Table SI. Primers used to confirm successful transfection of HPV16E7 and HPV18E7 in immortalised human keratinocytes (HaCaT) cell via reverse transcription-quantitative PCR.

Gene	**Sequence, 5'-3'**	**Melting temperature, ˚C**
pMSCV	F: CCCTTGAACCTCCTCGTTCGACC	64.3
	R: GAGACGTGCTACTTCCATTTGTC	
HPV16 E7	F: CATGGAGATACACCTACATTGCAT	54.8
	R: GAACAGATGGGGCACACAAT	
HPV18 E7	F: CATGGACCTAAGGCAACATTGCAA	58.1
	R: GTACCTGGATTCCGTTGTAACGTT	
β-actin	F: CGTGACATTAAGGAGAAGCTGTGC	58.0
	R: CTCAGGAGGAGCAATGATCTTGAT	

F, forward; HPV, human papillomavirus; R, reverse.

Table SII. Proteins expressed in HaCaT cells based on PEAKS analysis.

Accession code	Description	Gene symbol	Average mass	-10lgP	Coverage, %	Peptide	Unique
V9HWB8	Pyruvate kinase	PKM	57937	133.89	27	9	9
P06733	Alpha-enolase	ENO1	47169	133.20	31	9	9
B5BU38	Annexin 1	ANXA1	38680	127.65	28	10	10
V9HVZ4	Glyceraldehyde-3-phosphate dehydrogenase	GAPDH	36053	127.35	31	6	6
Q8IZ29	Tubulin beta chain	TUBB	49840	125.98	27	9	1
Q53GK6	Beta actin variant	ACTB	41723	125.27	31	3	3
P63261	Actin, cytoplasmic 2	ACTG1	41793	125.06	31	7	1
H0YMD0	Annexin 2	ANXA2	25342	108.33	47	7	7
A0A024R3X4	Heat shock 60kDa protein 1	HSPD1	61055	93.44	17	5	5
B4DNE0	Elongation factor 1-alpha 1	EEF1A1	42596	92.25	20	4	4
F5H5D3	Tubulin alpha chain	TUBA1C	57730	83.34	9	3	3
V9HWF4	Phosphoglycerate kinase	HEL-S-68p	44615	82.13	15	4	4
Q09666	Neuroblast differentiation-associated protein	AHNAK	629114	81.88	2	7	7
I3L3D5	Profilin	PFN1	17517	75.13	11	2	2
V9HWH9	Protein S100	HEL-S-43	11740	71.98	26	2	2
Q75MT9	Malate dehydrogenase	MDH2	33229	71.51	17	4	4
P60174	Triosephosphate isomerase	TPI1	30791	70.86	19	3	3
P31947	14-3-3 protein sigma	SFN	27774	69.85	17	4	4
P62937	Peptidyl-prolyl cis-trans isomerase A	PPIA	18012	68.97	51	7	7
A0A0K0K1L1	Epididymis secretory protein Li 282	HEL-S-282	29176	63.73	17	3	3
V9HW43	Epididymis secretory protein Li 102	HEL-S-102	22783	60.02	13	2	2
B4DWS9	Serpin B5	SERPINB5	32460	50.71	14	3	3

F8WCJ1	Eukaryotic translation initiation factor 5A	EIF5A2	11688	48.49	11	1	1
A0A024R1X8	Junction plakoglobin	JUP	81727	45.67	2	1	1
A0A0A0MSI0	Peroxiredoxin-1	PRDX1	18976	43.98	30	4	4
Q59EN5	Prosaposin	PSAP	58727	43.42	3	1	1
P10599	Thioredoxin	TXN	11737	43.08	20	2	2
A0A0U1RRH7	Histone H2A	HISTH2A	18553	41.82	11	1	1
F5GZI0	4F2 cell-surface antigen heavy chain	SLC3A2	18950	40.62	8	1	1
V9HWE9	Epididymis secretory protein Li 22	HEL-S-22	23356	38.82	10	1	1
B4DFF1	Heterogeneous nuclear ribonucleoprotein K	HNRNPK	50715	38.48	4	1	1
X6RJP6	Transgelin-2	TAGLN2	21086	37.62	6	1	1
Q9UMY3	3-phosphoglycerate dehydrogenase	PGDH3	24159	35.12	10	2	2
D3DV26	S100 calcium binding protein A10	S100A10	22360	34.22	8	1	1
E5RIE0	Catenin alpha-1	CTNNA1	12807	27.54	15	1	1
A0A024R4Q8	Ribosomal protein S5	RPS5	22876	26.81	7	1	1
Q53FA3	HSPA1L	HSPA1L	70404	25.56	2	1	1
E9PK25	Cofilin-1	CFL1	22728	43.07	7	1	1
A0A0U1RR32	Histone H2A	hCG	18482	42.44	11	1	1
P06748	Nucleophosmin	NPM1	32575	28.00	7	1	1
C9JV02	Septin-8	SEPT8	15045	21.35	7	1	1

A P-value of 1% is equivalent to -10lgP. 20 is a good threshold for -10lgP. In other words, a score >20 indicates relatively high significance.

