

Supplementary information

Silencing of LINC00221 Suppresses Glioblastoma Cell Migration and Invasion through miR-34c-5p/Snai1 and Regulation of Actin and Cytoskeletal Dynamics Proteins

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Supplementary S1

Table S1: 373 Upregulated lncRNAs identified from microarray of LN18 cells vs NHA cells

ProbeName	GeneName	FoldChange	q-value
A_32_P162192	LINC00221	127.403886	3.18E-20
A_32_P203066	ENST00000446495	108.40151	3.37E-20
A_33_P3531373	LOC340340	66.2813327	7.03E-20
A_19_P00322291	FENDRR	60.2909207	3.43E-20
A_23_P6252	DSCR8	57.9115831	3.46E-20
A_23_P337689	lnc-EIF3M-2	55.0339001	1.46E-19
A_23_P360542	LINC00470	42.6877144	7.38E-19
A_33_P3392560	LINC00871	41.449436	9.65E-19
A_33_P3398727	LINC01296	30.4752986	2.92E-17
A_32_P88231	ERICH2	29.4289848	4.68E-17
A_19_P00322440	FENDRR	28.5533671	1.26E-19
A_33_P3421611	lnc-PLEKHH2-1	27.6845515	3.66E-19
A_33_P3668839	LOC644656	26.4334026	1.33E-19
A_19_P00317034	ENST00000515286	26.2902134	2.68E-16
A_33_P3217490	FAM230B	25.9262706	1.40E-19
A_24_P339858	TSPEAR-AS2	25.7763385	5.22E-18
A_19_P00320927	LINC00942	24.6067631	1.02E-19
A_23_P250516	LOC101928710	24.6016828	2.15E-19
A_33_P3329339	THRB-AS1	24.5795791	9.04E-16
A_33_P3277890	ENST00000527434	24.2502414	1.13E-15
A_19_P00322663	ENST00000514452	23.6591549	1.65E-17
A_32_P72181	LINC00669	22.1512423	6.48E-15
A_19_P00315641	LINC00632	20.9812976	1.82E-19
A_32_P28223	LOC101928837	20.1429888	2.18E-19
A_33_P3222549	ENST00000437648	19.5784129	7.63E-14
A_19_P00320275	LINC00632	19.4859425	2.31E-19
A_32_P200238	UCA1	17.1221042	3.91E-18
A_33_P3414027	LOC727924	17.1213969	1.73E-12

A_23_P149050	LINC00115	17.020361	9.40E-19
A_19_P00322397	FENDRR	16.9347822	5.05E-19
A_19_P00316836	LINC01291	16.7888352	3.90E-16
A_33_P3424217	HLA-DQB1	15.2789157	2.58E-11
A_23_P150648	KCNQ1DN	15.2654986	2.43E-11
A_33_P3338360	SCARNA13	14.743389	8.58E-19
A_19_P00804417	THC2666657	14.7281546	1.48E-18
A_32_P79483	FGF14-AS2	14.3573865	2.23E-18
A_32_P185317	MNX1-AS1	14.2972614	4.22E-16
A_32_P6172	LINC01003	13.9308781	1.84E-18
A_33_P3388486	LOC100129518	13.5577523	5.48E-15
A_19_P00321332	NEAT1	13.3125089	1.57E-18
A_33_P3347320	ADIRF-AS1	13.1128121	1.88E-16
A_19_P00800629	LINC01510	12.7953958	2.94E-17
A_19_P00316219	THC2666657	12.6399147	2.85E-18
A_32_P222460	LOC100130700	12.446409	3.71E-09
A_33_P3305775	lnc-HDDC3-4	12.4133279	3.66E-09
A_19_P00320723	SRP14-AS1	12.1240079	2.68E-16
A_19_P00315502	LOC102723721	12.0928913	3.14E-18
A_33_P3865368	LOC254896	12.0622082	3.25E-18
A_33_P3401397	C7orf65	12.0289506	7.42E-09
A_24_P120734	LINC00525	11.8080962	1.18E-08
A_19_P00322929	ENST00000513179	11.7759684	4.35E-18
A_33_P3248231	LOC283028	11.7306519	1.58E-08
A_33_P3348474	LOC100128840	11.5988087	1.82E-08
A_24_P280983	HOXA11-AS	11.598595	1.89E-08
A_19_P00802238	lnc-FBXW4-1	10.7851293	8.73E-08
A_33_P3349384	LOC102724074	10.244971	3.74E-17
A_33_P3378435	ENST00000543072	10.1489491	3.61E-07
A_33_P3334250	ENST00000512519	10.0107887	4.54E-07
A_33_P3237850	LINC01296	9.8794918	3.81E-10
A_24_P520767	LOC149351	9.70955242	2.60E-17
A_33_P3291732	ENST00000598356	9.51674506	1.37E-06

A_19_P00317878	LINC00659	9.47723008	1.50E-06
A_32_P55840	LINC01556	9.37779757	1.65E-06
A_32_P351277	lnc-JMJD8-1	9.35427482	7.28E-17
A_33_P3407314	PAXIP1-AS2	9.24502213	3.06E-12
A_32_P133090	ENST00000610060	9.16558793	4.56E-11
A_33_P3255631	ZNF780A	9.15695409	4.35E-17
A_33_P3231076	PAXIP1-AS2	8.87393304	1.90E-16
A_19_P00318938	ENST00000414603	8.40449094	4.11E-06
A_33_P3334384	KDM4A-AS1	8.30746565	1.11E-16
A_19_P00317851	ENST00000508998	8.30359682	1.89E-05
A_19_P00318183	LINC01197	8.25130143	1.03E-12
A_33_P3399755	EPB42	8.22586908	8.34E-17
A_32_P100641	LINC01233	8.22398623	4.62E-16
A_33_P3313899	LINC01433	8.20840942	9.12E-06
A_32_P176911	LINC00239	8.04867763	6.18E-15
A_19_P00318511	ENST00000423838	8.03156031	3.42E-05
A_19_P00330814	HOTAIR	7.92898996	4.09E-05
A_19_P00318790	ENST00000454172	7.8443064	8.13E-11
A_33_P3408837	LOC101927479	7.79719701	5.85E-05
A_33_P3826460	ENST00000505877	7.77907032	6.14E-05
A_32_P190461	LOC101926894	7.64374435	2.72E-10
A_33_P3232677	ENST00000428118	7.62192775	9.09E-05
A_33_P3315134	DIRC3	7.53478953	3.84E-16
A_33_P3531979	LOC283352	7.41798392	3.03E-16
A_33_P3388536	LOC728752	7.37497553	0.000153
26			
A_32_P211248	LINC01405	7.3352797	5.53E-16
A_33_P3227492	IBA57-AS1	7.30973029	3.47E-09
A_24_P854492	MIAT	7.2914227	0.000180
12			
A_33_P3376786	LINC01291	7.25584871	0.000187
66			
A_23_P107432	FLJ35934	7.2293209	2.21E-15

