

Comprehensive analysis of long non-coding RNA-mRNA co-expression patterns in thyroid cancer

Yaying Du, Wenfei Xia, Jinjun Zhang, Dongyi Wan, Zhifang Yang\* and Xingrui Li\*

**Supplementary Table 1:** 240 unannotated lncRNAs

test_id	lncRNA_name	chr	length	log2FC	style	p_value
XLOC_023611	RP11-353N14.2	chr17	14655	-4.57161	up	5.00E-05
XLOC_014586	LINC00284	chr13	124359	-3.89777	up	5.00E-05
XLOC_024502	CTD-2020K17.1	chr17	31292	-3.2117	up	5.00E-05
XLOC_034456	FER1L4	chr20	49922	-3.19175	up	5.00E-05
XLOC_002885	ESPNP	chr1	39000	-2.90551	up	5.00E-05
XLOC_049543	AC004540.5	chr7	103385	-2.87451	up	5.00E-05
XLOC_039844	LINC00887	chr3	49743	-2.87258	up	5.00E-05
XLOC_013785	RP11-1016B18.1	chr12	361377	-2.63519	up	5.00E-05
XLOC_015138	LINC00457	chr13	207318	N/A	up	5.00E-05
XLOC_050989	AC007255.8	chr7	49446	-5.99376	up	0.0001
XLOC_013298	RP11-469H8.6	chr12	11801	-3.12483	up	0.0001
XLOC_021558	AC002331.1	chr16	59147	-2.72717	up	0.0001
XLOC_039586	IL12A-AS1	chr3	314411	-4.14308	up	0.0002
XLOC_027450	SIGLEC17P	chr19	6359	-3.38566	up	0.0002
XLOC_029726	ANKRD36BP2	chr2	40803	-2.60998	up	0.0002
XLOC_029324	CYP1B1-AS1	chr2	106207	-2.04381	up	0.0002
XLOC_020365	ABCC6P1	chr16	27340	-3.02179	up	0.00025
XLOC_042397	RP11-362F19.1	chr4	30886	2.46926	down	0.00025
XLOC_019933	RP11-66B24.4	chr15	26896	-3.25838	up	0.0003
XLOC_050657	LINC00996	chr7	16877	-3.58194	up	0.00035
XLOC_046405	HCG22	chr6	10735	-3.48789	up	0.00035
XLOC_003886	RP4-663N10.2	chr1	53993	-5.21654	up	0.0004
XLOC_032769	LINC00607	chr2	232739	-2.53671	up	0.0004
XLOC_060271	AC010970.2	chrY	599	N/A	up	0.0004
XLOC_035157	ITGB2-AS1	chr21	8717	-3.19737	up	0.00045
XLOC_013180	RP11-476D10.1	chr12	23660	-8.24353	up	0.0005
XLOC_040810	RP11-115D19.1	chr4	175148	-4.4288	up	0.0006
XLOC_036167	CTA-126B4.7	chr22	13076	-2.73381	up	0.00065
XLOC_013554	RP11-230G5.2	chr12	176006	-5.41361	up	0.0008
XLOC_013219	PLEKHA8P1	chr12	43233	-2.03435	up	0.0008
XLOC_058486	LINC00086	chrX	6553	-1.86655	up	0.0008
XLOC_011934	RP11-923I11.5	chr12	8598	-3.7956	up	0.0009
XLOC_032490	HOXD-AS1	chr2	15943	-3.30042	up	0.0009
XLOC_030193	AC068492.1	chr2	622	N/A	up	0.0009
XLOC_048200	RP3-525N10.2	chr6	5407	-2.46565	up	0.00095
XLOC_054459	RP11-44N11.2	chr8	3649	-5.69683	up	0.001

