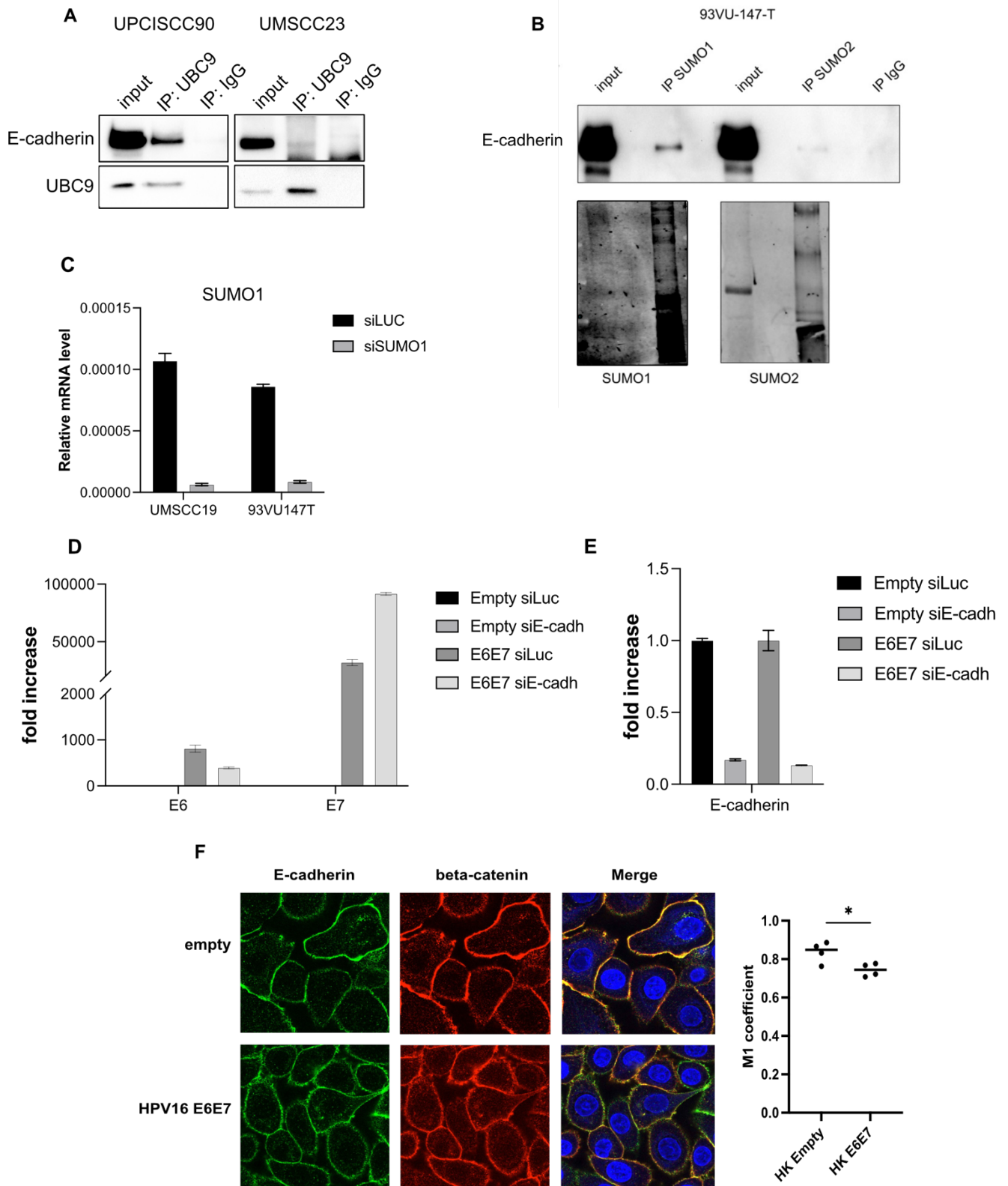


Supplementary Material



Supplementary Figure. (A) HPV-positive UPCISCC90 and HPV-negative UMSCC23 cell lines were harvested and whole cells extracts were subjected to anti-UBC9 immunoprecipitation (IP). Immunoblotting with the indicated antibodies was then performed and whole cell extracts were used as input controls. (B) HPV-positive 93VU147T cell line was harvested and whole cells extracts were subjected to anti-SUMO1 or SUMO2 immunoprecipitation (IP). Immunoblotting with the indicated antibodies was then performed and whole cell extracts were used as input controls. (C) HPV-positive 93VU147T and HPV-negative UMSCC19 were transfected for 72h with specific siRNA against SUMO1 or Luciferase as control. After transfection total RNAs were isolated for RT-qPCR and SUMO1 expression was normalized to RppP0 and shown as means \pm SD. (D, E) UMSCC10A cell line was transduced with empty or HPV16E6/E7 recombinant retroviral vectors. After selection with G418 cells were transfected with specific siRNA against E-cadherin or Luciferase as control. 72h after transfection total RNAs were isolated for RT-qPCR and reported as means \pm SD of fold changes. (F) Human Keratinocytes (HK) were transduced with empty or HPV16E6/E7 recombinant retroviral vectors. After selection with G418 cells were seeded on coverslips and after 24h fixed and stained with the indicated antibodies for Immunofluorescence. Coverslips were mounted and visualized using a Leica SP8 AOBS confocal microscopy. E-cadherin (green) and β -catenin (red) colocalization was evaluated in 4 different images and measured by Mander's coefficient (M1) as shown in the graph. *, $P < 0.05$ (unpaired t test).