A_19_P00315843	SCARNA16	7.21585259	3.70E-16
A_33_P3363445	LOC100506014	7.19754434	0.00020079
A_19_P00802607	lnc-HK2-1	7.19195522	0.00021789
A_19_P00317053	lnc-HDAC2-2	7.15363096	0.00023487
A_23_P396299	MRVI1-AS1	7.14503582	7.91E-06
A_33_P3464438	LINC00221	7.11498193	0.00028556
A_33_P3387766	LINC00908	6.89605223	2.25E-07
A_19_P00318409	NEAT1	6.87506847	2.61E-15
A_33_P3384835	LOC101927100	6.85219214	7.31E-15
A_19_P00318759	APCDD1L-AS1	6.83868601	7.44E-16
A_33_P3329577	THC2625037	6.82149783	0.00046091
A_19_P00322339	LINC00707	6.7631316	0.00053739
A_33_P3263417	LINC-PINT	6.73530783	6.23E-15
A_32_P163858	SCD	6.71916516	9.04E-16
A_33_P3867584	LINC01268	6.70648613	5.27E-06
A_24_P238499	TYMSOS	6.66333677	1.79E-15
A_32_P135517	lnc-CHST4-3	6.63886767	7.56E-08
A_32_P113812	lnc-EIF2D-1	6.62231153	0.00067318
A_19_P00322977	LINC-PINT	6.5119606	7.75E-13
A_33_P3338484	DSG1-AS1	6.47668057	2.58E-05
A_32_P232035	LOC100270746	6.46975727	2.49E-15
A_33_P3331511	LINC00173	6.39203269	1.54E-10
A_33_P3288694	LOC101929243	6.3796343	1.87E-15
A_33_P3350853	PAXIP1-AS1	6.32686928	3.89E-06
A_19_P00321361	LINC-PINT	6.31635149	6.18E-15
A_33_P3213086	ENST00000577614	6.28514049	3.90E-10

A_19_P00802433	LINC01564	6.28500362	2.46E-11
A_33_P3372667	lnc-VIP-1	6.2687037	8.56E-11
A_19_P00318113	ENST00000503299	6.23463704	0.00149385
A_23_P377965	LINC00526	6.14223206	1.34E-14
A_24_P618401	CKMT2-AS1	6.10633219	0.0020157
A_33_P3255314	FLJ26245	6.05126875	0.00212746
A_32_P230148	ENST00000415530	6.00753113	0.00239057
A_19_P00801490	ENST00000567197	5.95843736	0.00256897
A_33_P3753757	lnc-SUSD1-1	5.95472334	6.79E-12
A_33_P3258581	PTGES2-AS1	5.94428375	0.00277659
A_33_P3286151	LOC100132891	5.88994601	2.38E-12
A_33_P3374997	CEP83-AS1	5.87288644	0.00301162
A_33_P3268868	THC2674845	5.83520572	0.0033357
A_33_P3239744	LOC150051	5.82355866	3.63E-06
A_24_P272225	ASH1L-AS1	5.80023609	8.30E-15
A_33_P3365408	C1RL-AS1	5.72097779	0.00403305
A_23_P166508	LINC01315	5.70689518	1.65E-14
A_24_P785293	SNHG1	5.67462425	9.45E-15
A_19_P00318587	LINC01023	5.65650929	1.65E-14
A_32_P110016	LOC101928424	5.62011486	5.13E-10
A_23_P99204	MAPKAPK5-AS1	5.58554316	1.35E-14
A_33_P3364443	CRNDE	5.46795041	4.21E-07
A_19_P00318725	LINC01204	5.45865505	1.38E-07

A_32_P832001	LOC731157	5.43902731	0.00680125
A_24_P751247	lnc-FOXI2-1	5.43499379	2.73E-07
A_33_P3236778	A_33_P3236778	5.43395651	0.00707902
A_33_P3833256	LOC440028	5.42609683	4.58E-14
A_33_P3244478	ACVR2B-AS1	5.41842352	0.00728824
A_33_P3260106	THC2533491	5.4052353	0.00755484
A_32_P84728	THC2685750	5.39460232	2.45E-14
A_33_P3283636	THC2731370	5.36588986	3.65E-13
A_19_P00316564	LOC653712	5.35984506	9.28E-08
A_19_P00319900	ENST00000509244	5.3373824	0.00572656
A_33_P3328883	HGC6.3	5.33433364	0.0090569
A_23_P78742	FLT3LG	5.31455033	1.69E-09
A_33_P3288614	LOC101927322	5.31434509	6.76E-14
A_19_P00810227	lnc-C14orf118-1	5.25370567	0.00397381
A_33_P3267607	LOC729870	5.24184757	9.82E-13
A_33_P3795649	ENST00000447535	5.20983991	0.00252442
A_33_P3365988	TGFB2-AS1	5.182311	4.73E-14
A_33_P3281710	LOC79999	5.1822732	1.36E-12
A_32_P101699	LOC729887	5.17663515	4.07E-14
A_33_P3508717	LINC00847	5.08702508	5.52E-14
A_19_P00331853	LOC100131564	5.05177461	6.74E-05
A_33_P3394489	CHKB-AS1	5.03493816	1.04E-13
A_24_P481375	LOC100131564	5.0170751	2.24E-13
A_32_P34138	FAM25A	4.99200449	1.73E-10
A_33_P3234472	LINC01270	4.93372078	4.53E-10

A_33_P3258712	LOC101928000	4.8952986	1.02E-13
A_32_P157208	PGM5P3-AS1	4.85577211	3.15E-09
A_33_P3217517	EXOC3-AS1	4.84309149	2.21E-13
A_19_P00317519	LOC101927043	4.83926663	1.86E-13
A_32_P181297	ST7-AS1	4.80993195	3.74E-13
A_19_P00326514	ENST00000602736	4.80502803	6.15E-13
A_24_P728006	XLOC_l2_011874	4.79695052	6.22E-08
A_19_P00813554	KTN1-AS1	4.77909444	5.36E-13
A_32_P8813	LINC00926	4.7132568	3.62E-10
A_33_P3221055	LOC101927270	4.70202955	5.90E-12
A_33_P3601163	ILF3-AS1	4.68521547	2.26E-13
A_32_P100258	FLJ37453	4.67851151	2.40E-13
A_19_P00327035	HAR1A	4.67346742	0.007288
			24
A_19_P00321636	ENST00000446336	4.66361904	0.000205
			92
A_24_P263910	LINC01588	4.65216616	5.56E-12
A_19_P00325158	MALAT1	4.63442589	1.96E-12
A_19_P00316820	lnc-WRNIP1-2	4.63439868	1.20E-05
A_32_P212897	LOC643406	4.62036496	2.45E-05
A_33_P3841819	THUMPD3-AS1	4.62007939	4.23E-10
A_33_P3681776	TOLLIP-AS1	4.61180015	1.32E-12
A_19_P00322333	LOC101059954	4.6082144	1.80E-10
A_19_P00807643	CYP1B1-AS1	4.58426157	1.27E-05
A_33_P3290368	LINC00894	4.58154233	6.57E-10
A_33_P3427239	LOC100134937	4.49531904	1.88E-12
A_23_P302134	FLJ37453	4.41873345	9.52E-13
A_23_P87769	PARPBP	4.38181629	7.55E-13
A_19_P00315780	LOC101929709	4.30772749	4.95E-06
A_19_P00803226	lnc-TOP1MT-2	4.28008204	1.16E-12
A_23_P102681	LOC79160	4.2742417	1.28E-12
A_23_P131139	DIRC1	4.25734683	1.28E-12
A_33_P3377529	HOXA4	4.25217366	6.43E-10

A_33_P3323760	LOC153684	4.24884377	6.71E-11
A_32_P82475	SNHG10	4.22572799	1.92E-12
A_23_P131036	UPK1A-AS1	4.19789496	4.77E-06
A_24_P179183	ANKRD12	4.17371633	2.04E-12
A_32_P523096	FOXD2-AS1	4.16991801	0.00013401
A_19_P00803960	THAP9-AS1	4.1646537	4.92E-07
A_33_P3356492	FAM230B	4.14990436	7.64E-06
A_33_P3362886	lnc-COPZ2-1	4.14764726	1.16E-11
A_33_P3732466	LOC100506282	4.11938356	3.73E-11
A_23_P106898	ORAI3	4.10660878	5.64E-12
A_33_P3299811	FLVCR1-AS1	4.10367959	5.46E-11
A_33_P3337019	LOC728975	4.05528076	5.52E-12
A_33_P3214239	GNAS-AS1	4.04970979	4.69E-12
A_33_P3319815	LINC01546	4.04764105	0.00054753
A_33_P3357332	lnc-C9orf147-1	4.02811764	2.02E-06
A_19_P00320579	LINC-PINT	4.01291839	0.00014537
A_19_P00324399	LINC01481	3.98637604	6.98E-12
A_33_P3278684	A_33_P3278684	3.91536702	1.80E-11
A_33_P3237580	FLJ45513	3.90479221	0.00021823
A_33_P3781394	SCAMP1-AS1	3.90408648	7.35E-12
A_33_P3362063	LINC01124	3.90181967	2.19E-06
A_33_P3229215	ATP1A1-AS1	3.86693318	1.22E-05
A_24_P16214	LINC00665	3.86593649	9.08E-12
A_23_P201368	CTBS	3.85923566	8.90E-12
A_33_P3377239	LOC100270804	3.83057648	1.27E-06
A_32_P177955	STX17-AS1	3.8266025	5.04E-10
A_23_P256694	MCM3AP-AS1	3.81739661	2.36E-08
A_19_P00329564	THAP9-AS1	3.7178955	1.14E-05
A_33_P3722568	LINC00685	3.7139139	5.92E-09