Table SIII. Proteins expressed in HaCaT-pMSCVpuro (control) cells based on PEAKS analysis.

Accession code	Description	Gene symbol	Average mass	-10lgP	Coverage, %	Peptides	Unique
Q8IWP6	Tubulin beta chain	TUBB	49753	121.57	21	6	6
P63261	Actin cytoplasmic 2	ACTG1	41793	98.06	23	4	4
V9HVZ4	Glyceraldehyde-3-phosphate dehydrogenase	GAPDH	36053	97.97	19	3	3
Q6IPT9	Elongation factor 1-alpha	EEF1A1	50185	99.79	15	4	4
H3BTN5	Pyruvate kinase	PKM	53045	89.15	17	4	4
A8K486	Peptidyl-prolyl cis-trans isomerase	PPIA	18013	82.6	27	3	3
B5BU38	Annexin 1	ANXA1	38680	72.42	9	2	2
V9HW65	Annexin 2	ANXA2	38576	65.59	9	2	2
P04792	Heat shock protein beta-1	HSPB1	22783	57.6	16	2	2
P11142	Heat shock cognate 71 kDa protein	HSPA8	70898	61.34	4	2	2
P68371	Tubulin beta-4B chain	TUBB4B	49831	121.57	21	6	6
P54652	Heat shock-related 70 kDa protein 2	HSPA2	70021	61.34	5	2	2
A0A024R4F1	Enolase 1	ENO1	47169	55.2	16	4	4
B4E3D4	Transmembrane glycoprotein NMB	GPNMB	68073	54.2	6	2	2
A0A1W6AYU6	Glucose-6-phosphate isomerase	GPI	63354	53.4	3	2	2
Q15847	Adipogenesis regulatory factor	ADIRF	7855	49.4	49	2	2
J3KPS3	Fructose-bisphosphate aldolase	ALDOA	39818	49.2	5	2	2
V9HW31	ATP synthase subunit beta	HEL-S-271	56560	48.5	12	3	3
A0A0U1RQF0	Fatty acid synthase	FASN	273196	47.8	1	1	1
A0A024R228	Heterogeneous nuclear ribonucleoprotein K	HNRPK	51219	45.4	4	1	1
B4DWS9	Serpin B5	SERPINB5	32460	41.3	8	1	1

V9HWH9	Protein S100	HEL-S-43	11740	40.1	5	2	2
V9HWE9	Epididymis secretory protein Li 22	HEL-S-22	23356	39.9	13	2	2
E9PFF2	Transketolase	TKT	36449	39.7	5	1	1
U3KPZ0	Triosephosphate isomerase	TPI1	12437	38.4	13	2	2
B3GQS7	Mitochondrial heat shock 60kD protein 1 variant 1	HSPD1	60680	36.0	8	3	3
A0A0G2JIW1	Heat shock 70 kDa protein 1B	HSPA1B	70109	34.4	5	2	2
Q9BQ02	NCL protein	NCL	50950	33.2	5	2	2
E9PRY8	Elongation factor 1-delta	EEF1D	76570	33.2	2	2	2

Table SIV. Proteins expressed in HaCaT-HPV16 E7 transfected based on PEAKS analysis.

Accession code	Description	Gene symbol	Average mass	-10lgP	Coverage (%)	Peptide	Unique
V9HVZ4	Glyceraldehyde-3-phosphate dehydrogenase	GAPDH	36053	242	71	16	16
V9HWB8	Pyruvate kinase	PKM	57937	228	47	15	15
A0A024R4F1	Enolase 1, (Alpha)	ENO1	47169	223	48	12	12
A0A087WVQ9	Elongation factor 1-alpha 1	EEF1A1	47883	220	46	11	11
P07437	Tubulin beta chain	TUBB	49671	218	43	13	2
V9HW65	Annexin	ANXA2	38576	205	47	11	11
P68363	Tubulin alpha-1B chain	TUBA1B	50152	201	36	11	11

P31947	14-3-3 protein sigma	SFN	27774	199	40	8	6
P04083	Annexin A1	ANXA1	38714	195	34	9	9
P08238	Heat shock protein HSP 90-beta	HSP90AB1	83264	190	15	8	5
B4E1H9	Phosphoglycerate kinase	PGK1	35045	180	43	8	8
P13639	Elongation factor 2	EEF2	95338	177	14	7	7
A8K486	Peptidyl-prolyl cis-trans isomerase	PPIA	18013	173	51	9	9
P00338	L-lactate dehydrogenase A chain	LDHA	36689	173	40	10	10
P07900	Heat shock protein HSP 90-alpha	HSP90AA1	84660	159	14	6	3
P07737	Profilin-1	PFN1	15054	155	56	6	6
Q9NZ23	Drug-sensitive protein 1	YA61	14867	140	42	5	5
E9PK25	Cofilin-1	CFL1	22728	139	38	5	5
B7Z597	60 kDa heat shock protein, mitochondrial	HSPD1	60048	134	15	4	4
P18669	Phosphoglycerate mutase	PGAM1	28804	131	23	3	3
E9PN89	Heat shock cognate 71 kDa protein	HSPA8	34819	127	27	6	6
J3KPS3	Fructose-bisphosphate aldolase	ALDOA	39818	126	17	5	5
A0A024R228	Heterogeneous nuclear ribonucleoprotein K	HNRPK	51219	124	11	4	4
Q5VXV3	SET translocation (Myeloid leukemia-associated)	SET	33489	121	22	3	3
P63241	Eukaryotic translation initiation factor 5A-1	EIF5A	16832	121	38	3	3
A0A0A0MRQ5	Peroxiredoxin-1	PRDX1	10676	118	44	3	3
H9ZYJ2	Thioredoxin	TXN	11737	115	43	4	4
B4DEF7	78 kDa glucose-regulated protein	HSPA5	30420	102	17	3	3