XLOC_048890	RP11-417E7.2	chr6	12886	-2.83455	up	0.00115
XLOC_002684	RP11-547D24.1	chr1	6025	-3.31609	up	0.00125
XLOC_001687	RP11-85G21.3	chr1	14928	-6.72142	up	0.0013
XLOC_011791	AC079630.2	chr12	39193	-7.58859	up	0.00135
XLOC_018615	RP11-279F6.3	chr15	112072	-3.36137	up	0.0014
XLOC_018253	RP11-1008C21.1	chr15	77575	-3.6009	up	0.00145
XLOC_024846	LINC00511	chr17	317348	-2.56346	up	0.00145
XLOC_024617	RP11-893F2.9	chr17	6369	-5.15897	up	0.00165
XLOC_056035	RP11-125B21.2	chr9	219870	1.78303	down	0.00165
XLOC_023040	RP5-1028K7.2	chr17	10061	-3.69634	up	0.0017
XLOC_009440	RP11-136I14.5	chr11	30395	N/A	up	0.0019
XLOC_037179	RP11-761N21.1	chr3	114366	-5.6164	up	0.0019
XLOC_002237	MIR205HG	chr1	4019	-2.27901	up	0.00195
XLOC_024301	YWHAEP7	chr17	64626	-2.08105	up	0.0021
XLOC_046196	CASC15	chr6	549732	-1.56346	up	0.00225
XLOC_017616	AL132709.1	chr14	5073	N/A	up	0.0023
XLOC_012735	RP11-638F5.1	chr12	53191	2.77192	down	0.0024
XLOC_000853	RP1-158P9.1	chr1	35590	-5.30022	up	0.00245
XLOC_039711	RP11-385J1.2	chr3	333901	-3.41036	up	0.00245
XLOC_011432	RP5-1063M23.2	chr12	25516	-2.05114	up	0.00245
XLOC_015112	LINC00426	chr13	37026	-1.32445	up	0.00255
XLOC_012151	RP11-221N13.3	chr12	16521	-4.01995	up	0.00265
XLOC_037409	ADAMTS9-AS1	chr3	26865	-2.04318	up	0.00265
XLOC_002671	RP4-758J18.10	chr1	7348	-3.05168	up	0.00285
XLOC_047710	GUSBP2	chr6	85422	-2.25003	up	0.0029
XLOC_001312	TCEB1P20	chr1	58053	-7.28756	up	0.00335
XLOC_042677	RP11-290F5.1	chr4	17486	-2.10513	up	0.00335
XLOC_013556	RPSAP52	chr12	70838	-5.03336	up	0.0034
XLOC_027886	EMR4P	chr19	45399	-2.983	up	0.00365
XLOC_049477	AC098592.8	chr7	105077	-1.92375	up	0.0038
XLOC_014143	LRCOL1	chr12	7470	-1.81897	up	0.00385
XLOC_019715	RP11-2E17.1	chr15	59532	-5.11721	up	0.0039
XLOC_009246	GAPDHP70	chr11	90642	-2.24547	up	0.00395
XLOC_010991	LINC00900	chr11	7353	-1.74728	up	0.00425
XLOC_030838	AC010980.2	chr2	37345	1.93256	down	0.00425
XLOC_057912	SSX8	chrX	21021	-4.89222	up	0.0044
XLOC_006819	SFTA1P	chr10	10724	-1.99394	up	0.00485
XLOC_000032	RP11-465B22.3	chr1	10445	-1.82217	up	0.005
XLOC_030323	AC008063.2	chr2	4036	-5.4783	up	0.00515
XLOC_039346	RP11-402L6.1	chr3	13340	-7.50461	up	0.0052
XLOC_001553	AL450992.2	chr1	14818	-2.19763	up	0.0053
XLOC_043151	LINC01021	chr5	24278	-1.74739	up	0.0053
XLOC_007536	ENTPD1-AS1	chr10	337033	-2.30999	up	0.0055
XLOC_038014	RP11-64D22.2	chr3	20915	2.38247	down	0.0055
XLOC_008628	LRP4-AS1	chr11	27985	-5.60336	up	0.00555

