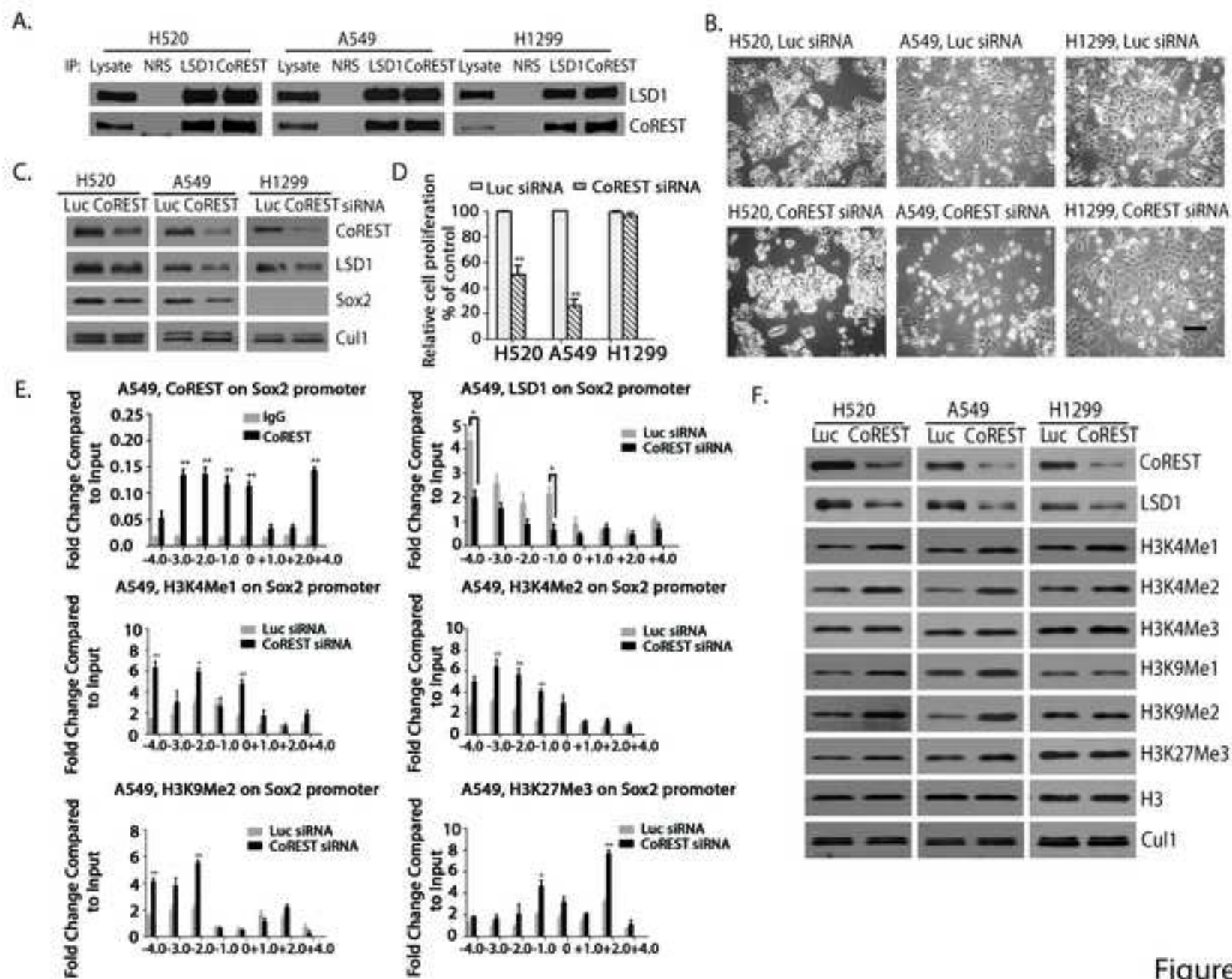


Figure S7

Table S1

Type	Differentiation degree	LSD1 expression	Sox2 expression	total
Lung Squamous Carcinomas (13 cases)	Poorly differentiated (5/13)	+++	+++	5
	Moderately differentiated (8/13)	+++	+++	1
		++	+++	3
		+	++	3
		+	—	1
Lung adenocarcinoma Carcinomas (17 cases)	Poorly differentiated (2/17)	++/+++	—	2
	Moderately differentiated (15/17)	+ / ++	—	15

The criteria for scoring the immunoreactivity were: + < 50%; 50% < ++ < 90%; 90% < +++ < 100%; —: non-detectable.