A_33_P3380236	ENST00000423408	3.71293947	4.58E-06
A_33_P3395028	LOC152225	3.69496876	1.08E-10
A_33_P3333282	FGF11	3.6020835	0.00015888
A_33_P3309110	ALOX12-AS1	3.59917163	3.60E-10
A_33_P3312384	MIR99AHG	3.59408222	6.48E-10
A_33_P3275495	LOC400743	3.57638187	0.00101179
A_33_P3363720	ZNF436-AS1	3.56099184	8.59E-09
A_33_P3343467	LINC00957	3.55987312	2.91E-09
A_33_P3442605	LOC389641	3.5393044	0.00112218
A_33_P3354881	LOC100506753	3.52037268	2.82E-09
A_32_P131143	CECR5-AS1	3.51160174	1.02E-07
A_33_P3402600	A_33_P3402600	3.50952265	6.51E-11
A_33_P3461039	lnc-MTERFD3-1	3.49033544	7.79E-10
A_33_P3410201	ENST00000529743	3.46585619	1.09E-10
A_33_P3414880	LOC339192	3.45952643	3.43E-07
A_33_P3323928	OLMALINC	3.44457385	3.41E-10
A_23_P362228	ZNF436-AS1	3.44087433	1.01E-10
A_33_P3375002	SOCS2-AS1	3.43376554	2.30E-07
A_19_P00320229	FLJ46906	3.42333873	0.00150302
A_33_P3645465	PDCD4-AS1	3.41902851	1.19E-10
A_33_P3402329	MIR503HG	3.40316868	3.33E-10
A_33_P3677061	LOC283887	3.37286649	0.00691282
A_24_P354496	WWC2-AS2	3.34588844	1.08E-09
A_24_P419300	PP7080	3.33349395	2.03E-10
A_33_P3372682	GTSE1-AS1	3.32653474	1.06E-09
A_19_P00316547	ENST00000505702	3.31986997	4.33E-09
A_33_P3304824	LINC00618	3.31743028	3.12E-07
A_33_P3280945	SNHG3	3.31491774	2.20E-10

A_19_P00315584	LOC100130691	3.30325044	1.26E-08
A_23_P1014	LINC00467	3.28316006	2.75E-10
A_33_P3346538	lnc-WWP2-1	3.25567481	4.21E-09
A_33_P3369079	CHKB-AS1	3.25523347	1.45E-09
A_33_P3424112	DHX40	3.23612549	2.19E-07
A_23_P319640	LBX2-AS1	3.21482332	6.12E-10
A_33_P3295009	lnc-AEBP1-1	3.1985841	2.73E-09
A_24_P352116	SNHG7	3.18932393	2.07E-07
A_19_P00316493	ENST00000452701	3.13952324	3.95E-07
A_19_P00810806	SMIM2-AS1	3.12366973	8.09E-09
A_33_P3362143	TTC28-AS1	3.11759794	2.72E-09
A_24_P117138	ZNF626	3.10320026	9.81E-10
A_33_P3780286	lnc-DAOA-4	3.09608902	1.43E-06
A_24_P239076	IGLL1	3.08752985	0.000344
			88
A_19_P00316467	ENST00000473756	3.0254726	1.20E-08
A_33_P3272442	ZSCAN16-AS1	3.01275034	1.84E-05
A_33_P3241661	LOC388780	2.99670009	1.22E-05
A_32_P30831	RAD51-AS1	2.98030072	8.81E-05
A_33_P3223097	LINC00467	2.97622403	2.70E-09
A_19_P00319453	lnc-MMRN1-2	2.96321789	2.16E-08
A_19_P00318280	LOC100506860	2.9475151	1.12E-06
A_33_P3774867	lnc-AP002478.1-1	2.94111139	0.003451
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A_33_P3356686	TEX41	2.92513989	0.003741
			34
A_24_P583225	LINC00265	2.92304471	0.000100
			71
A_33_P3375710	lnc-VAMP3-1	2.91428655	3.95E-07
A_24_P323084	LINC00482	2.90433507	3.41E-08
A_32_P88310	LOC730183	2.88999544	1.53E-08
A_33_P3273584	SCARNA2	2.88530295	4.33E-08
A_24_P403244	PILRB	2.88376958	8.31E-09

A_19_P00319655	CTD-3080P12.3	2.86679295	0.00310512
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A_33_P3360204	XLOC_l2_006958	2.81344056	1.07E-08
A_23_P50504	FTL	2.79585459	1.11E-08
A_33_P3832872	LOC389247	2.7914697	3.10E-06
A_33_P3221234	IPP	2.78732157	2.03E-05
A_33_P3328184	lnc-CAST-4	2.77289837	0.00957606
A_19_P00807670	SOCS2-AS1	2.77161974	7.54E-05
A_23_P368909	LINC00346	2.77107571	2.99E-07
A_33_P3351197	GLIDR	2.75996369	1.20E-07
A_19_P00315716	SNORA71A	2.75611506	3.36E-08
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A_24_P818529	ENST00000454281	2.67783776	8.18E-08
A_33_P3411392	LINC00028	2.67082607	0.00718242
A_33_P3369213	LINC00999	2.6686658	2.47E-05
A_23_P47565	LDHA	2.6665672	3.40E-08
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A_24_P270769	VPS35	2.6287088	4.79E-08
A_32_P231493	DOCK9-AS2	2.62429339	0.00014952
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A_23_P130418	NDUFV2	2.60282457	6.06E-08
A_33_P3336527	PDXDC1	2.57814617	9.16E-08
A_32_P65706	C9orf92	2.56977928	0.00310788
A_33_P3407985	TMEM99	2.55948609	2.23E-07
A_33_P3226380	LINC01347	2.55692938	0.0002736
A_24_P161463	ZFAS1	2.53288822	1.17E-07
A_33_P3288074	lnc-ATG2B-2	2.52904	0.00137836
A_33_P3831730	lnc-NDUFA4-2	2.52062824	1.55E-07
A_33_P3348204	FAM218A	2.4959329	3.26E-07
A_19_P00808088	LMCD1-AS1	2.49439941	0.00042573
A_33_P3226228	A_33_P3226228	2.49198937	5.32E-06
A_33_P3379106	LINC00922	2.48006025	1.47E-05
A_19_P00805523	MIR4458HG	2.45053336	0.00253019
A_32_P94660	LRRC37B	2.44193799	3.17E-07
A_33_P3365985	ENST00000624051	2.41845617	4.88E-07
A_19_P00317965	ENST00000609220	2.40826143	2.77E-06
A_33_P3213259	CENPBD1P1	2.38585709	5.70E-07
A_23_P358195	GOLGA6L4	2.38018813	5.56E-06
A_19_P00318878	ENST00000566446	2.36822233	6.76E-07
A_24_P332739	GUSBP1	2.35816959	6.76E-07
A_32_P62211	LOC101928433	2.34841923	1.99E-06
A_33_P3384548	AK309505	2.33206941	2.13E-05
A_33_P3390017	C15orf54	2.32820492	0.00112558
A_19_P00322533	CRNDE	2.28466944	1.44E-06
A_33_P3332348	RN7SL1	2.28430663	1.43E-06
A_23_P4160	NBR2	2.27789208	0.00026246

