

Supplementary Material

A Pleiotropic Role of Long Non-Coding RNAs in the Modulation of Wnt/ β -Catenin and PI3K/Akt/mTOR Signaling Pathways in Esophageal Squamous Cell Carcinoma: Implication in Chemotherapeutic Drug Response

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Table S1. Association of ESCC related lncRNAs in various signalling pathways.

S No.	LncRNA	Full Form	Signalling pathways	References
1	<i>HOTAIR</i>	HOX Transcript Antisense RNA	Wnt signaling pathway	[67]
2	<i>LINC RNA-uc003opf.1 or (LINC00951)</i>	Long Intergenic Non-Protein Coding RNA 951	NA	[68]
3	<i>ANRIL or CDKN2B-AS1</i>	Cyclin Dependent Kinase Inhibitor 2B Antisense RNA 1	TGFβ1 signaling pathway	[34]
4	<i>FOXCUT</i>	Forkhead Box C1 Upstream Transcript	NA	[69]
5	<i>H19</i>	H19 Imprinted Maternally Expressed Transcript	IGF2 imprinting pathway	[70]
6	<i>LINC-POU3F3</i>	POU Class 3 Homeobox 3	NA	[71]
7	<i>LOC285194</i>	Also known as Tumor Suppressor Candidate 7 (<i>TUSC7</i>)	NA	[54]
8	<i>PLncRNA-1 or CBR3-AS1</i>	CBR3 Antisense RNA 1	NA	[72]
9	<i>SOX2OT</i>	SRY-Box Transcription Factor 2 Overlapping Transcript	NA	[73]
10	<i>SPRY4-IT1</i>	Sprouty RTK Signaling Antagonist 4 Intronic Transcript 1	NA	[74]
11	<i>UCA1</i>	Urothelial Cancer Associated 1	Wnt signaling pathway	[75]
12	<i>91H</i>	Long noncoding RNA 91H	NA	[76]
13	<i>BOKAS or BOK-AS1</i>	BOK antisense RNA 1	Wnt/β-catenin signaling pathway	[77]
14	<i>CCAT2</i>	Colon Cancer Associated Transcript 2	β-catenin/WISP1 signaling pathway	[78]
15	<i>LINC RNA-uc002yug.2 or LINC01426</i>	Long Intergenic Non-Protein Coding RNA 1426	NA	[79]
16	<i>Long noncoding RNA POLR2E</i>	RNA Polymerase II, I And III Subunit E	NA	[80]
17	<i>MALAT1</i>	Metastasis Associated Lung Adenocarcinoma Transcript 1	β-catenin, ATM-CHEK2 signaling pathway	[81]
18	<i>NEAT1</i>	Nuclear Paraspeckle Assembly Transcript 1	NA	[82]
19	<i>PCAT-1</i>	Prostate Cancer Associated Transcript 1	NA	[83]
20	<i>POU3F3</i>	POU Class 3 Homeobox 3	NA	[84]
21	<i>SOX2OT</i>	SRY-Box Transcription Factor 2 Overlapping Transcript	NA	[85]
22	<i>TUG1</i>	Taurine Up-Regulated 1	Wnt/β-catenin, Nrf2 signaling pathways	[86]
23	<i>ZEB1-AS1</i>	Zinc Finger E-Box Binding Homeobox 1 Antisense RNA 1	NA	[87]
24	<i>AFAP1-AS1</i>	Actin Filament Associated Protein 1 Antisense RNA 1	NA	[88]
25	<i>BANCR</i>	BRAF-Activated Non-Protein Coding RNA	IGF1R/Raf/MEK/ERK signaling pathway	[89]
26	<i>BC032469</i>		NA	[90]
27	<i>BC200 or BCYRN1</i>	Also known as Brain Cytoplasmic RNA 1	NA	[91]
28	<i>CASC9</i>	Cancer Susceptibility 9	NA	[92]
29	<i>HOTTIP</i>	HOXA Distal Transcript Antisense RNA	NA	[93]
30	<i>LINC-ROR</i>	Long Intergenic Non-Protein Coding RNA, Regulator Of Reprogramming	p53 signaling pathway	[94]
31	<i>LOC100130476 or WAKMAR2</i>	Wound and Keratinocyte Migration Associated LncRNA 2	NA	[95]