Table S2

Cancer Cells Analyzed for Sensitivity to LSD1 Inhibitors and Sox2 Expression

Cell Lines	Sources	Cancer Types	Oct4	Lin28	Sox2	Sensitivity to LSD1 inhibitors
F9*	ATCC	Murine teratocarcinoma	Yes	Yes	Yes	Yes
PA-1**	ATCC	Ovarian teratocarcinoma	Yes	Yes	Yes	Yes
NTERA-2**	ATCC	Embryonal carcinoma	Yes	Yes	Yes	Yes
Hs38.T	ATCC	Ovarian teratoma (fibroblast-like)	No	No	No	No
HeLa	ATCC	Cervical adenocarcinoma	No	No	No	No
IGROV-1	NCI-60	Ovarian adenocarcinoma	Yes	Yes	Yes	Yes
A2780**	NCI-60	Ovarian carcinoma	No	Yes	Yes	Yes
SKOV-3	NCI-60	Ovarian adenocarcinoma	No	No	Yes	Yes
OVCAR-3	NCI-60	Ovarian adenocarcinoma	No	No	Yes	Yes
OVCAR-8	NCI-60	Ovarian carcinoma	No	No	No	No
ES-2	ATCC	Ovarian carcinoma	No	No	No	No
MCF7	NCI-60	Breast adenocarcinoma	No	No	Yes	Yes
T47D	NCI-60	Breast ductal carcinoma	No	Yes	Yes	Yes
MDA-MB-453	ATCC	Breast carcinoma	No	No	Yes	Yes
MDA-MB-468	NCI-60	Breast adenocarcinoma	No	No	Yes	Yes
MDA-MB-231	NCI-60	Breast adenocarcinoma	No	No	No	No
MDA-MB-361	ATCC	Breast adenocarcinoma	No	No	Yes	Yes
SK-BR-3	ATCC	Breast adenocarcinoma	No	No	No	No
BT-549	ATCC	Breast ductal carcinoma	No	No	No	No
NCI-H520	ATCC	Lung squamous cell carcinoma	No	No	Yes	Yes
NCI-H1437	ATCC	Lung adenocarcinoma	No	No	No	No
A549	NCI-60	Lung carcinoma	No	No	Yes	Yes
H1299	ATCC	Lung carcinoma	No	No	No	No
G401**	ATCC	Kidney rhabdoid tumor	No	Yes	Yes	Yes
MDA-MB-435s	NCI-60	Melanoma	No	No	No	No
K562	NCI-60	Myelogenous leukemia	No	No	Yes	Yes

*: Also expresses Nanog and Sall4

**: Also express Sall4

Table S3: Primer Sequences for Quantitative Real-Time PCR/RT-PCR**Chromatin Immunoprecipitation (ChIP) qPCR analysis:**

Gene	Primer sequence (5'-3')
SOX2_human (-4000)-F	AATACTGGTGGTCGTCAAAC
SOX2_human (-4000)-R	TGAGAACTAGCCAAGCATCT
SOX2_human (-3000)-F	TGCTGGATTGAAATAGAGTG
SOX2_human (-3000)-R	TAAGCCTGCTGTACTTATCG
SOX2_human (-2000)-F	CTTAGACGAGGCTTTGTTTG
SOX2_human(-2000)-R	GGGTTAGAGGAGGATGAGAT
SOX2_human (-1000)-F	TTTGGGTCTCCTAACTTCTA
SOX2_human (-1000)-R	GTCATTGTTCTCCCGCTCAT
SOX2_human (0)-F	CAGGAGTTGTCAAGGCAGAG
SOX2_human (0)-R	GGAAAATCAGGCGAAGAATA
SOX2_human (+1000)-F	CATCACCCACAGCAAATGAC
SOX2_human (+1000)-R	TTCCTGCAAAGCTCCTACCG
SOX2_human (+2000)-F	TACTGTGCTCAGCCAAGAAA
SOX2_human (+2000)-R	GCAACAAGTGGCATAAATCA
SOX2_human (+4000)-F	TCCCGGAATTTGAGGCAGTC
SOX2_human (+4000)-R	TTGGCTCGGCGATATGAAGG
FOXA2_human (-4000)-F	CAACCTTCGGCACAACGATC
FOXA2_human (-4000)-R	GAAGCCACCATACAAACCTGA
FOXA2_human (-2500)-F	AATAGTGCTGTGGTGGAGGT
FOXA2_human (-2500)-R	TTTGTGAGCTTATGTGGGTG
FOXA2_human (-1500)-F	CCTGTGCCTACTGCTACCTC
FOXA2_human (-1500)-R	GTTAGCCTGTGAGCCCAGAT
FOXA2_human (-1000)-F	GCTTCTCCCGAGGCCGTTCC
FOXA2_human (-1000)-R	ACTCGCCCCTGCTGCTCCT
FOXA2_human (0)-F	CCGCCCACTTCCAACCTACCG
FOXA2_human (0)-R	GTCAGCCAAAGCACCGTCCC
FOXA2_human (+1000)-F	GGTGTACTCCCGGCCCATTA
FOXA2_human (+1000)-R	ATTTCTTCTCCCTTGCCTCT
FOXA2_human (+2000)-F	CCAGGTCTCGGGTCCGATTA
FOXA2_human (+2000)-R	CCCTCCCTCCTTCTTGAAAT
Lin28A_human(-4000)-F	GGGTGGATCACGAGGTCA
Lin28A_human (-4000)-R	CCAGGTTCAAGCCATTCT
Lin28A_human (-3000)-F	TTGCAGCGAGCCAAGATC
Lin28A_human (-3000)-R	TGTAAAGGGTTAGGAAAGAA
Lin28A_human (-1500)-F	TAAATGGGTTGTAGTGGTGG
Lin28A_human (-1500)-R	TACTGCCCTGGTCGGAGA
Lin28A_human (-1000)-F	AGGCAGACATTCAGATGTAGT
Lin28A_human (-1000)-R	GTGCTTAGATAGACCTGGAGT
Lin28A_human (0)-F	AAAGGGAGGGGAAAGGAGA
Lin28A_human (0)-R	GCACAATAGCGGTGGGAG
Lin28A_human (+500)-F	TGCGCCAAGGCGGCAGAAGA
Lin28A_human (+500)-R	TGGACAGGAAGCCGAACCC