CELL LINE	HPV STATUS	SUBSITE	SEX	ORIGIN
UMSCC4	Negative	Oropharynx	Female	(Brenner <i>et al.</i> , 2010) (Zhao <i>et al.</i> , 2010)
UMSCC6	Negative	Oropharynx	Male	(Brenner <i>et al.</i> , 2010) (Zhao <i>et al.</i> , 2010)
UMSCC10A	Negative	Larynx	Male	(Brenner <i>et al.</i> , 2010) (Zhao <i>et al.</i> , 2010)
UMSCC17A	Negative	Larynx	Female	(Carey <i>et al.</i> , 1989)
UMSCC17B	Negative	Larynx	Female	(Carey <i>et al.</i> , 1989)
UMSCC19	Negative	Oropharynx	Male	(Brenner <i>et al.</i> , 2010), (Zhao <i>et al.</i> , 2010)
UMSCC23	Negative	Larynx	Female	(Brenner <i>et al.</i> , 2010)
UDSCC2	Positive	Hypopharynx	Male	(Balló <i>et al.</i> , 1999)
UMSCC47	Positive	Oropharynx	Male	(Brenner <i>et al.</i> , 2010), (Zhao <i>et al.</i> , 2010)
UPCISCC90	Positive	Oropharynx	Male	(Ragin, Reshmi and Gollin, 2004)
UMSCC104	Positive	Oral cavity	Male	(Tang <i>et al.</i> , 2011)
UPCISCC152	Positive	Hypopharynx	Male	(Kalu <i>et al.</i> , 2017), (White <i>et al.</i> , 2007)
UPCISCC154	Positive	Oral cavity	Male	(White <i>et al.</i> , 2007)
93VU147T	Positive	Oral cavity	Male	(Steenbergen <i>et al.</i> , 1995)

Supplementary Table1. List of used HNC cell lines.

antibody	Company	Clone
anti-UBC9	Novus Biologicals	Catalog n: NBP1-86887
anti-E-cadherin	Cell Signaling Technology	Catalog n: 3195
anti-GAPDH	Abcam	6C5
anti-SUMO1	SIGMA	Catalog n: S8070
anti-vinculin	SIGMA	hVIN1
anti-tubulin	SIGMA	DM 1A
anti-actin	Novus Biologicals	AC-15
anti-E7(HPV16)	Santa Cruz Biotechnology	NM2
anti-ubiquitin	Santa Cruz Biotechnology	P4D1
anti-p53	Santa Cruz Biotechnology	DO-1
anti- β -catenin	BD Biosciences	14/Beta-Catenin

Supplementary Table2. List of used antibodies.

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