32	<i>MEG3</i>	Maternally expressed gene 3	p53 signaling pathway	[96]
33	<i>SOX2OT and SOX2</i>	SOX2 Overlapping Transcript and SRY-Box Transcription Factor 2	NA	[97]
34	<i>ATB</i>	Long Noncoding RNA Activated By TGF-Beta	NA	[98]
35	<i>CCAT1</i>	Colon Cancer Associated Transcript 1	NA	[99]
36	<i>ESCCAL-1 or CASC9</i>	Cancer Susceptibility 9	NA	[100]
37	<i>GHE1</i>	Gastric Carcinoma Proliferation Enhancing Transcript 1	NA	[101]
38	<i>HNF1A-AS1</i>	HNF1 Homeobox A Antisense RNA 1	NA	[102]
39	<i>HOTAIR</i>	HOX transcript antisense RNA	NA	[103]
40	<i>LINC00460</i>	Long Intergenic Non-Protein Coding RNA 460	NA	[104]
41	<i>LINC RNA-NR_024015 or TDRG1</i>	Also known as Testis Development Related 1	NA	[105]
42	<i>MEG3</i>	Maternally expressed gene 3	GSK-3 β /Snail/ Wnt/ β -catenin signaling pathway	[106]
43	<i>MIR31HG</i>	MIR31 Host Gene	NA	[107]
44	<i>NORAD</i>	Non-Coding RNA Activated By DNA Damage	NA	[108]
45	<i>Pseudogene PHBP1</i>	Prohibitin Pseudogene 1	NA	[109]
46	<i>PVT1</i>	Pvt1 Oncogene	NA	[110]
47	<i>RP11-766N7.4 or LINC02231</i>	Long Intergenic Non-Protein Coding RNA 2231	NA	[111]
48	<i>SNHG1</i>	Small Nucleolar RNA Host Gene 1	Notch signaling pathway	[27]
49	<i>SNHG16</i>	Small Nucleolar RNA Host Gene 16	Wnt/ β -catenin signaling pathway	[112]
50	<i>XIST</i>	X Inactive Specific Transcript	NA	[113]
51	<i>ZFAS1</i>	ZNF1 Antisense RNA 1	STAT3 signaling pathway	[114]
52	<i>AK001796 or MIR4435-2HG</i>	MIR4435-2 Host Gene	MDM2/ p53 signaling pathway	[115]
53	<i>DANCR</i>	Differentiation Antagonizing Non-Protein Coding RNA	NA	[116]
54	<i>DUXAP10</i>	Double Homeobox A Pseudogene 10	NA	[117]
55	<i>DUXAP8</i>	Double Homeobox A Pseudogene 8	NA	[118]
56	<i>ECM</i>	long non-coding RNA-extracellular matrix	NA	[119]
57	<i>EZR-AS1</i>	Ezrin Antisense RNA 1	NA	[120]
58	<i>FAM201A</i>	Family With Sequence Similarity 201 Member A	NA	[121]
59	<i>FER1L4</i>	Fer-1 Like Family Member 4 (Pseudogene)	NA	[122]
60	<i>FOX2-AS1</i>	Forkhead Box D2 Adjacent Opposite Strand RNA 1	Akt signaling pathway	[123]
61	<i>FTH1P3</i>	Ferritin Heavy Chain 1 Pseudogene 3	NF-kB signaling pathway	[26]
62	<i>GAS5</i>	Growth Arrest Specific 5	NA	[124]
63	<i>HOXA11-AS</i>	Homeobox A11 Antisense RNA	NA	[125]
64	<i>LET</i>	long noncoding RNA-LET	NA	[126]
65	<i>LINC00657 or NORAD</i>	Also known as Non-Coding RNA Activated By DNA Damage	NA	[127]