Lin28A_human (+1000)-F	GGGGCGTAAAGCCGAGAA
Lin28A_human (+1000)-R	ACGGGAAGTGGACAGCAAAG
Lin28A_human (+3000)-F	ATGGCATGATCTCCACTCA
Lin28A_human (+3000)-R	CCTGTAATCCCAGCACTTT
KLF4_human (-4000)-F	GAGCCAAGATCACGCCACT
KLF4_human (-4000)-R	TGCCGCAGGACTCAAGAA
KLF4_human (-2500)-F	GATCTTAGAGGGATTCTCTGG
KLF4_human (-2500)-R	TGTTTGAACCCTGCGATT
KLF4_human (-1500)-F	TGGCGCACGCCTGTAATC
KLF4_human (-1500)-R	CATCTCGAAGCCCTTTCC
KLF4_human (-1000)-F	GGAGATGGAGGGCTGGATG
KLF4_human (-1000)-R	GCGAAGACTGGTGGGGTCA
KLF4_human (0)-F	ACGCTGCTGAGTGGAAGA
KLF4_human (0)-R	AATTGGCCGAGATCCTTC
KLF4_human (+500)-F	TGTATGCCCGTGGTGCGA
KLF4_human (+500)-R	TCTGGCCCAGCCAGTGTC
KLF4_human (+1000)-F	GAGACCGAGGAGTTCAACGA
KLF4_human (+1000)-R	GCGACGACGAAGAGGAGG
KLF4_human (+3000)-F	GGTGTAGGTGGTGGTTGT
KLF4_human (+3000)-R	TGACCCTATCCTAAAGAAAT
BMP2_human (-2500)-F	CCCAGCGGGGAAATAAGAGG
BMP2_human (-2500)-R	CGCCTCCACTCCCTGCTC
BMP2_human (-1500)-F	TCCTAAGGAGGACGACAGCA
BMP2_human (-1500)-R	TCGGAGATGGCGAAGCAG
BMP2_human (-1000)-F	TCTTCCACCCCTCTTTCT
BMP2_human (-1000)-R	AGGGATTTCTTTGACCCA
BMP2_human (0)-F	GAGGGCAAATCCCAAATC
BMP2_human (0)-R	GGTAAGACCGACCGAAGC
BMP2_human (+500)-F	AGTAACTCCGCACCCTCT
BMP2_human (+500)-R	TTGCACGTTTAGCTGACTAG
BMP2_human (+1800)-F	ATAAAAGCGTTTGTAGCA
BMP2_human (+1800)-R	CAAGCAGAAATATCCCAC
BMP2_human (+3000)-F	CCAGGTGCTTCTTGTTCT
BMP2_human (+3000)-R	TTTGTGGAAAGAGGGTTA
TP63_human (-4000)-F	AGTGGCTACCACATCAGA
TP63_human (-4000)-R	CACATTAGACACCGAGTA
TP63_human (-2500)-F	GCTCATGCCTGTAATCCC
TP63_human (-2500)-R	TCTGCCTCAGCTTCCTGT
TP63_human (-1500)-F	TCTCGGGCTAAGTAAAGG
TP63_human (-1500)-R	AGTTCACATCTTCCCTTC
TP63_human (-1000)-F	TAAAGAATAGAGTGGAGCCG
TP63_human (-1000)-R	TTTGCCTGACCCGAATAA
TP63_human (0)-F	AAAATCAAGAAACGCTCCG
TP63_human (0)-R	GCAATAGGGTCAAATGCT
TP63_human (+500)-F	CAGCACCTACTCACTCAA