XLOC_050067	RP11-115N4.1	chr7	204042	-2.36592	up	0.00555
XLOC_033761	BPIFB9P	chr20	11241	-4.68018	up	0.00575
XLOC_020211	RP11-473M20.5	chr16	6662	-2.15071	up	0.00585
XLOC_041858	RP11-707A18.1	chr4	110218	2.45566	down	0.0059
XLOC_002649	RP11-54O7.3	chr1	8899	-2.62043	up	0.0063
XLOC_027974	ILF3-AS1	chr19	2154	1.10976	down	0.0063
XLOC_043565	CTD-2269F5.1	chr5	106339	-3.221	up	0.0066
XLOC_048544	RP11-624M8.1	chr6	173914	-3.04916	up	0.0067
XLOC_054556	RP11-238K6.1	chr8	274127	2.54785	down	0.00675
XLOC_044702	RP11-53O19.1	chr5	66558	1.19478	down	0.0071
XLOC_006489	CYP17A1-AS1	chr10	3666	2.03788	down	0.0076
XLOC_048061	RP1-244F24.1	chr6	4577	-5.81609	up	0.00775
XLOC_037629	RP11-861A13.4	chr3	13834	-2.93591	up	0.0082
XLOC_016732	MEG9	chr14	4036	-4.46766	up	0.0083
XLOC_046467	HLA-DPB2	chr6	22215	-4.09349	up	0.00835
XLOC_019163	TMCO5B	chr15	12070	2.82269	down	0.00855
XLOC_024481	AC003102.3	chr17	24095	-2.02251	up	0.009
XLOC_016397	RAP1AP	chr14	451	-3.12655	up	0.00905
XLOC_034580	RP11-465L10.10	chr20	8572	-3.84642	up	0.0094
XLOC_013586	RP11-81H14.2	chr12	118975	-1.61673	up	0.0095
XLOC_039843	RP11-513G11.2	chr3	25749	-3.68028	up	0.00965
XLOC_043855	AC063976.7	chr5	4032	-3.02906	up	0.00985
XLOC_001816	RP11-541H12.1	chr1	11036	-7.52789	up	0.00995
XLOC_016908	AE000662.93	chr14	752	N/A	up	0.01035
XLOC_036809	CTA-384D8.35	chr22	12028	-3.58253	up	0.01165
XLOC_029912	AC104655.3	chr2	5008	-2.72488	up	0.01305
XLOC_003152	RP4-728D4.2	chr1	10785	-2.6006	up	0.0131
XLOC_040729	LINC01094	chr4	39605	-1.59779	up	0.0133
XLOC_049334	AC093627.11	chr7	9139	-1.9898	up	0.01345
XLOC_040734	LINC01088	chr4	337249	1.4839	down	0.01365
XLOC_018961	RP11-168G16.2	chr15	67792	-3.70475	up	0.01375
XLOC_036351	PI4KAP1	chr22	46285	-1.53053	up	0.01395
XLOC_058268	RP6-24A23.3	chrX	3649	1.80885	down	0.01405
XLOC_022180	RP11-118F19.1	chr16	5363	2.37865	down	0.0141
XLOC_057780	RP11-245M24.1	chrX	124815	-5.61113	up	0.01425
XLOC_037574	LINC00973	chr3	17773	-2.334	up	0.0143
XLOC_016612	RP11-638I2.8	chr14	20272	-2.75109	up	0.0144
XLOC_013705	MKRN9P	chr12	5601	-6.10441	up	0.0146
XLOC_024774	RP11-214C8.2	chr17	7305	-1.78439	up	0.0147
XLOC_045479	CTC-255N20.1	chr5	61856	-2.28198	up	0.01475
XLOC_056716	VN1R51P	chr9	47163	2.33709	down	0.01485
XLOC_021628	RP11-455F5.5	chr16	1453	-2.13223	up	0.0151
XLOC_046511	RP3-340B19.3	chr6	59946	1.88682	down	0.0158
XLOC_000259	U1	chr1	3148	-2.96941	up	0.0159
XLOC_025219	RP11-838N2.4	chr18	13110	-2.37344	up	0.01605