A_33_P3268863	C11orf44	2.27520632	0.002784 87
A_33_P3368785	DLGAP1-AS1	2.24064726	2.30E-06
A_23_P54041	THTPA	2.23813664	2.48E-06
A_33_P3363120	SCARNA10	2.23710334	4.83E-05
A_24_P120970	ARRDC1-AS1	2.2265202	7.86E-06
A_33_P3743508	LOC158435	2.2188789	2.96E-06
A_33_P3368540	SRGAP3	2.20730808	4.29E-06
A_33_P3251617	LINC01118	2.19223688	0.000656 15
A_23_P7083	CTBP1-AS2	2.18922154	4.37E-06
A_19_P00318813	LOC101928738	2.18865265	4.06E-06
A_33_P3280927	SNHG7	2.17375756	5.32E-06
A_32_P104063	CRNDE	2.17166297	4.91E-06
A_32_P919718	TMEM105	2.17022742	0.006559 14
A_24_P262201	SULT1A4	2.16282747	5.84E-06
A_19_P00318174	LOC100506014	2.16234791	0.000290 11
A_19_P00318361	KIF9-AS1	2.16019902	3.36E-05
A_33_P3352887	LOC388692	2.14339794	1.42E-05
A_33_P3281532	RMND5A	2.12064224	0.000386 8
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A_19_P00321124	LINC01468	2.11302112	0.000103 45
A_33_P3452297	LINC00317	2.10222431	0.000914 7
A_33_P3868357	ENST00000507936	2.10101749	1.32E-05
A_24_P709377	PAX8-AS1	2.09982617	1.97E-05
A_33_P3383283	CASP10	2.09083821	1.23E-05
A_19_P00319413	ENST00000520819	2.08316987	1.33E-05

A_33_P3409261	LOC100652758	2.07757355	0.00655914
A_23_P397543	LINC00174	2.07312212	0.00403305
A_32_P22501	EIF3J-AS1	2.07278233	2.50E-05
A_33_P3646051	lnc-ZNF345-1	2.05768855	0.00253019
A_24_P178631	AK027667	2.05209188	2.16E-05
A_24_P229536	MIR99AHG	2.04979043	2.86E-05
A_33_P3402056	LOC389831	2.04792229	0.00217345
A_19_P00321132	LOC101927136	2.04134221	0.00988188
A_24_P678418	DICER1-AS1	2.03209498	0.00723609
A_23_P151337	DLEU1	2.03031011	2.51E-05
A_19_P00318261	SNORA26	2.02751399	3.31E-05
A_33_P3239101	GOLGA6L9	2.02463465	0.00198112

Supplementary S2

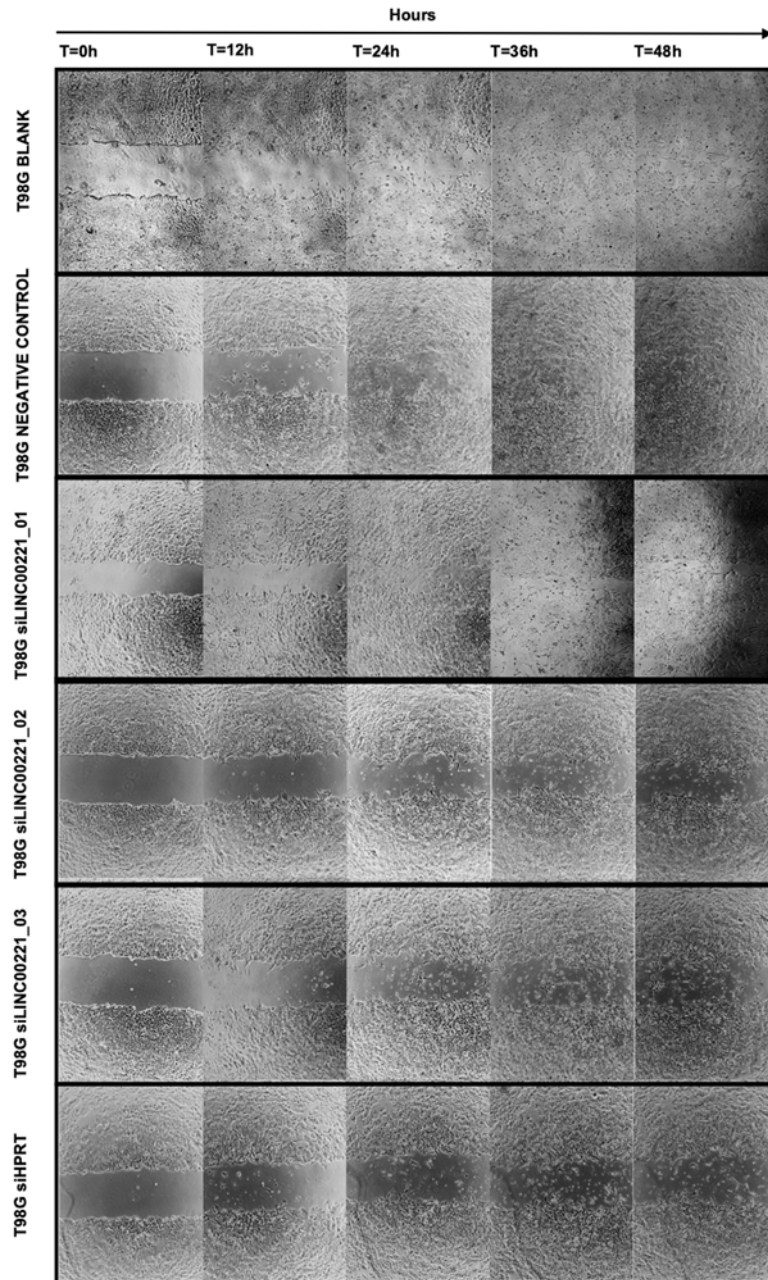


Figure S1: Cell scratch assay of T98G cells transfected with various siRNAs used in the study