TP63_human (+500)-R	AATGACAAGCCACAATCT
TP63_human (+1000)-F	GGGGTCTCCAAGGTTTCA
TP63_human (+1000)-R	AACCCAATCCTCAACTGC
TP63_human (+3000)-F	GGGACTTCATCCTCTGTT
TP63_human (+3000)-R	GGTAATGTGATTTTATCCAAC
KRT6A_human (-4000)-F	CCTTCGTGCTTCTGTCTA
KRT6A_human (-4000)-R	TTCAGTGCCTAATCTTGC
KRT6A_human (-2500)-F	ACCACCTTTCCTTCCAAT
KRT6A_human (-2500)-R	CAGGCTTGTGCCACATTA
KRT6A_human (-1500)-F	CTTGCCAGACGCTGAGTT
KRT6A_human (-1500)-R	AGCAGTCCCATTTCTCCA
KRT6A_human (-1000)-F	TGGCAGAAGTCAGGTCTC
KRT6A_human (-1000)-R	CTTTACTGTAGGAGCAAC
KRT6A_human (0)-F	GCTGGAAGGCAGGAGAAT
KRT6A_human (0)-R	GGTGAGCTTGCAGGTTGG
KRT6A_human (+500)-F	GAGGTCACCGTCAACCAG
KRT6A_human (+500)-R	CGATGAAGGAGGCAAAC
KRT6A_human (+1500)-F	TGTTTCGAGCAGTACATCAA
KRT6A_human (+1500)-R	CCTGGTCACCCAATAGTC
KRT6A_human (+3000)-F	GAACCTTATGCCCAAGTCAA
KRT6A_human (+3000)-R	CCTCATTATGGCACCCT
Sox17_human (-4000)-F	ACGCTGCTGATAAGGCTGTC
Sox17_human (-4000)-R	TGGGCTGTGGAACCTCATA
Sox17_human (-3000)-F	CCAAGAACAAGGGCAAATAA
Sox17_human (-3000)-R	TCAAGCGATTCTCCTGTCTC
Sox17_human (-2000)-F	GGAGGCTGAGACAGGAGAAT
Sox17_human (-2000)-R	GGAGCCAAGAAGGTGGAGAA
Sox17_human (-1000)-F	TCTTTGCTAATGCTGGAGGG
Sox17_human (-1000)-R	AAATGTCCGAGTTTGTGTTGG
Sox17_human (0)-F	CAGTGCCTCACTCCCCACCC
Sox17_human (0)-R	GCCTCGCCCTTCACCTTCAT
Sox17_human (+2000)-F	TTCCCATAGTTGGATTGTCA
Sox17_human (+2000)-R	GCATTTATGTTACCCCTTTT
Sox17_human (+4000)-F	TGTCCCAAGAGTCCCAGTA
Sox17_human (+4000)-R	AACACCAATCCCTCCATCCA
CyclinA_human (-4000)-F	AGGGAAAGAAGGAGTGAG
CyclinA_human (-4000)-R	ACCTTGCAGAGCTATTGT
CyclinA_human (-3000)-F	ACCTCAGCCTCCCAAAGT
CyclinA_human (-3000)-R	TAGCAGCATCCAATAGCAA
CyclinA_human (-2000)-F	TAGACCGCTTTATAGGCT
CyclinA_human (-2000)-R	CATACATAGTAACCAGGAC
CyclinA_human (-1000)-F	CAGTAGTTCAAGGTGCCA
CyclinA_human (-1000)-R	CTTAACATTTAGGCGTTTAT
CyclinA_human (0)-F	CCTGCTCAGTTTCCTTTGGT
CyclinA_human (0)-R	ATCCCGCGACTATTGAAATG

