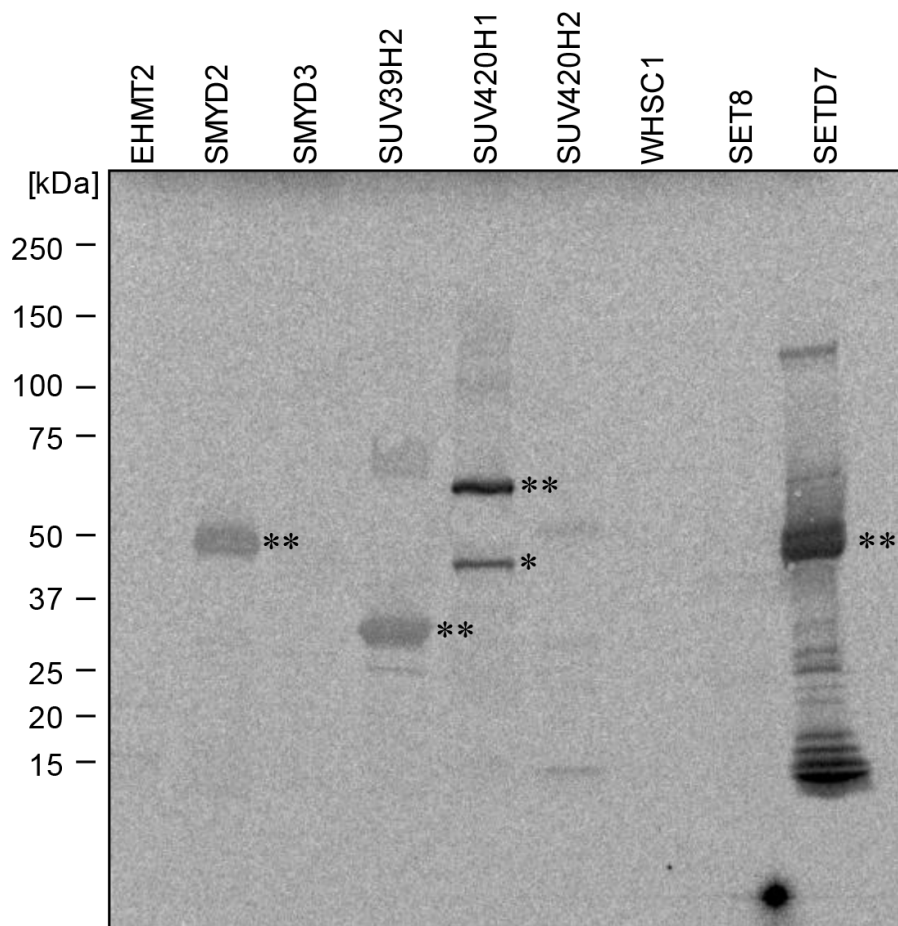
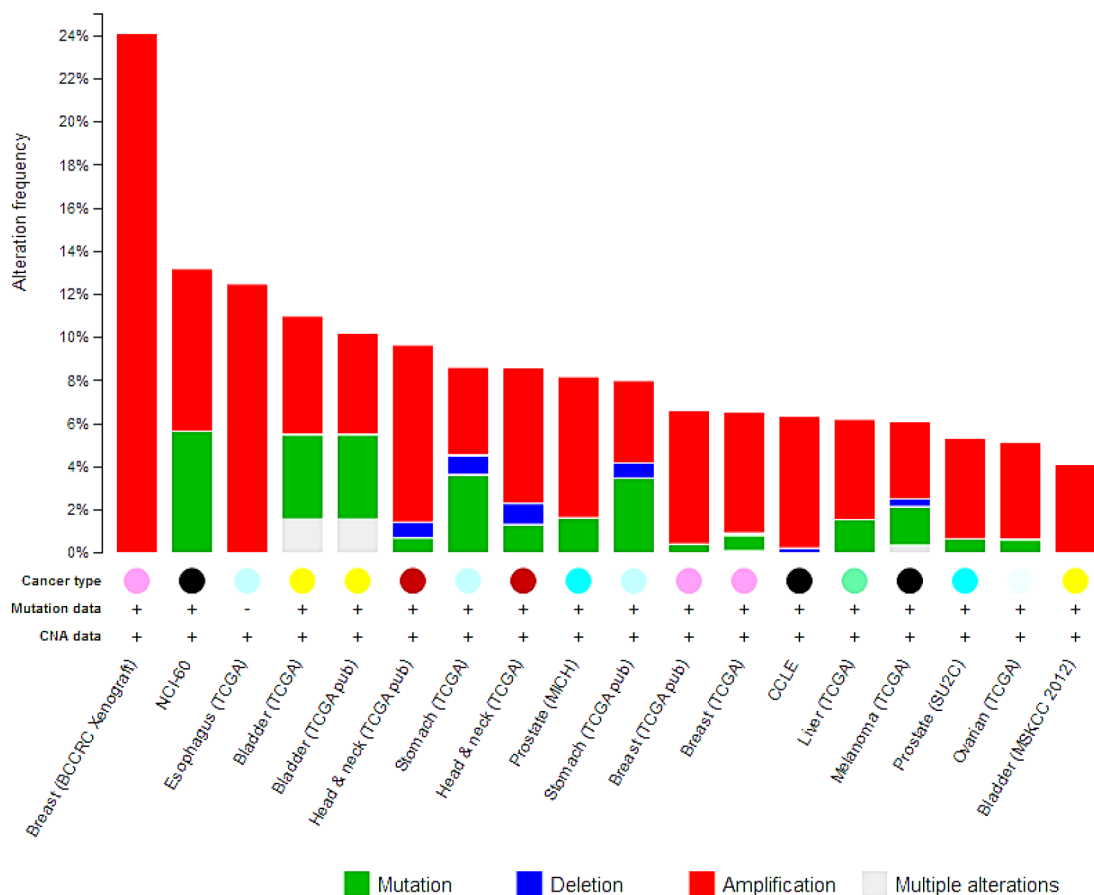