66	<i>LINC00675 or TMEM238L</i>	Also known as Transmembrane Protein 238	Wnt/ β -catenin signaling pathway	[13]
67	<i>LINC01133</i>	Long Intergenic Non-Protein Coding RNA 1133	NA	[128]
68	<i>LINC01296 or DUXAP9</i>	Double Homeobox A Pseudogene 9	NA	[129]
69	<i>LINC01503</i>	Long Intergenic Non-Protein Coding RNA 1503	NA	[130]
70	<i>LINC-UBC1 or UBE2K</i>	Also known as Ubiquitin Conjugating Enzyme E2 K	NA	[131]
71	<i>LncRNA CTC-276P9.1 or EPIST</i>	Esophagus Epithelial Intergenic Associated Transcript	NA	[132]
72	<i>LUCAT1</i>	Lung Cancer Associated Transcript 1	NA	[133]
73	<i>NKILA</i>	NF-KappaB Interacting LncRNA	NF- κ B signaling pathway	[25]
74	<i>NMR</i>	NSUN2 methylated lncRNA	ERK1/2 signaling pathway	[134]
75	<i>PART1</i>	Prostate Androgen-Regulated Transcript 1	NA	[63]
76	<i>SBF2-AS1</i>	SET Binding Factor 2 Antisense RNA 1	NA	[135]
77	<i>SNHG6</i>	Small nucleolar host gene 6	NA	[136]
78	<i>TTN-AS1</i>	Titin Antisense RNA 1	NA	[137]
79	<i>TUSC7</i>	Tumor Suppressor Candidate 7	NA	[55]
80	<i>UCA1 and MALAT1</i>	Urothelial Cancer Associated 1 and Metastasis Associated Lung Adenocarcinoma Transcript 1	NA	[138]
81	<i>CASC2</i>	Cancer Susceptibility 2	Akt signaling pathway	[139]
82	<i>DANCR and ZEB1</i>	Differentiation Antagonizing Non-Protein Coding RNA and Zinc Finger E-Box Binding Homeobox 1	NA	[140]
83	<i>DLX6-AS1</i>	Distal-Less Homeobox 6 Antisense RNA 1	NA	[141]
84	<i>DNM3OS</i>	DNM3 Opposite Strand/Antisense RNA	NA	[142]
85	<i>ErbB4-IR</i>	Erb-B2 Receptor Tyrosine Kinase 4 - IR	NA	[143]
86	<i>FEZF1-AS1</i>	FEZ Family Zinc Finger 1 Antisense RNA 1	JAK2/STAT3 signaling pathway, Wnt/ β -catenin signaling pathway	[38]
87	<i>FMR1-AS1</i>	FMRP Translational Regulator 1 Antisense RNA 1	NF κ B/c-Myc signaling pathway	[144]
88	<i>HAND2-AS1</i>	Heart And Neural Crest Derivatives Expressed 2 Antisense RNA 1	NA	[145]
89	<i>HERES</i>		Wnt signaling pathways	[9]
90	<i>IRF1-AS</i>	Interferon Regulatory Factor 1	NA	[146]
91	<i>LBX2-AS1</i>	Ladybird Homeobox 2 Antisense RNA 1	NA	[147]
92	<i>LEF1-AS1</i>	Lymphoid Enhancer Binding Factor 1 Antisense RNA 1	NA	[148]
93	<i>LINC00152 or CYTOR</i>	Cytoskeleton Regulator RNA	NA	[149]
94	<i>LINC00473</i>	Long Intergenic Non-Protein Coding RNA 473	NA	[150]
95	<i>LINC01419</i>	Long Intergenic Non-Protein Coding RNA 1419	NA	[60]

96	<i>LINC01518</i>	Long Intergenic Non-Protein Coding RNA 1518	PIK3CA/Akt signaling pathway	[151]
97	<i>LINC01980</i>	Long Intergenic Non-Protein Coding RNA 1980	MYO5A signaling pathway	[152]
98	<i>LINC RNA-p21 or TP53COR1</i>	Also known as Tumor Protein P53 signaling Corepressor 1	p53 signaling pathway	[33]
99	<i>Lnc-ATB</i>	Long Noncoding RNA Activated By TGF-Beta	NA	[153]
100	<i>LncRNAXLOC_001659</i>	Long Noncoding RNA XLOC_001659	NA	[154]
101	<i>LSINCT5</i>	Long Stress-Induced Non-Coding Transcript 5	NA	[155]
102	<i>MNX1-AS1</i>	Motor Neuron And Pancreas Homeobox 1 Antisense RNA 1	NA	[156]
103	<i>NR2F1-AS1</i>	Nuclear Receptor Subfamily 2 Group F Member 1 Antisense RNA 1	Hedgehog signaling pathway	[32]
104	<i>PANDA or PANDAR</i>	Also known as Promoter Of CDKN1A Antisense DNA Damage Activated RNA	NA	[157]
105	<i>PCAT1</i>	Prostate Cancer Associated Transcript 1	NA	[158]
106	<i>PGM5-AS1</i>	Phosphoglucomutase 5 Antisense RNA 1	NA	[159]
107	<i>SEMA3B-AS1</i>	Semaphorin 3B Antisense RNA 1	NA	[160]
108	<i>SNHG20</i>	Small Nucleolar RNA Host Gene 20	ATM-JAK-PD-L1 signaling pathway	[161]
109	<i>SNHG6</i>	Small Nucleolar RNA Host Gene 6	NA	[162]
110	<i>SNHG8</i>	Small Nucleolar RNA Host Gene 8	NA	[163]
111	<i>SPINT1-AS1</i>	Serine Peptidase Inhibitor, Kunitz Type 1 Antisense RNA 1	NA	[164]
112	<i>TP73-AS1</i>	Tumor Protein P73 Antisense RNA 1	NA	[165]
113	<i>ZNF667-AS1</i>	Zinc Finger Protein 667 Antisense RNA 1	NA	[166]
114	<i>AGPG or ACTG1P25</i>	Actin Gamma 1 Pseudogene 25	NA	[167]
115	<i>CASC8</i>	Cancer Susceptibility 8	NA	[168]
116	<i>EGFR-AS1</i>	Epidermal Growth Factor Receptor Antisense RNA 1	NA	[169]
117	<i>FAM225A</i>	Family With Sequence Similarity 225 Member A	NA	[170]
118	<i>FAM83H-AS1 or IQANK1</i>	IQ Motif And Ankyrin Repeat Containing 1	NA	[171]
119	<i>FGD5-AS1</i>	FYVE, RhoGEF And PH Domain Containing 5 Antisense RNA 1	NA	[172]
120	<i>FOXP4-AS1</i>	Forkhead Box P4 Antisense RNA 1	NA	[173]
121	<i>HCG22</i>	HLA Complex Group 22	NA	[174]
122	<i>HEIH</i>	Hepatocellular Carcinoma Up-Regulated EZH2-Associated Long Non-Coding RNA	NA	[175]
123	<i>IUR</i>	Imatinib-up-regulated lncRNA	NA	[176]
124	<i>KLF3-AS1</i>	KLF3 Antisense RNA 1	NA	[177]