XLOC_014845	LINC00359	chr13	13534	-2.6889	up	0.01645
XLOC_032066	DPP10-AS1	chr2	33080	-3.54464	up	0.0165
XLOC_003974	RP11-782C8.1	chr1	29044	-2.8053	up	0.01675
XLOC_035452	AP001422.3	chr21	14528	-1.79338	up	0.01675
XLOC_012480	RP11-689B22.2	chr12	14244	-4.94	up	0.017
XLOC_008493	RP5-1024C24.1	chr11	51962	3.05043	down	0.0173
XLOC_003381	RP4-631H13.4	chr1	2642	3.90766	down	0.0173
XLOC_058590	RP11-49C9.2	chrX	4608	-1.94333	up	0.01735
XLOC_032146	RAB6C-AS1	chr2	13875	-5.24285	up	0.0186
XLOC_027467	CTD-3073N11.9	chr19	9677	N/A	up	0.0186
XLOC_003329	FOXD2-AS1	chr1	6419	-2.46833	up	0.01865
XLOC_020948	VAC14-AS1	chr16	18154	-3.22305	up	0.01875
XLOC_047237	RP3-332B22.1	chr6	120881	1.83817	down	0.0188
XLOC_053416	AF186192.5	chr8	10445	1.21189	down	0.019
XLOC_022433	RP11-459C13.1	chr17	10864	3.38714	down	0.0193
XLOC_030445	AC009336.24	chr2	1292	-3.9358	up	0.0199
XLOC_003897	RP5-1086K13.1	chr1	18379	-2.0083	up	0.0204
XLOC_002760	RP11-185B14.1	chr1	24374	2.42918	down	0.0205
XLOC_029899	RP11-76I14.1	chr2	227454	-1.82384	up	0.02065
XLOC_000252	MST1P2	chr1	5281	-1.60187	up	0.0208
XLOC_007083	RP11-20J15.3	chr10	7670	-3.3418	up	0.02135
XLOC_037067	RP11-222K16.2	chr3	2293	-2.48006	up	0.0216
XLOC_021601	CTB-134H23.3	chr16	54733	-2.46614	up	0.0217
XLOC_004272	RP11-85G21.2	chr1	28962	-2.36794	up	0.0217
XLOC_018974	DNM1P47	chr15	52424	1.6997	down	0.02205
XLOC_024943	RP11-285E9.6	chr17	25065	-2.42637	up	0.02245
XLOC_025768	LINC00470	chr18	153962	2.51885	down	0.0225
XLOC_019813	RP11-97O12.2	chr15	19739	1.3561	down	0.02275
XLOC_029917	AC012360.6	chr2	15802	2.86472	down	0.0228
XLOC_032792	CXCR2P1	chr2	7053	-2.83804	up	0.02345
XLOC_052710	RP11-726G23.11	chr8	3541	N/A	up	0.0236
XLOC_006257	MBL1P	chr10	45439	-1.43207	up	0.0237
XLOC_036719	Z83851.1	chr22	4837	-1.25113	up	0.02405
XLOC_056342	VN1R48P	chr9	8935	2.19661	down	0.0242
XLOC_042599	RP11-10K16.1	chr4	38091	-1.77298	up	0.0246
XLOC_011844	RP5-1057I20.2	chr12	13258	-1.93522	up	0.02485
XLOC_053218	HAS2-AS1	chr8	8009	-1.70322	up	0.02495
XLOC_039118	LINC00882	chr3	489834	1.50821	down	0.02495
XLOC_009612	RP11-480C22.1	chr11	65972	N/A	up	0.0252
XLOC_033954	RP11-290F20.3	chr20	14064	-1.55573	up	0.02555
XLOC_022217	RP11-863P13.3	chr16	9599	-1.74321	up	0.0258
XLOC_025441	LRRC37A7P	chr18	6735	-2.33239	up	0.0259
XLOC_023959	KRT16P2	chr17	2933	-4.34843	up	0.02625
XLOC_009021	CTD-2655K5.1	chr11	8466	2.20008	down	0.0269
XLOC_007302	UNC5B-AS1	chr10	1005	-4.73369	up	0.02715