P60174	Triosephosphate isomerase	TPI1	30791	99	15	2	2
M0R0R2	40S ribosomal protein S5	RPS5	25333	91	19	2	2
V9HWE9	Epididymis secretory protein Li 22	GSTP1	23356	91	15	2	2
P12814	Alpha-actinin-1	ACTN1	103058	91	4	3	3
B3KQT9	Protein disulfide-isomerase	PDIA3	54103	91	8	2	2
P22392	Nucleoside diphosphate kinase B	NME1-NME2	17298	90	24	2	2
P60903	Protein S100-A10	S100A10	11203	84	35	2	2
P09429	High mobility group protein B1	HMGB1	24894	75	13	2	2
B4DG31	Plastin-3	PLS3	34275	75	12	2	2
A0A024RDT4	Lymphocyte cytosolic protein 1 (L-plastin)	LCP1	70289	73	6	2	2
P36952	Serpin B5	SERPINB5	42100	70	7	2	2
Q09666	Neuroblast differentiation-associated protein AHNAK	AHNAK	629114	70	1	2	2
B4DLV7	Rab GDP dissociation inhibitor	GDI2	51154	65	8	2	2
A8K7F6	eukaryotic translation initiation factor 4A, isoform 1 (EIF4A1)	EIF4A1	46122	64	9	2	2
P29034	Protein S100-A2	S100A2	11117	46	26	2	2
P68371	Tubulin beta-4B chain	TUBB4B	49831	219.3	43	13	1
P63261	Actin, cytoplasmic 2	ACTG1	41792	234.0	46	11	1
Q53G99	Beta actin variant	ACTB	41765	233.2	46	11	1
B7Z6P1	Alpha skeletal muscle	ACTA1	38579	167.2	21	7	1
V9HWH9	Protein S100	HEL-S-43	11740	134.8	56	23	1
P63104	14-3-3 protein zeta/delta	YWHAZ	27745	84.4	12	3	1
A0A024R4K3	Malate dehydrogenase	MDH2	35503	80.2	6	1	1

A0A0U1RR32	Histone H2A	hCG	18481	74.4	11	1	1
U3KQK0	Histone H2B	HIST1H2BN	18803	72.9	9	1	1
D3DPU2	Adenylyl cyclase-associated protein	CAP1	51673	72.5	5	1	1
A0A1W6AYU6	Glucose-6-phosphate isomerase	GPI	63354	70.6	3	1	1
J7M2B1	Tyrosine-protein kinase receptor	EZR-ROS1	98948	70.4	2	1	1
P35579	Myosin-9	MYH9	226530	69.1	1	1	1
G3V277	Tryptophan--tRNA ligase, cytoplasmic	WARS1	23885	68.7	11	1	1
P20290	Transcription factor BTF3	BTF3	22167	68.5	11	1	1
F8W079	ATP synthase subunit beta, mitochondrial	ATP5F1B	30169	68.4	8	1	1
V9HWK2	Epididymis luminal protein 114	HEL114	123799	68.0	2	1	1
P14625	Endoplasmin	HSP90B1	92468	66.5	3	1	1
P07195	L-lactate dehydrogenase B	LDHB	36638	66.4	6	1	1
Q15181	Inorganic pyrophosphatase	PPA1	32660	66.3	6	1	1
Q9BTI9	NPM1 protein	NPM1	25048	65.8	6	1	1
P60981	Destrin	DSTN	18505	63.3	10	1	1
P52209	6-phosphogluconate dehydrogenase, decarboxylating	PGD	53140	62.0	5	1	1
P22314	Ubiquitin-like modifier-activating enzyme	UBA1	117848	61.5	2	1	1
A0A087X1Z3	Proteasome activator complex subunit 2	PSME2	29127	61.2	9	1	1
V9HW80	Epididymis luminal protein 220	HEL-S-70	89321	60.2	2	1	1
Q8TE01	Dermal papilla derived protein 12	DERP12	38192	60.1	9	1	1