CyclinA_human (+500)-F GTTCTCCCATATTAGCATCA
 CyclinA_human (+500)-R GAGCTGAGCGAAGACTACA
 CyclinA_human (+1000)-F CCTTTGTGGGAATGCCTGTG
 CyclinA_human (+1000)-R GGGTGTGGCCTTTGCTT
 CyclinA_human (+3000)-F AGCCAGACATCACTAACA
 CyclinA_human (+3000)-R TGTAGTTCACAGCCAAAT
 CyclinB_human (-4000)-F CCGGTTGGAGTGCAGTAG
 CyclinB_human (-4000)-R CTGGGATTGGTGGTGTAT
 CyclinB_human (-3000)-F TCAGGAGTTTGAGGTTAC
 CyclinB_human (-3000)-R TCTGTTCAGGTATTTTGC
 CyclinB_human (-2000)-F GAAGGCAGGTGAAATGCT
 CyclinB_human (-2000)-R TGCGATTACAGGCCGTGAG
 CyclinB_human (-1000)-F ATCTGAGTAAAGGGCATA
 CyclinB_human (-1000)-R GTTTTAGCTTTCTATTTGGA
 CyclinB_human (0)-F GAGTGAGTGCCACGAACAGG
 CyclinB_human (0)-R ACCCAGCAGAAACCAACAGC
 CyclinB_human (+500)-F AGAGGTCGGCGGAAACTG
 CyclinB_human (+500)-R AGGTGGGGCACAAGGAGA
 CyclinB_human (+1000)-F AAATGCCTATGAAGAAGG
 CyclinB_human (+1000)-R TTTTCCAGTAGCTGAAGG
 CyclinB_human (+3000)-F GGCTGGTCTCGAACTCCT
 CyclinB_human (+3000)-R CTTCATGGCATCCTCAA
 CyclinD_human (-4000)-F GCAAGTCCGGAGTGGGG
 CyclinD_human (-4000)-R GAGACGCAGGGCTTCGCT
 CyclinD_human (-3000)-F AACCCAAGCCCCGAGCCC
 CyclinD_human (-3000)-R GCGTGTTCCGCCACCGTCC
 CyclinD_human (-2000)-F TCTGAGGCTTGGCTATGCG
 CyclinD_human (-2000)-R TGGGGAGCGATGGGTTGC
 CyclinD_human (-1000)-F AGGTAGGAAGGCAGCCCCGAAGA
 CyclinD_human (-1000)-R AGCAGCAGCCCAAGATGG
 CyclinD_human (0)-F ACCCAGCCAGGACCCACA
 CyclinD_human (0)-R GGTTTCCACTTCGCAGCAC
 CyclinD_human (+500)-F CGTTTCTTTGCTACTCACCC
 CyclinD_human (+500)-R CCACCCCTTCCTCCTTCA
 CyclinD_human (+1000)-F TGAAAGTGCGGCGTGGTG
 CyclinD_human (+1000)-R CTCGGGCGACCCTTTACC
 CyclinD_human (+3000)-F GGATGGAGGGAGATTTGCT
 CyclinD_human (+3000)-R GAAGGACGAGGCCAGAGTAA
 SAT2_human-F AATCATCGAATGGTCTCGAT
 SAT2_human-R ATAATTCCATTTCGATTCCAC
 GAPDH_human-F ACCACAGTCCATGCCATCA
 GAPDH_human-R CAGGGATGATGTTCTGGAGA

mRNA qPCR analysis:

Gene	Primer sequence (5'-3')
SOX2_human-F	GTGAGCGCCCTGCAGTACAA
SOX2_human-R	GCGAGTAGGACATGCTGTAGGTG
LSD1_human-F	AGCGTCATGGTCTTATCAA
LSD1_human-R	GAAATGTGGCAACTCGTC
FOXA2_human-F	CCCAACAAGATGCTGACGC
FOXA2_human-R	GCGAGTGGCGGATGGAGTT
BMP2_human-F	ACAGCGGAAACGCCTTAA
BMP2_human-R	GGGAGCCACAATCCAGTC
EOMES_human-F	CCCAGACCCAACCTTTCC
EOMES_human-R	GAGCCAATTTCTCTTTCACTT
SOX17_human-F	CTGCAGGCCAGAAGCAGTGTTA
SOX17_human-R	CCCAAAGTGTCAAGTGGCAGA
HNF4A_human-F	AGCTGCAGATCGATGACAATGAG
HNF4A_human-R	CATACTGGCGGTCGTTGATGTAG
TP63_human-F	CCTTACTTTGCTGAGGGTTTGAA
TP63_human-R	CAAGGCCCTAGTGTTACCTGAATAG
KRT6A_human-F	GGCTGAGGAGCGTGAACAG
KRT6A_human-R	CAGGAACCGCACCTTGT
β -Actin_human-F	GGCCACGGCT GCTTC
β -Actin_human-R	GTTGGCGTACAGGTCTTTGC