125	<i>LINC00278</i>	Long Intergenic Non-Protein Coding RNA 278	AR Signaling pathway	[178]
126	<i>LINC00337</i>	Long Intergenic Non-Protein Coding RNA 337	NA	[51]
127	<i>LINC00662</i>	Long Intergenic Non-Protein Coding RNA 662	NA	[179]
128	<i>LINC00673</i>	Long Intergenic Non-Protein Coding RNA 673	NA	[180]
129	<i>LINC00963</i>	Long Intergenic Non-Protein Coding RNA 963	NA	[181]
130	<i>LINC01014</i>	Long Intergenic Non-Protein Coding RNA 1014	EGFR-PI3K-AKT-mTOR signaling pathway	[18]
131	<i>LINC01232</i>	Long Intergenic Non-Protein Coding RNA 1232	NA	[182]
132	<i>LINC01433</i>	Long Intergenic Non-Protein Coding RNA 1433	NA	[183]
133	<i>LINC01535</i>	Long Intergenic Non-Protein Coding RNA 1535	JAK/STAT3 signaling pathway	[21]
134	<i>LINC02042</i>	Long Intergenic Non-Protein Coding RNA 2042	c-Myc signaling pathway	[184]
135	<i>LINP1</i>	LncRNA In Non-Homologous End Joining Pathway 1	NA	[185]
136	<i>Lnc-ABCA12-3</i>	ATP Binding Cassette Subfamily A Member 12-3	NA	[186]
137	<i>Lnc-MCEI</i>	Also known as Ribosomal Protein S10 Pseudogene 7 (<i>RPS10P7</i>)	NA	[187]
138	<i>Lnc TUG1</i>	Taurine Up-Regulated 1	Wnt/ β -catenin signaling pathway	[188]
139	<i>LOC100133669</i>	Also known as LY6E Divergent Transcript (<i>LY6E-DT</i>)	NA	[189]
140	<i>LOC440173</i>		NA	[190]
141	<i>LOC441178</i>		NA	[191]
142	<i>MACC1-AS1 and FOXD2-AS1</i>	MACC1 Antisense RNA 1 and Forkhead Box D2 Adjacent Opposite Strand RNA 1	NA	[61]
143	<i>MAFG-AS1 or MAFG-DT</i>	MAF BZIP Transcription Factor G Divergent Transcript	NA	[192]
144	<i>MIAT</i>	Myocardial Infarction Associated Transcript	NA	[193]
145	<i>MIR205HG</i>	MicroRNA 205 Host Gene	NA	[194]
146	<i>NLIPMT</i>	Novel lncRNA inhibiting proliferation and metastasis	NA	[195]
147	<i>PSMA3-AS1</i>	Proteasome 20S Subunit Alpha 3 Antisense RNA 1	NA	[196]
148	<i>PTCSC1</i>	Papillary Thyroid Carcinoma Susceptibility Candidate 1	Akt signaling pathway	[20]
149	<i>SNHG22</i>	Small nucleolar RNA host gene 22	NA	[197]
150	<i>SNHG12</i>	Small nucleolar RNA host gene 12	NA	[198]
151	<i>TTY15</i>	Testis-Specific Transcript, Y-Linked 15	JAK2 signaling pathway	[199]
152	<i>TUSC7</i>	Tumor Suppressor Candidate 7	NA	[200]
153	<i>uc061hsf.1</i>		p53 signaling pathway	[201]
154	<i>UPK1A-AS1</i>	Uroplakin 1A Antisense RNA 1	NA	[202]