E9PFF2	Transketolase	TKT	36449	59.2	5	1	1
H0YH88	Nucleosome assembly protein 1-like 1	NAP1L1	21086	58.7	6	1	1
B2R9K8	T-complex protein 1 subunit zeta	CCT6A	57966	58.3	4	1	1
Q15843	NEDD8 precursor	NEDD8	9071	58.2	17	1	1
A0A0S2Z487	Junction plakoglobin isoform 1	JUP	81744	58.2	3	1	1
Q59EN5	Prosaposin	PSAP	58727	57.9	3	1	1
P0CG48	Polyubiquitin-C	UBC	77038	56.8	2	1	1
B7Z6Z4	Myosin light polypeptide 6	MYL6	26706	53.2	7	1	1
O75369	Filamin-B	FLNB	278162	52.2	1	1	1
A0A2R8Y6L3	RPS10-NUDT3 readthrough	RPS10-NUDT3	14294	51.9	7	1	1
B4DID5	Transaldolase 1	TALDO1	17073	46.5	7	1	1
Q92597	Protein NDRG1	NDRG1	42835	44.9	5	1	1
H0YID2	Adenylate kinase isoenzyme 1	AK1	5832	44.4	27	1	1
P14174	Macrophage migration inhibitory factor	MIF	12476	37.8	10	1	1
B9V6H7	Envelope glycoprotein gp160	env	98174	25.1	2	1	1

Table SV. Proteins expressed in HaCaT-HPV18 E7 cells based on PEAKS analysis.

Accession code	Description	Protein	Average mass	-10lgP	Coverage, %	Peptide	Unique
Q53G85	Elongation factor 1-alpha	EEF1A1	50113	248	49	17	17
P04406	Glyceraldehyde-3-phosphate dehydrogenase	GAPDH	36053	245	56	12	12
A0A024R4F1	Enolase 1, (Alpha), isoform CRA_a	ENO1	47169	242	54	14	14
P14618	Pyruvate kinase PKM	PKM	57937	223	42	13	13
A0A024R5Z7	Annexin	ANXA2	38604	212	53	13	13
P13639	Elongation factor 2	EEF2	95338	205	25	13	13
P04083	Annexin A1	ANXA1	38714	187	31	8	8
A0A024RD80	Heat shock protein 90kDa alpha (Cytosolic), class B member 1	HSP90AB1	83264	186	23	13	6
A0A0S2Z4G7	Nucleophosmin (Nucleolar phosphoprotein B23, numatrin)	NPM1	29465	181	47	5	5
K9JA46	Epididymis luminal secretory protein 52	HSP90AA1	84660	181	18	11	4
P68363	Tubulin alpha-1B chain	TUBA1B	50152	179	29	9	9
P11142	Heat shock cognate 71 kDa protein	HSPA8	70898	177	29	14	13
B3KM80	Nucleolin	NCL	58555	173	27	9	9
P09651	Heterogeneous nuclear ribonucleoprotein A1	HNRNPA1	38747	173	28	9	7
V9HWF5	Peptidyl-prolyl cis-trans isomerase	PPIA	18012	172	51	8	8
P61978	Heterogeneous nuclear ribonucleoprotein K	HNRNPK	50976	170	25	7	7
P22626	Heterogeneous nuclear ribonucleoproteins A2/B1	HNRNPA2B1	37430	166	23	7	5
Q00839	Heterogeneous nuclear ribonucleoprotein U	HNRNPU	90585	160	14	5	5
P31947	14-3-3 protein sigma	SFN	27774	159	40	7	5
V9HWI5	Cofilin 1 (Non-muscle)	CFL1	18502	149	57	6	6

B4DJI1	L-lactate dehydrogenase A chain	LDHA	33593	147	43	7	7
Q01105	Protein SET	SET	33489	136	30	5	5
A8K7F6	Eukaryotic translation initiation factor 4A, isoform 1 (EIF4A1)	EIF4A1	46122	125	13	4	4
A0A024R7T3	Heterogeneous nuclear ribonucleoprotein F	HNRNPF	45672	124	19	4	4
Q59EJ3	Heat shock 70kDa protein 1A variant	HSPA1A	77496	114	8	4	3
A0A0G2JIW1	Heat shock 70 kDa protein 1B	HSPA1B	70109	114	8	4	3
Q9NR30	Nucleolar RNA helicase 2	DDX21	87344	113	7	4	4
B4DE32	ATP-dependent DNA helicase 2 subunit 1	XRCC6	64241	112	11	4	4
Q7Z2V5	Uncharacterized protein DKFZp686J01190	DDX5	45997	111	11	3	3
J3KPS3	Fructose-bisphosphate aldolase	ALDOA	39818	108	14	3	3
A0A0U1RRM4	Polypyrimidine tract-binding protein 1	PTBP1	62464	108	10	3	3
P60174	Triosephosphate isomerase	TPI1	30791	103	22	3	3
A0A024RCA7	Ribosomal protein, large, P2	RPLP2	11665	103	63	4	4
P36952	Serpin B5	SERPINB5	42100	99	10	3	3
B4DWA0	High mobility group protein HMG-I/HMG-Y	HMGA1	34301	98	8	2	2
Q16777	Histone H2A type 2-C	HIST2H2AC	13988	97	22	2	2
Q6FI13	Histone H2A type 2-A	HIST2H2AA	14095	97	22	2	2
Q6FHU2	Phosphoglycerate mutase	PGAM1	28804	95	14	2	2
P07737	Profilin-1	PFN1	15054	93	21	2	2
B4E1H9	Phosphoglycerate kinase	PGK1	35045	93	14	3	3
A0A024RDR0	High-mobility group box 1	HMGB1	24894	91	21	3	3
Q8N274	NEUROBLAST DIFFERENTIATION ASSOCIATED PROTEIN AHNAK	AHNAK	86053	88	5	3	3
A0A024R694	Actinin	ACTN1	103058	88	4	3	3