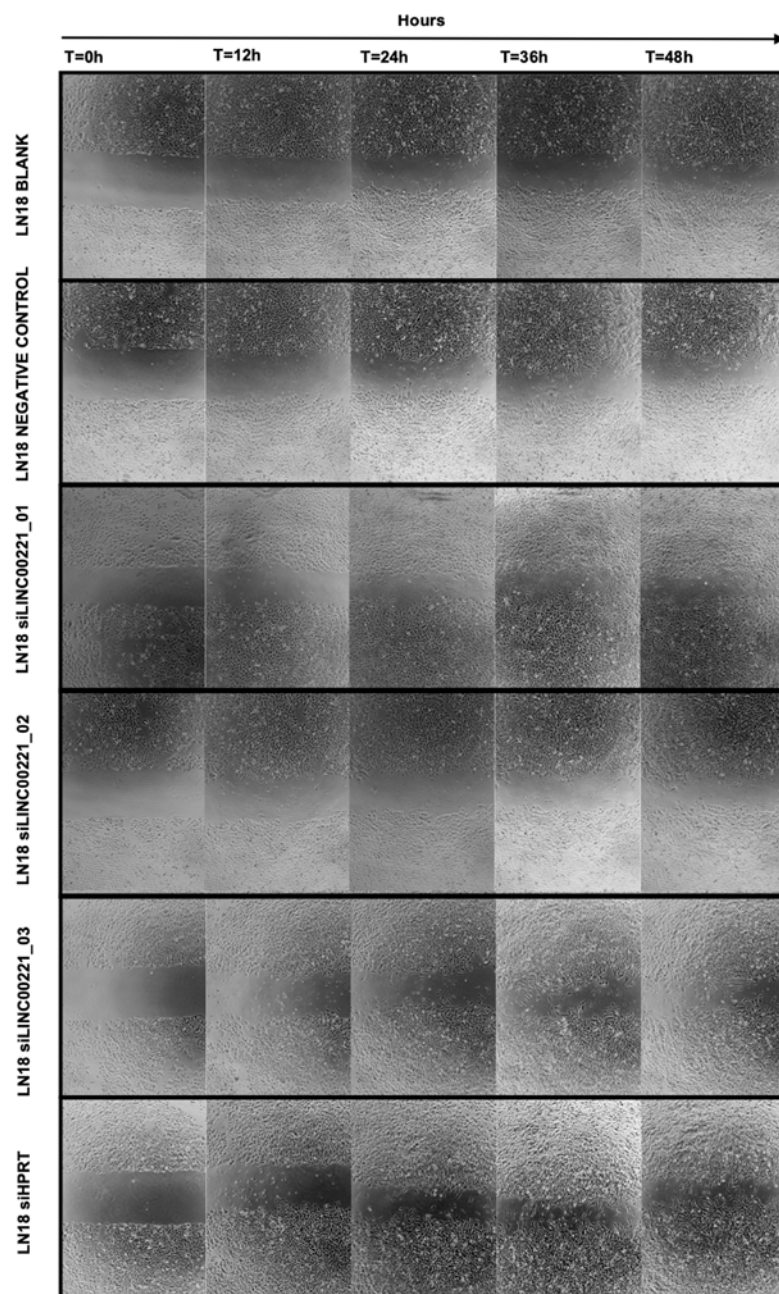


Figure S2: Cell scratch assay of LN18 cells transfected with various siRNAs used in the study