155	WDFY3-AS2	WD Repeat And FYVE Domain Containing 3 Antisense RNA 2	NA	[203]
156	ZEB2-AS1	Zinc Finger E-Box Binding Homeobox 2 Antisense RNA 1	NA	[204]
157	ZFPM2-AS1	Zinc Finger Protein, FOG Family Member 2 Antisense RNA 1	NA	[205]
158	BAALC-AS1	Brain And Acute Leukemia Cytoplasmic Antisense RNA 1	NA	[206]
159	BCAR4	Breast Cancer Anti-Estrogen Resistance 4	p53/p21 signaling pathway	[207]
160	CASC15	Cancer Susceptibility 15	NA	[208]
161	DGCR5	DiGeorge Syndrome Critical Region Gene 5	NA	[209]
162	DIO3OS	Iodothyronine Deiodinase 3 Opposite Strand Upstream RNA	NA	[210]
163	FAM83A-AS1	Family With Sequence Similarity 83 Member A Antisense RNA 1	NA	[211]
164	GAPLINC	Gastric Adenocarcinoma Associated, Positive CD44 Regulator, Long Intergenic Non-Coding RNA	NA	[212]
165	GASL1 or GASAL1	Growth Arrest Associated LncRNA 1	Wnt3a/ β -catenin signaling pathway	[16]
166	HCP5	HLA Complex P5	PI3K/AKT/mTOR signaling pathway	[19]
167	KCNQ1 overlapping transcript 1	Potassium Voltage-Gated Channel Subfamily Q Member 1 overlapping transcript 1	NA	[213]
168	LINC00239	Long Intergenic Non-Protein Coding RNA 239	NA	[214]
169	LINC00261	Long Intergenic Non-Protein Coding RNA 261	NA	[215]
170	LINC00467	Long Intergenic Non-Protein Coding RNA 467	NA	[216]
171	LINC00491	Long Intergenic Non-Protein Coding RNA 491	NA	[217]
172	LINC00551	Long Intergenic Non-Protein Coding RNA 551	NA	[218]
173	LINC00941	Long Intergenic Non-Protein Coding RNA 941	NA	[219]
174	LINC00958	Long Intergenic Non-Protein Coding RNA 958	NA	[220]
175	LINC01305	Long Intergenic Non-Protein Coding RNA 1305	NA	[221]
176	LINCIN		NA	[222]
177	LINC-PINT	Long Intergenic Non-Protein Coding RNA, P53 Induced Transcript	NA	[223]
178	LOC101928477	Uncharacterized LOC101928477	NA	[224]
179	LOC146880 or ARHGAP27P1	Rho GTPase Activating Protein 27 Pseudogene 1	MAPK signaling pathway	[23]
180	NEAT1	Long Noncoding RNA Nuclear Paraspeckle Assembly Transcript 1	MDM2 signaling pathway	[225]
181	SNHG7	Long non-coding RNA small nucleolar RNA host gene 7	NA	[226]

182	<i>LOXL1-AS1</i>	Lysyl Oxidase Like 1 Antisense RNA 1	NA	[227]
183	<i>MTX2-6</i>	Metaxin 2-6	NA	[228]
184	<i>MY or VPS9D1-AS1</i>	VPS9 Domain Containing 1 Antisense RNA 1	NA	[229]
185	<i>SNHG5</i>	Small Nucleolar RNA Host Gene 5	NA	[230]
186	<i>SOX4</i>	SRY-Box Transcription Factor 4	NA	[231]
187	<i>THAP9-AS1</i>	THAP Domain Containing 9 Antisense RNA 1	NA	[232]
188	<i>TMEM161B-AS1</i>	Transmembrane Protein 161B Divergent Transcript	NA	[233]
189	<i>VESTAR</i>	Vascular Endothelial Growth Factor C mRNA stability-associated long noncoding RNA	NA	[234]
190	<i>LINC00324</i>	Long Intergenic Non-Protein Coding RNA 324	MAPK signaling pathway	[24]