O43707	Alpha-actinin-4	ACTN4	104854	88	4	3	3
P13010	X-ray repair cross-complementing protein 5	XRCC5	82705	86	5	2	2
P26641	Elongation factor 1-gamma	EEF1G	50119	85	8	3	3
D6RF44	Heterogeneous nuclear ribonucleoprotein D0	HNRNPD	12553	83	20	2	2
Q6FGE5	S100A10 protein	S100A10	11187	82	35	2	2
D0PNI1	Epididymis luminal protein 4	YWHAZ	27745	82	17	4	2
I3L397	Eukaryotic translation initiation factor 5A	EIF5A	16019	82	20	2	2
E9PL12	Elongation factor 1-delta	EEF1D	18401	81	21	2	2
P62081	40S ribosomal protein S7	RPS7	22127	81	17	2	2
A0A024QYX3	RNA binding motif (RNP1, RRM) protein 3	RBM3	17170	80	32	2	2
Q86VG2	Splicing factor proline/glutamine-rich (Polypyrimidine tract binding protein associated)	SFPQ	76189	80	6	2	2
A0A0A0MRQ5	Peroxiredoxin-1	PRDX1	10676	80	44	3	3
A8MXP9	Matrin-3	MATR3	99967	78	5	2	2
P09211	Glutathione S-transferase P	GSTP1	23356	76	15	2	2
P55072	Transitional endoplasmic reticulum ATPase	VCP	89322	76	5	2	2
P16403	Histone H1.2	HIST1H1C	21365	73	11	3	3
Q4VB24	Histone cluster 1 H1e	HIST1H1E	21893	73	11	3	3
P16402	Histone H1.3	HIST1H1D	22350	73	10	3	3
D6R9P3	Heterogeneous nuclear ribonucleoprotein A/B	HNRNPAB	30303	69	8	2	2
P10599	Thioredoxin	TXN	11737	60	21	2	2
P68371	Tubulin beta-4B	TUBB4B	49831	213.1	40	13	1
P63261	Actin, cytoplasmic 2	ACTG1	41793	240.7	50	12	1
P60709	Actin, cytoplasmic 1	ACTB	41737	238.9	50	12	1
B2R5H0	Protein S100	S100	11724	93.5	26	2	1

P31949	Protein S100-A11	S100A11	11740	92.4	26	2	1
C9JZW3	Elongation factor 1-beta	EEF1B2	13442	78.0	12	1	1
A0A024RCJ2	Histone H2B	HIST1H2BJ	13904	77.8	12	1	1
Q53H03	Nuclear autoantigenic sperm protein isoform 2	NASP	85236	73.6	3	1	1
V9HWB5	Epididymis secretory sperm binding protein Li 66p	HEL-S-66p	32660	66.9	6	1	1
P62314	Small nuclear ribonucleoprotein Sm D1	SNRPD1	13281	65.9	17	1	1
Q16658	Fascin	FSCN1	54530	65.7	3	1	1
E7EQV9	Ribosomal protein L15	RPL15	20509	63.7	7	1	1
Q53EM5	Transketolase	TKT	67906	63.1	3	1	1
A0A1W6AYU6	Glucose-6-phosphate isomerase	GPI	63354	62.1	3	1	1
P15531	Nucleoside diphosphate kinase A	NME1	17149	62.0	11	1	1
B2R5W3	Poly [ADP-ribose] polymerase	PARP	113085	61.5	2	1	1
Q15233	Non-POU domain-containing octamer-binding protein	NONO	54232	59.7	5	1	1
S4R341	Nucleolar and coiled-body phosphoprotein 1	NOLC1	8051	59.74	21	1	1
Q5TZP7	DNA-(apurinic or apyrimidinic site) lyase	APEX1	35555	55.3	5	1	1
B7Z6Z4	Myosin light polypeptide 6	MYL6	26707	55.2	7	1	1
Q92688	Acidic leucine-rich nuclear phosphoprotein 32 family member B	ANP32B	28788	54.99	5	1	1
Q53SS8	Epididymis secretory protein Li 85	PCBP1	37497	54.91	4	1	1
Q9BYK1	40S ribosomal protein S21	RPS21	9894	52.69	20	1	1
P84103	Serine/arginine-rich splicing factor 3	SRSF3	19330	49.6	13	1	1
Q53SW9	Uncharacterized protein PTD004	PTD004	19958	49.16	8	1	1
H0YH88	Nucleosome assembly protein 1-like 1	NAP1L1	21086	47.5	6	1	1
Q1JQ76	Ribosomal protein	RPL10A	23536	45.29	7	1	1
J3KQE5	GTP-binding nuclear protein Ran	RAN	26816	42.99	6	1	1