Supplementary S3

Figure S3-1: T98G ZEB1

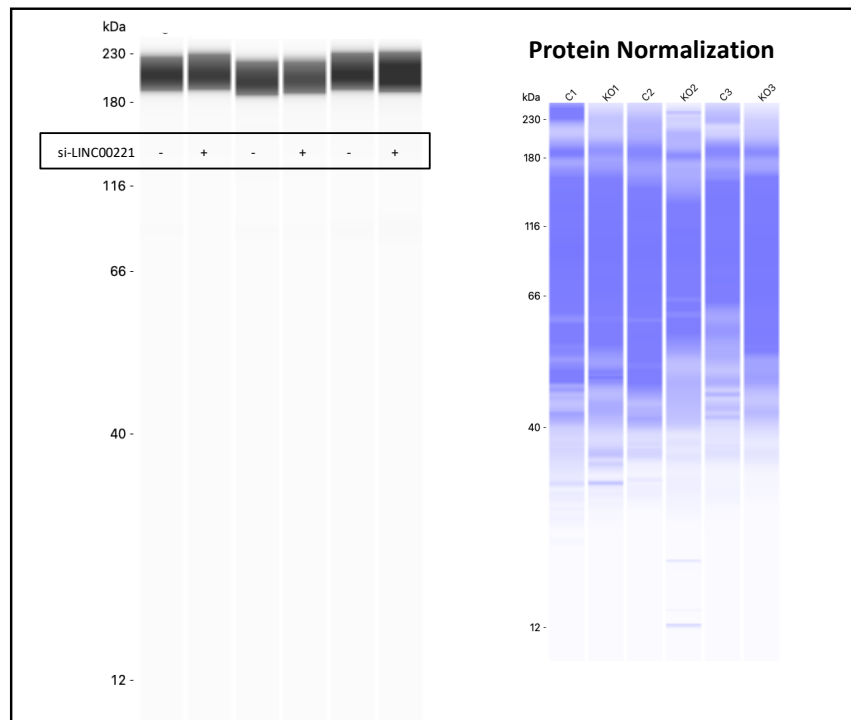


Figure S3-2: T98G N-cadherin

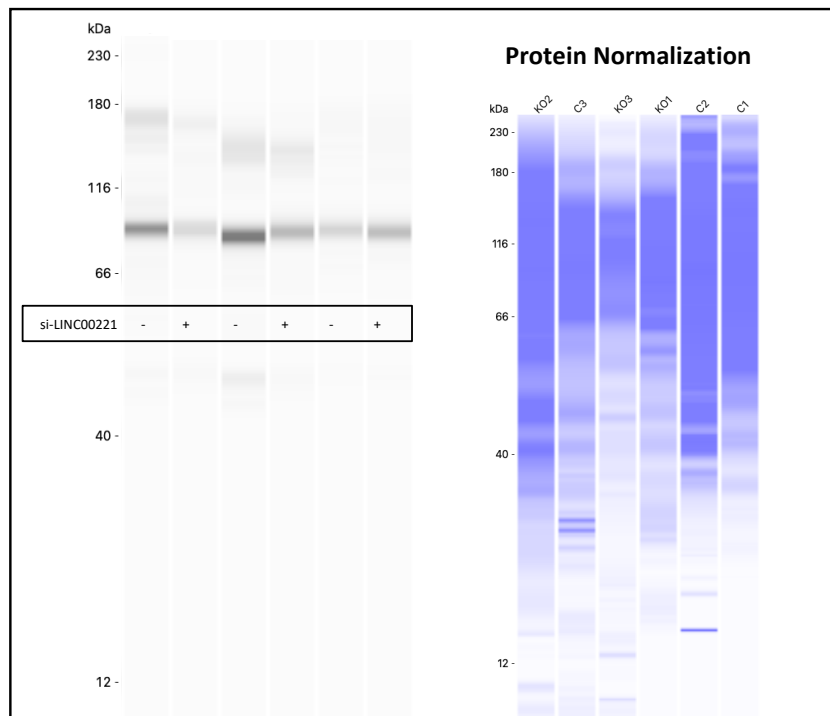


Figure S3-3: T98G Slug

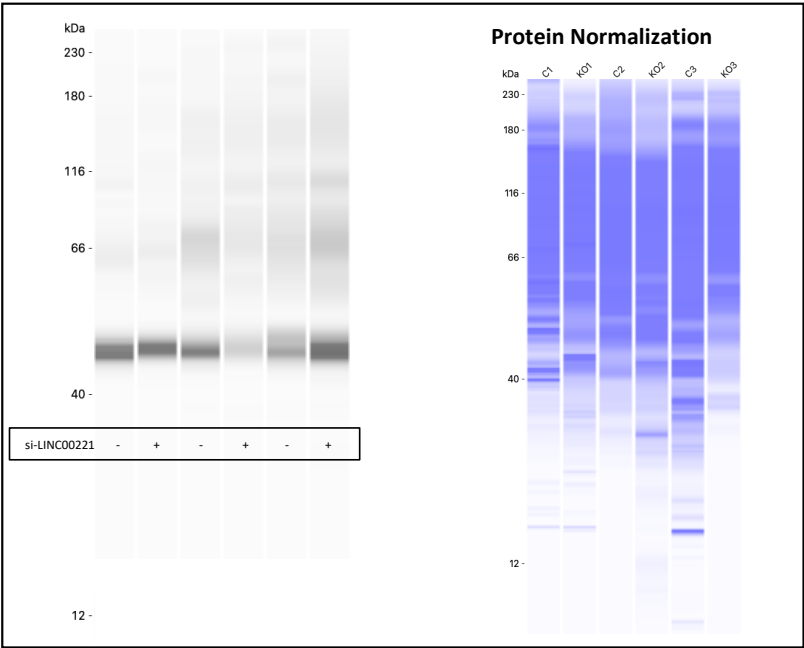


Figure S3-4: T98G Vimentin

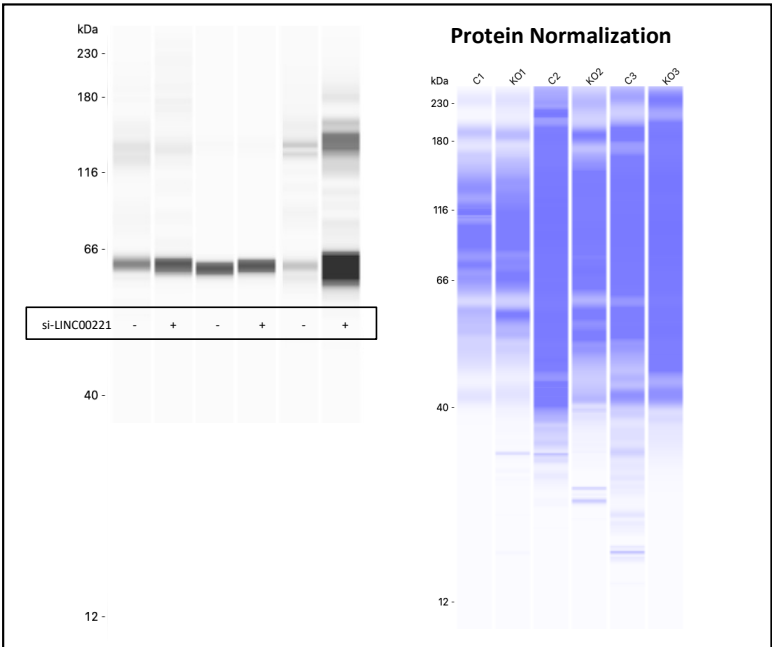


Figure S3-5: T98G Snai1

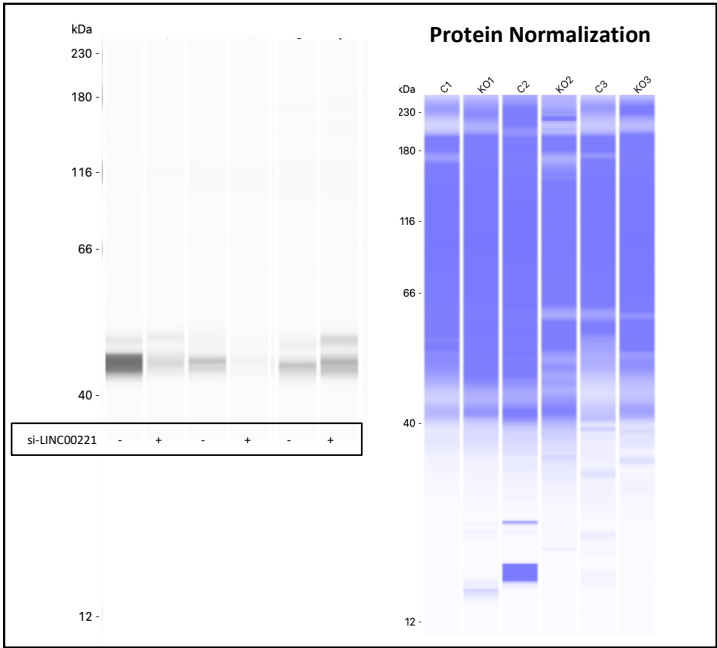


Figure S3-6: LN18 Snai1

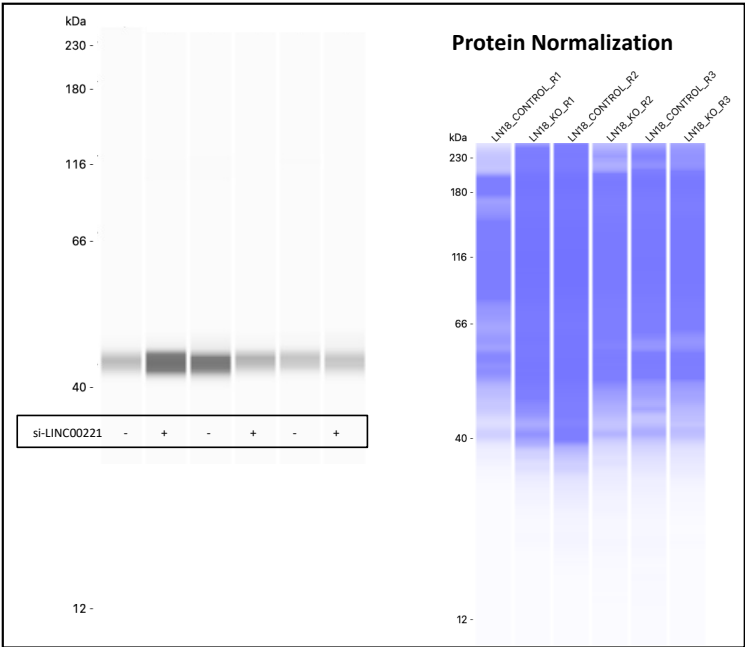


Figure S3-7: T98G B-catenin

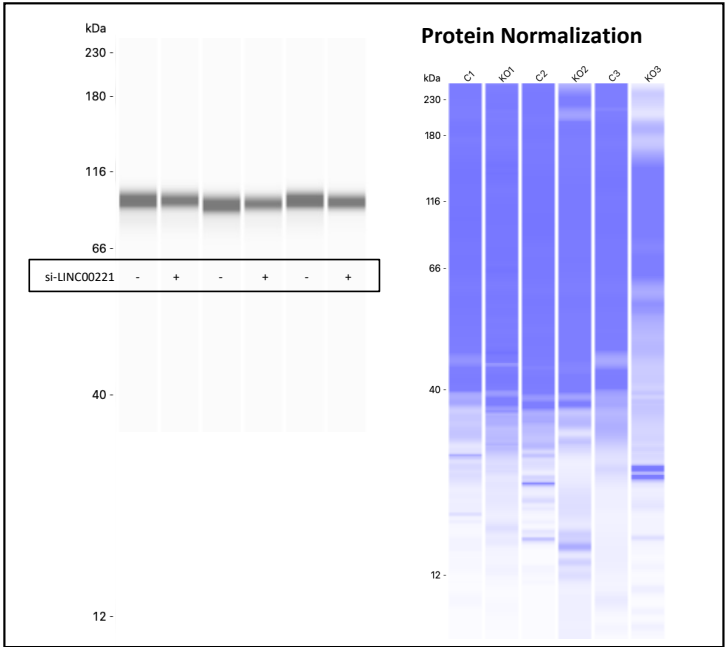


Figure S3-8: LN18 Slug

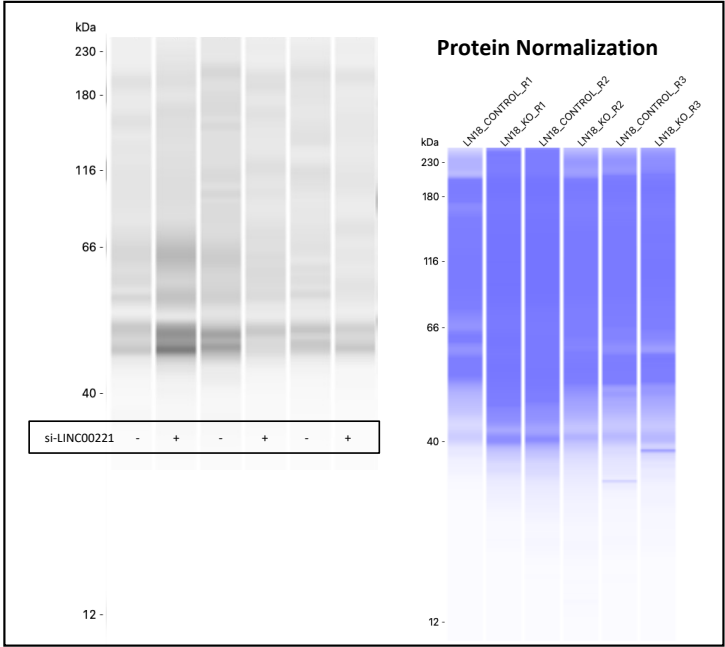


Figure S3-9: LN18 N-cadherin

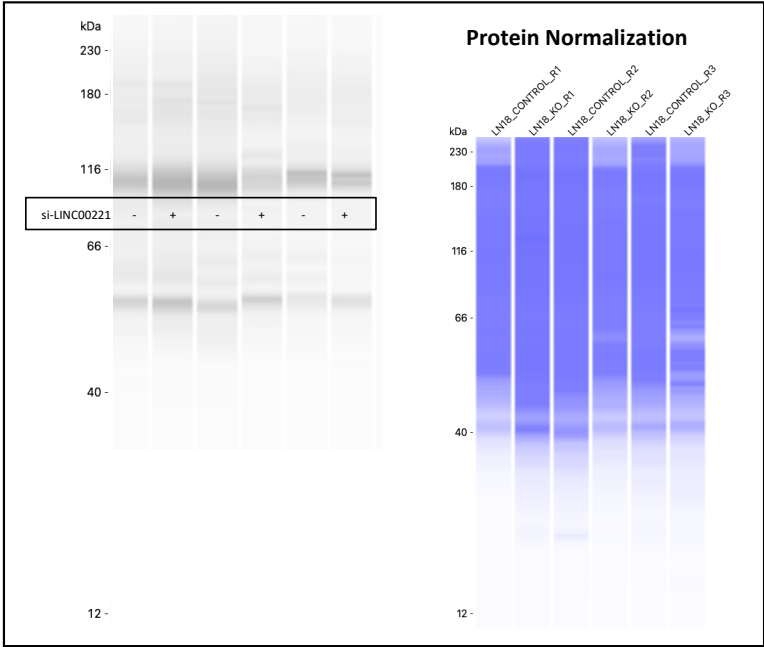


Figure S3-10: LN18 E-cadherin

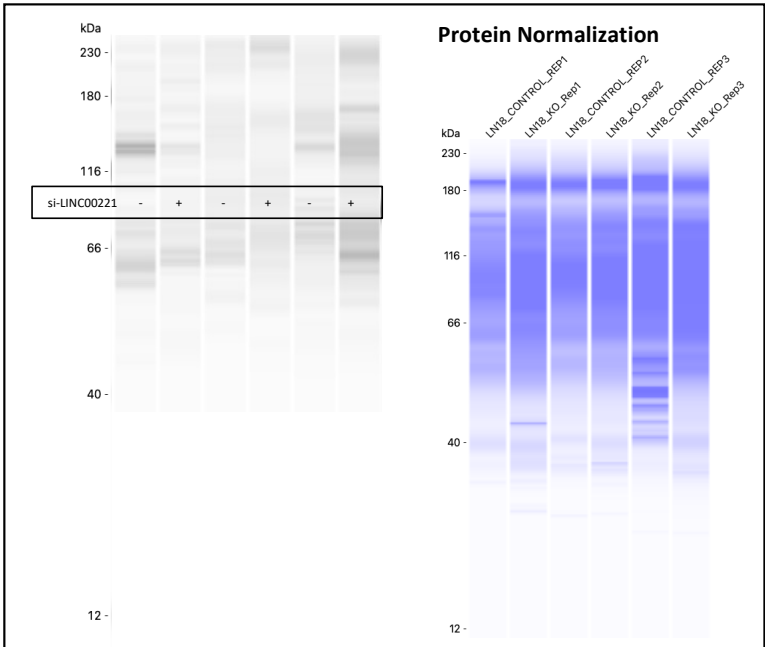


Figure S3-11: LN18 Vimentin

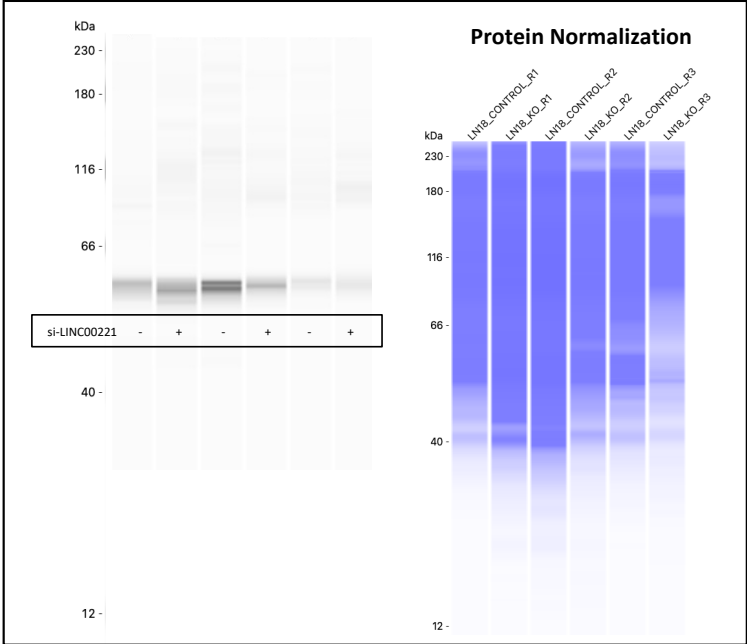


Figure S3-12: LN18 B-catenin

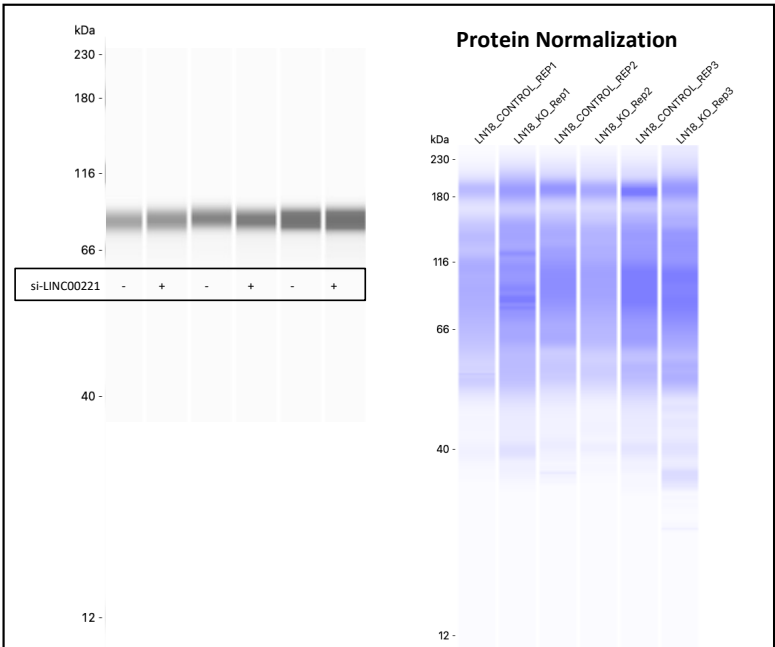


Figure S3-13: LN18 ZEB1

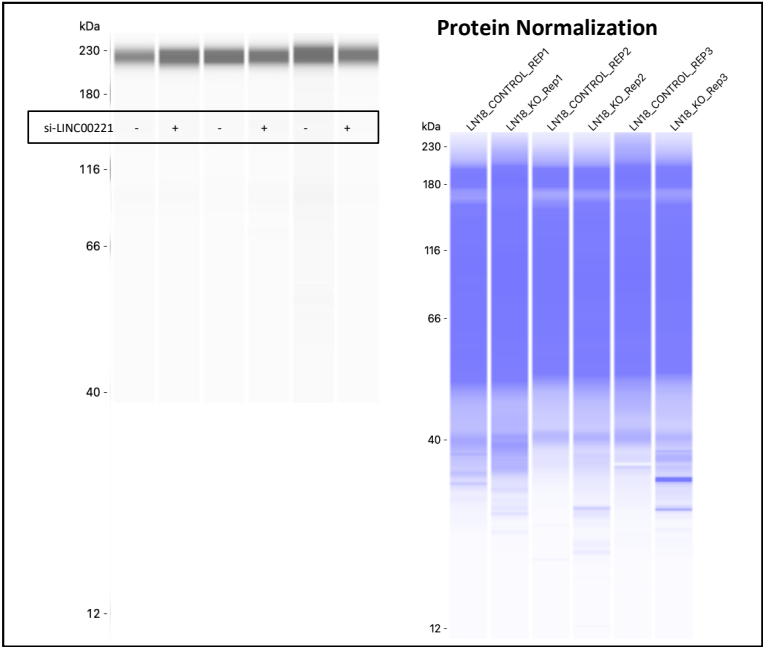
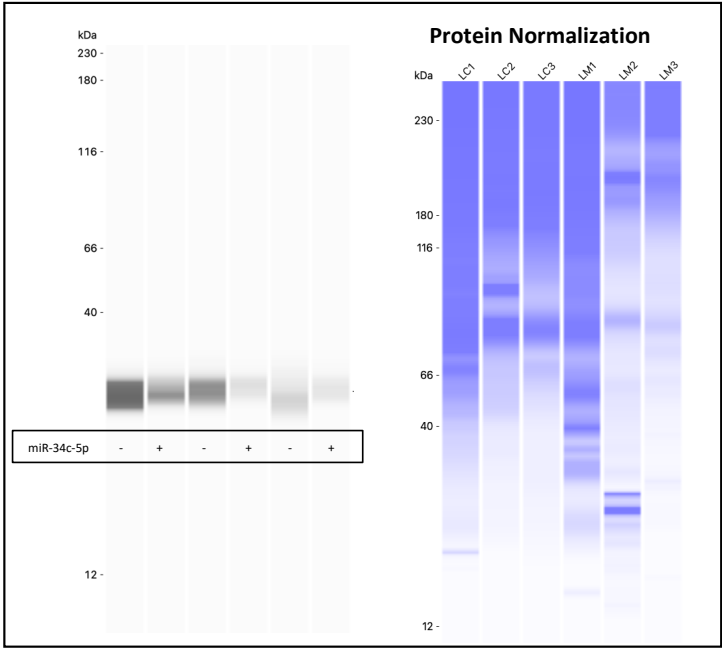


Figure S3-14: LN18 Snai1



Supplementary S4

Table S4: DEPs identified in T98G transfected with si-LINC00221 through LCMS analysis. Experiments were carried out in biological triplicates.

UniProt Accession	Protein	Description	Significance (-10logP)	Coverage (%)	Unique Peptides	Avg. Mass	FoldChange
P62805	H4	Histone H4	200	19	2	11367	0.25
O60814	H2B1K	Histone H2B type 1-K	119.73	39	5	13890	0.37
P57053	H2BFS	Histone H2B type F-S	119.73	39	5	13944	0.37
P58876	H2B1D	Histone H2B type 1-D	119.73	39	5	13936	0.37
P62807	H2B1C	Histone H2B type 1-C/E/F/G/I	119.73	39	5	13906	0.37
Q5QNW6	H2B2F	Histone H2B type 2-F	119.73	39	5	13920	0.37