XLOC_015116	TEX26-AS1	chr13	51914	-2.20007	up	0.02735
XLOC_000105	RP11-242F24.1	chr1	5376	2.48383	down	0.02865
XLOC_029932	AC096669.3	chr2	27824	1.41885	down	0.0287
XLOC_011737	LINC00941	chr12	8142	-1.95788	up	0.0288
XLOC_026062	LINC00669	chr18	593402	-2.8057	up	0.02895
XLOC_021011	RP11-77K12.4	chr16	22425	-2.72474	up	0.029
XLOC_013181	AC079630.4	chr12	54389	-3.80851	up	0.02915
XLOC_029175	LINC00954	chr2	27355	-1.54278	up	0.03075
XLOC_046684	TRAM2-AS1	chr6	7332	1.10842	down	0.03075
XLOC_000583	RP5-884C9.2	chr1	72597	-2.07865	up	0.03155
XLOC_023471	AC003051.1	chr17	338184	-2.64956	up	0.03185
XLOC_057082	DBH-AS1	chr9	3189	-2.08853	up	0.03215
XLOC_006730	AGGF1P2	chr10	14716	-1.78339	up	0.03235
XLOC_046129	RP3-413H6.2	chr6	50287	-1.70673	up	0.03235
XLOC_031652	DGUOK-AS1	chr2	34841	-1.68476	up	0.03235
XLOC_036385	FAM230C	chr22	24053	-5.99997	up	0.0324
XLOC_022491	ALOX12P2	chr17	102882	-1.11536	up	0.03245
XLOC_028716	NAPSB	chr19	10973	-1.92336	up	0.03265
XLOC_057072	LCN1P1	chr9	8353	1.20234	down	0.03265
XLOC_046280	RP11-209A2.1	chr6	41848	-1.88258	up	0.0329
XLOC_031141	MYCNOS	chr2	21213	1.90168	down	0.03295
XLOC_046348	OR2I1P	chr6	3053	-4.84693	up	0.0337
XLOC_021603	RP11-426C22.4	chr16	3684	-2.0403	up	0.03375
XLOC_021969	RP11-297D21.2	chr16	7712	2.03151	down	0.03375
XLOC_000851	RP11-90C4.1	chr1	221096	-1.69823	up	0.0339
XLOC_030754	AC093850.2	chr2	3225	-3.85277	up	0.0341
XLOC_051664	SLC26A4-AS1	chr7	8738	1.02434	down	0.03415
XLOC_005038	RP11-443B7.1	chr1	12767	-1.61485	up	0.0347
XLOC_025506	CTD-2130O13.1	chr18	332178	-9.35154	up	0.03515
XLOC_021869	RP11-212I21.2	chr16	37728	-2.10109	up	0.0354
XLOC_001490	FCGR1C	chr1	9072	-1.89673	up	0.03555
XLOC_056548	RP11-151D14.1	chr9	15700	1.68236	down	0.0362
XLOC_060343	RP11-424G14.1	chrY	2666	2.23223	down	0.03635
XLOC_046415	XXbac-BPG248L24.12	chr6	991	-3.33194	up	0.0364
XLOC_025573	CTD-2008L17.2	chr18	1927	2.78548	down	0.0366
XLOC_055017	IFNWP19	chr9	12423	-2.78212	up	0.03665
XLOC_056744	NAMA	chr9	21904	1.3022	down	0.03705
XLOC_043546	SHFM1P1	chr5	48391	-2.9186	up	0.03715
XLOC_007245	RP11-174J11.1	chr10	8088	-2.12605	up	0.0372
XLOC_026594	CTD-3193O13.11	chr19	736	-3.60701	up	0.03735
XLOC_013573	NTAN1P3	chr12	18066	-3.101	up	0.0375
XLOC_059231	XIST	chrX	32103	-2.22673	up	0.03765
XLOC_052428	RP11-369K16.1	chr8	3814	2.19977	down	0.03765
XLOC_035756	KB-1592A4.13	chr22	27985	-2.89875	up	0.03845
XLOC_018852	LINC00925	chr15	37108	1.32831	down	0.03875

XLOC_001283	RP3-522D1.1	chr1	27844	-3.85001	up	0.0397
XLOC_036170	RNU12	chr22	1531	3.24202	down	0.0418
XLOC_019142	RP11-16E12.2	chr15	9583	-1.29701	up	0.0419
XLOC_024597	RP5-1029K10.2	chr17	68408	-2.43055	up	0.04235
XLOC_006573	RP11-106M7.1	chr10	15116	2.20876	down	0.04265
XLOC_032169	AC133785.1	chr2	6017	1.84086	down	0.04315
XLOC_050056	AC002383.2	chr7	53102	2.53381	down	0.0436
XLOC_023631	RP11-149I9.2	chr17	8351	-2.11635	up	0.04485
XLOC_031338	AC016995.3	chr2	110953	1.16534	down	0.04585
XLOC_052604	RP11-566H8.3	chr8	113345	2.81078	down	0.0461
XLOC_011812	RP11-118A3.1	chr12	188409	-10.1038	up	0.0462
XLOC_026920	CTD-2332E11.2	chr19	6663	1.64473	down	0.04635
XLOC_058946	KRT8P14	chrX	202654	-9.93261	up	0.04645
XLOC_018745	RP11-16K12.1	chr15	7038	-4.32449	up	0.04745
XLOC_034947	MIR155HG	chr21	14595	-2.7093	up	0.04745
XLOC_029663	DUXAP1	chr2	1258	2.10032	down	0.0479
XLOC_058181	LL0XNC01-131B10.2	chrX	778	-2.73377	up	0.0481
XLOC_013876	RP11-554D14.2	chr12	22420	-2.38552	up	0.04885
XLOC_008491	RP4-710M3.1	chr11	12979	2.24876	down	0.0489
XLOC_012692	RP4-765H13.1	chr12	212692	-6.02887	up	0.0492
XLOC_018600	HMG2N2P40	chr15	22231	2.11509	down	0.04925
XLOC_037072	LINC00693	chr3	184033	1.30806	down	0.0497
XLOC_024468	RP11-527L4.5	chr17	8569	-1.74969	up	0.0498
XLOC_007311	RP11-442H21.2	chr10	1066	-1.36532	up	0.04995

Notes: For some lncRNAs that were not detected in group 2, so a ratio could not be calculated.