Q8N5L9	Ribosomal protein S2	RPS2	31336	42.4	4	1	1
O43684	Mitotic checkpoint protein BUB3	BUB3	37155	41.5	6	1	1
P62304	Small nuclear ribonucleoprotein E	SNRPE	10803	40.3	12	1	1
P62277	40S ribosomal protein S13	RPS13	17222	39.2	10	1	1
P46783	40S ribosomal protein S10	RPS10	18898	39.0	5	1	1
Q9UJU1	Cytovillin 2	VIL2	16302	37.85	6	1	1
B2R4R0	Histone H4	HIST1H4L	11367	37.81	12	1	1
P29034	Protein S100-A2	S100A2	11117	37.52	17	1	1
P25398	40S ribosomal protein S12	RPS12	14515	35.03	11	1	1
G3XAN0	40S ribosomal protein S20	RPS20	7247	34.83	19	1	1
I3RU04	Envelope glycoprotein gp160	env	97881	27.97	1	1	1
O95255	Multidrug resistance-associated protein 6	ABCC6	164906	24.66	1	1	1

Table SVI. Proteins expressed in CaSki cells based on PEAKS analysis.

Accession code	Description	Gene symbol	Average mass	-10lgP	Coverage, %	Peptide	Unique
P63261	Actin, cytoplasmic 2	ACTG1	41793	174	40	9	9
Q53GE9	Elongation factor 1-alpha	EEF1A1	50111	161	27	7	7
P08729	Keratin, type II cytoskeletal 7	KRT7	51386	158	34	10	10
E7EUT5	Glyceraldehyde-3-phosphate dehydrogenase	GAPDH	27871	157	34	5	5
H3BTN5	Pyruvate kinase	PKM	53045	143	25	8	8
P06733	Alpha-enolase	ENO1	47169	121	18	4	4
P10809	60 kDa heat shock protein, mitochondrial	HSPD1	61055	119	14	5	5
P68363	Tubulin alpha-1B chain	TUBA1B	50152	108	12	3	3
Q71U36	Tubulin alpha-1A chain	TUBA1A	50136	108	12	3	3
F5H5D3	Tubulin alpha chain	TUBA1C	57730	108	10	3	3
P13639	Elongation factor 2	EEF2	95338	104	8	4	4
Q53HF2	Heat shock 70kDa protein 8 isoform 2 variant	HSPA8	53500	100	9	3	3
P54652	Heat shock-related 70 kDa protein 2	HSPA2	70021	100	7	3	3
P06748	Nucleophosmin	NPM1	32575	96	24	3	3
I3L3D5	Profilin	PFN1	17517	89	20	2	2
Q96HX7	HSP90AA1 protein	HSP90AA1	49193	87	7	3	3
V9HWB4	Epididymis secretory sperm binding protein Li 89n	HSPA5	72333	81	7	3	3
B2RE56	Peptidyl-prolyl cis-trans isomerase	PPIA	18008	76	12	2	2
E9PK25	Cofilin-1	CFL1	22728	75	21	2	2
Q04695	Keratin, type I cytoskeletal 17	KRT17	48106	74	7	2	2
B2RA03	Keratin 18 (KRT18)	KRT18	48030	65	10	2	2
B7Z5V2	Ezrin	EZR	65569	63	5	2	2

J7M2B1	Tyrosine-protein kinase receptor	ROS1	98949	63	3	2	2
P68371	Tubulin beta-4B	TUBB4B	49831	173.6	33	10	1
E9PHT9	Annexin	ANXA5	18224	67.4	10	1	1
B4DPP6	Serum albumin	ALB	70363	66.1	2	1	1
P60174	Triosephosphate isomerase	TPI1	30791	58.7	5	1	1
B4E022	Transketolase	TKT	62879	56.5	3	1	1
J3KPS3	Fructose-bisphosphate aldolase	ALDOA	39818	53.9	5	1	1
F8VZU9	Myosin light polypeptide 6	MYL6	11677	53.9	16	1	1
Q0QEN7	ATP synthase subunit beta	ATP5B	48113	53.6	4	1	1
A0A1W6AYU6	Glucose-6-phosphate isomerase	GPI	63354	51.1	3	1	1
H0YMD0	Annexin	ANXA2	25342	50.8	7	1	1
P61978	Heterogeneous nuclear ribonucleoprotein K	HNRNPK	50976	48.2	4	1	1
V9HW96	Chaperonin containing TCP1, subunit 2	HEL-S-100n	57488	48.1	3	1	1
Q32Q12	Nucleoside diphosphate kinase	NME1-NME2	32641	46.97	7	1	1
P05787	Keratin, type II cytoskeletal 8	KRT8	53704	46.2	5	1	1
B3SNA0	Glycoprotein	G	58706	46.17	1	1	1
A0A0A0MSI0	Peroxiredoxin-1	PRDX1	18976	41.96	6	1	1
Q9NZ23	Drug-sensitive protein 1	YA61	14867	39.7	14	1	1
E9PRY8	Elongation factor 1-delta	EEF1D	76570	39.3	2	1	1
A0A024R6K8	Tryptophanyl-tRNA synthetase	WARS	53165	39.28	5	1	1
A0A0U4BW16	Non-muscle myosin heavy chain 9	MYH9	226515	39.3	1	1	1
H9ZN89	Gag polyprotein	gag	55816	38.59	1	1	1
B4DNH2	Eukaryotic initiation factor 4A-I	EIF4A1	26778	37.5	6	1	1