Q93079	H2B1H	Histone H2B type 1-H	119.73	39	5	13892	0.37
Q99877	H2B1N	Histone H2B type 1-N	119.73	39	5	13922	0.37
Q99879	H2B1M	Histone H2B type 1-M	119.73	39	5	13989	0.37
P08670	VIM	Vimentin	111.57	24	11	53652	0.39
P63151	2ABA	Serine/threonine-protein phosphatase 2A 55 kDa regulatory subunit B alpha isoform	14.12	3	1	51692	0.39
Q00005	2ABB	Serine/threonine-protein phosphatase 2A 55 kDa regulatory subunit B beta isoform	14.12	3	1	51710	0.39
Q66LE6	2ABD	Serine/threonine-protein phosphatase 2A 55 kDa regulatory subunit B delta isoform	14.12	3	1	52043	0.39
P12814	ACTN1	Alpha-actinin-1	57.68	2	1	103058	0.44
O75531	BAF	Barrier-to-autointegration factor	24.21	16	1	10059	0.67
P07339	CATD	Cathepsin D	18.41	17	6	44552	0.71
P40227	TCPZ	T-complex protein 1 subunit zeta	13.83	7	2	58024	0.75
Q99832	TCPH	T-complex protein 1 subunit eta	13.94	7	2	59367	0.75
P18124	RL7	60S ribosomal protein L7	13.53	16	3	29226	1.32

P61604	CH10	10 kDa heat shock protein mitochondrial	13.39	46	5	10932	1.32
P48735	IDHP	Isocitrate dehydrogenase [NADP] mitochondrial	13.57	4	2	50909	1.33
P31943	HNRH1	Heterogeneous nuclear ribonucleoprotein H	14.36	4	1	49229	1.34
P52597	HNRPF	Heterogeneous nuclear ribonucleoprotein F	14.36	4	1	45672	1.34
P31946	1433B	14-3-3 protein beta/alpha	15.6	21	3	28082	1.36
Q00610	CLH1	Clathrin heavy chain 1	16.13	7	8	191613	1.37
P30048	PRDX3	Thioredoxin-dependent peroxide reductase mitochondrial	17.44	5	1	27693	1.39
P61247	RS3A	40S ribosomal protein S3a	18.48	13	3	29945	1.4
P07686	HEXB	Beta-hexosaminidase subunit beta	18.68	2	1	63111	1.41