## SUV420H1 enhances the phosphorylation and transcription of ERK1 in cancer cells

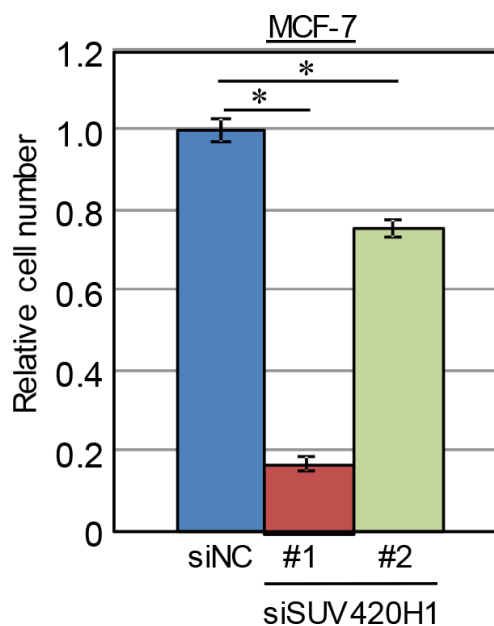
### Supplementary Materials



**Supplementary Figure S1: SUV420H1 methylates ERK1 *in vitro*.** Recombinant ERK1 protein was incubated with a variety of methyltransferases, and methylation signal was detected by autoradiography. \*ERK1 methylation band. \*\*automethylation band.



**Supplementary Figure S2: Cross-cancer alteration summary for *SUV420H1*.** The data were obtained from the TCGA database (<http://www.cbioportal.org/public-portal/>).



**Supplementary Figure S3: Involvement of *SUV420H1* in the growth of the breast cancer cell MCF-7.** Relative cell number shows the value normalized to siNC-treated cells. Mean  $\pm$  SD of four independent experiments. *P* values were calculated using Student's *t*-test ( $*P < 0.05$ ).

**Supplementary Table S1: Information of certificated cell lines**

Name	Origin	Certification institution	Tested method	DNA profile or characteristics
MCF7	human breast cancer	ATCC	STR	Amelogenin: X/X CSF1PO: 10/10 D13S317: 11/11 D16S539: 11/12 D5S818: 12/12 D7S820: 8/9 THO1: 6/6 TPOX: 9/12 vWA: 14/15 D3S1358: 16/16 D21S11: 30/30 D18S51: 14/14 Penta E: 7/12 Penta D: 12/12 D8S1179: 10/14 FGA: 23/25 CLS 2011.
293T	human embryonic kidney fibroblast	ATCC	STR	Amelogenin: X CSF1PO: 11, 12 D13S317: 12, 14 D16S539: 9, 13 D5S818: 8, 9 D7S820: 11 THO1: 7, 9.3 TPOX: 11 vWA: 16, 18, 19
HeLa	human cervix carcinoma	ATCC	STR	Amelogenin: X, Y CSF1PO: 11, 12 D13S317: 11, 14 D16S539: 9, 11 D5S818: 11, 12 D7S820: 10, 11 THO1: 8 TPOX: 8 vWA: 15

ATCC; American Type Culture Collection

**Supplementary Table S2: Characteristics of SCCHN cell lines**

Cell name	TNM stage	Specimen site	Gender	HPV status
HN-SCC-151	T3N0M0	Oral tongue	–	HPV16-negative
FaDu	–	Hypopharynx	Male	HPV16-negative

**Supplementary Table S3: Primer sequences for quantitative RT-PCR**

Gene name	Primer sequence
<i>GAPDH (housekeeping gene)-f</i>	5' GCAAATTCATGGCACCGTC 3'
<i>GAPDH (housekeeping gene)-r</i>	5' TCGCCCCACTTGATTTTGG 3'
<i>SDH (housekeeping gene)-f</i>	5' TGGGAACAAGAGGGCATCTG 3'
<i>SDH (housekeeping gene)-r</i>	5' CCACCACTGCATCAAATTCATG 3'
<i>SUV420H1-f</i>	5' AGAAATCATTGCAAGCGGCTGGAG 3'
<i>SUV420H1-r</i>	5' CTGGCTCCTATCTTTTTTAATGG 3'

**Supplementary Table S4: siRNA sequences**

siRNA name	Sequence
	Target#1 Sense: 5' AUCCGCGCGAUAGUACGUA 3'
siNegative control	Antisense: 5' UACGUACUAUCGCGCGGAU 3'
(Cocktail)	Target#2 Sense: 5' UUACGCGUAGCGUAAUACG 3'
	Antisense: 5' CGUAUUACGCUACGCGUAA 3'
	Target#3 Sense: 5' UAUUCGCGCGUAUAGCGGU 3'
	Antisense: 5' ACCGCUAUACGCGCGAAUA 3'
siSUV420H1#1	Sense: 5' CUGCGUUUAUAAACCAUGA 3'
	Antisense: 5' UCAUGGUUUUAUAAACGCAG 3'
siSUV420H1#2	Sense: 5' GUGUCAACUGGUCGAGAU 3'
	Antisense: 5' UAUCUCGACCAGUUGACAC 3'