Table SVII. Proteins expressed in HeLa cells based on PEAKS analysis.

Accession code	Description	Gene symbol	Average mass	-10lgP	Coverage, %	Peptide	Unique
A0A024R4F1	Enolase 1, (Alpha)	ENO1	47169	142	15	3	3
E7EUT5	Glyceraldehyde-3-phosphate dehydrogenase	GAPDH	27871	134	31	4	4
V9HWF4	Phosphoglycerate kinase	PGK1	44615	130	7	2	2
Q53G76	Beta actin variant	ACTB	41721	129	15	3	3
B4DW52	Actin, cytoplasmic 1	ACTG1	38633	129	16	3	3
P68363	Tubulin alpha-1B chain	TUBA1B	50152	107	8	2	2
Q71U36	Tubulin alpha-1A	TUBA1A	50136	107	8	2	2
F5H5D3	Tubulin alpha chain	TUBA1C	57730	107	7	2	2
H3BTN5	Pyruvate kinase	PKM	53045	105	9	3	3
G3V1A4	Cofilin 1 (Non-muscle)	CFL1	16812	99	17	2	2
P11021	Endoplasmic reticulum chaperone BiP	HSPA5	72333	77	5	2	2
P05787	Keratin, type II cytoskeletal 8	KRT8	53704	74	4	2	2
P07437	Tubulin beta chain	TUBB	49671	166.96	44	15	1
H0YMD0	Annexin	ANXA2	25342	87.9	25	4	4
B4E022	Transketolase	TKT	62879	80.3	6	2	2
P04083	Annexin A1	ANXA1	38714	79.6	24	6	6
V9HW31	ATP synthase subunit beta	HEL-S-271	56560	76.2	11	3	3
B4DNE0	Elongation factor 1-alpha 1	EEF1A1	42596	75.5	12	3	3
Q53HF2	Heat shock 70kDa protein 8	HSPA8	53499.6	73.98	9	3	3
P08238	Heat shock protein HSP 90-beta	HSP90AB1	83264	73.2	10	5	5
Q53HE2	Triosephosphate isomerase	TPI	26713	71.5	19	4	4
J3KPS3	Fructose-bisphosphate aldolase	ALDOA	39818	69.6	10	3	3
B3GQS7	Mitochondrial heat shock 60kD protein 1	HSPD1	60680	62.3	13	5	5

	variant 1						
B4DJI1	L-lactate dehydrogenase A	LDHA	33593	48.6	3	1	1
P13639	Elongation factor 2	EEF2	95338	46.0	6	3	3
F6KPG5	Albumin	ALB	66531	45.4	3	1	1
B4DUQ1	Heterogeneous nuclear ribonucleoprotein K	HNRNPK	48511	45.2	6	2	2
I3L3D5	Profilin	PFN1	17517	44.9	11	1	1
A0A1W6AYU6	Glucose-6-phosphate isomerase	GPI	63354	44.5	3	1	1
Q9NZ23	Drug-sensitive protein 1	YA61	14867	42.7	25	2	2
C9J9K3	40S ribosomal protein SA	RPSA	29405	42.3	12	2	2
A0A0A0MSI0	Peroxiredoxin-1	PRDX1	18976	41.5	24	3	3
L0R849	Alternative protein EDARADD OS	EDARADD	42342	41.2	6	1	1
P62807	Histone H2B type 1-C/E/F/G/I	HIST1H2BC	13906	40.9	12	1	1
Q04695	Keratin, type I cytoskeletal 17	KRT17	48106	40.2	3	1	1
P62861	40S ribosomal protein S30	FAU	6648	39.9	17	1	1
A8K486	Peptidyl-prolyl cis-trans isomerase	PPIases	18013	38.8	44	6	6
A0A024R608	Ribosomal protein, large, P1	RPLP1	11514	38.63	14	1	1
E9PHT9	Annexin	ANXA5	18224	38.60	10	1	1

Table SVIII. Label-free quantification of transfected and transformed cells.

Description	Gene	Fold changes				
		HaCaT control	HaCaT-HPV16	HaCaT-HPV18	CaSki	HeLa
Triosephosphate isomerase	TPI1	1.0	0.08	-	-	-
Heat-shock protein beta-1	HSPB1	1.0	1.62			
Peroxiredoxin 1	PRDX1	1.0	4.12	2.31		
Protein SET	SET	1.0	4.66			
Nucleoside diphosphate kinase	NME2	1.0	5.13	3.51	2.45	3.41
Neuroblast differentiation-associated protein AHNAK	AHNAK	1.0	5.52	3.2		
T-complex protein 1 subunit zeta	CCT6A	1.0	5.92			
Peptidyl-prolyl cis-trans isomerase A	PPIA	1.0	6.45	6.12	1.7	5.47
Epididymis secretory protein Li 48	HEL-S-48	1.0	7.50			
Serpin peptidase inhibitor	SERPINB5	1.0	8.16	11.75		
Heat shock 70kDa protein	HSPA8	1.0	8.60	8.76	1.06	0.82
Cofilin 1	CFL1	1.0	9.88	1.69	1.03	3.67

Heat shock 70 kDa protein 1	HSPA1A	1.0	11.00			
Annexin	ANXA2	1.0	11.76	3.82	0.6	1.15
Fructose-bisphosphate aldolase	ALDOA	1.0	12.28	12.29	1.0	4.07
Tubulin alpha chain	TUBA1A	1.0	13.44	9.99	2.41	3.13
Tubulin beta-4B chain	TUBB4B	1.0	14.18	10.25	1.03	6.53
Glutathione S-transferase P	GSTP1	1.0	14.96			
Protein S100	S100-P	1.0	15.54			
Phosphoglycerate kinase 1	PGK1	1.0	15.62		1.0	1.78
Tubulin beta chain	TUBB	1.0	17.30			
S100A10 protein	S100A10	1.0	17.86			
Annexin	ANXA1	1.0	18.31	4.99	0.39	1.39
Actinin	ACTN1	1.0	19.19	12.86	1.96	2.39
Glyceraldehyde-3-phosphate dehydrogenase	GAPDH	1.0	7.29	6.01	1.84	2.41
Alpha-enolase	ENO1	1.0	8.66	8.51	1.83	5.72
Polyubiquitin-B	UBB	1.0	26.34			
Pyruvate kinase	PKM2	1.0	31.53			
Eukaryotic initiation factor 4A-I	EIF4A1	1.0	38.43	57.6		

Myosin light polypeptide 6	MYL6	1.0	39.05	18.59	2.62	2.07
Profilin-1	PFN1	1.0	57.97	27.2		
Heat shock protein HSP 90-beta	HSP90AB1	1.0	64.00	36.5		
Elongation factor 2	EEF2	1.0	7.12	13.09	1.61	2.16
Epididymis luminal protein 4	DOPNI1	1.0	64.00			
Thioredoxin	TXN	1.0	64.00			
Myosin	MYH9	1.0	64.00			
Inorganic pyrophosphatase	PPA1	1.0	64.00			
60 kDa heat shock protein	HSPD1	1.0	30.59	2.86	4.27	4.05
Elongation factor 1-delta	EEF1D	1.0	14.29	13.01	4.81	2.78
Heterogeneous nuclear ribonucleoprotein A1	HNRNPA1	1.0	0.79	3.78	1.6	8.22
Pyruvate kinase	PKM	1.0		7.69	1.45	1.72
Keratin, type II cytoskeletal 7	KRT7				1.0	0.16
Glucose-6-phosphate isomerase	GPI		1.0	0.27	1.0	0.55
cDNA FLJ54141, highly similar to Ezrin	EZR				1.0	0.29

Heat-shock 70-kDa protein 5	HSP70-5		1.0	0.12		
Receptor protein-tyrosine kinase	ERBB2		1.0	0.13		
L-lactate dehydrogenase	LDHA		1.0	0.24		
14-3-3 protein	SFN		1.0	0.25		
Phosphoglycerate mutase 1	PGAM1		1.0	0.35		
Epididymis luminal secretory protein 52	EL52		1.0	0.46		
Protein S100-A2	S100A2		1.0	0.60		
Elongation factor 1-alpha	EEF1A1		1.0	0.63		
Histone H1.3	HIST1H1D		1.0	1.58		
Heterogeneous nuclear ribonucleoprotein K	HNRNPK		1.0	1.61		
High mobility group protein B1	HMGB1		1.0	1.81		
Ribosomal protein	RPLP2		1.0	2.36		
Heterogeneous nuclear ribonucleoprotein F	HNRNPF		1.0	2.59		
Nucleolin	NCL		1.0	3.38		
Heterogeneous nuclear ribonucleoprotein	HNRNPD		1.0	3.50		
Heterogeneous nuclear ribonucleoprotein U	HNRNPU		1.0	3.51		

HNRNPA2B1 protein	HNRNPA2B1		1.0	4.02		
Nucleolar RNA helicase 2	DDX21		1.0	13.23		