P12111	CO6A3	Collagen alpha-3(VI) chain	19.78	12	28	343668	1.43
P16403	H12	Histone H1.2	19.84	10	2	21365	1.43
P09936	UCHL1	Ubiquitin carboxyl-terminal hydrolase isozyme L1	28.18	32	5	24824	1.55
P62888	RL30	60S ribosomal protein L30	27.93	10	1	12784	1.55
P13473	LAMP2	Lysosome-associated membrane glycoprotein 2	28.67	5	2	44961	1.56
Q15366	PCBP2	Poly(rC)-binding protein 2	29.17	4	1	38580	1.57
Q14974	IMB1	Importin subunit beta-1	45.33	2	1	97170	1.78
P06396	GELS	Gelsolin	13.11	1	1	85697	2.01
Q16719	KYNU	Kynureninase	16.86	3	1	52352	2.72
P04264	K2C1	Keratin type II cytoskeletal 1	131.38	2	1	66039	2.82
Q15185	TEBP	Prostaglandin E synthase 3	48.37	8	1	18697	4.36

Supplementary S5

Table S5: List of DEPs identified in T98G cells following miR-34c-5p transfection

UniProt Accession	Protein	Description	Significance (-10logP)	Coverage (%)	Unique Peptides	Avg. Mass	FoldChange
P50395	GDIB	Rab GDP dissociation inhibitor beta	45.99	4	1	50663	0.25
P46782	RS5	40S ribosomal protein S5	34.31	21	2	22876	0.28
Q15233	NONO	Non-PoU domain-containing octamer-binding protein	22.64	5	1	54232	0.3
P51648	AL3A2	Aldehyde dehydrogenase family 3 member A2	53.62	8	2	54848	0.34
P55060	XPO2	Exportin-2	34.26	2	1	110417	0.34
Q08211	DHX9	ATP-dependent RNA helicase A	36.04	1	1	140958	0.35
Q9NYU2	UGGG1	UDP-glucose:glycoprotein glucosyltransferase 1	24.51	1	1	177189	0.35
P21266	GSTM3	Glutathione S-transferase Mu 3	15.62	7	1	26560	0.36
Q8NBS9	TXND5	Thioredoxin domain-containing protein 5	50.52	10	2	47629	0.36
P04844	RPN2	Dolichyl-diphosphooligosaccharide--protein glycosyltransferase subunit 2	32.5	7	2	69284	0.39
P62847	RS24	40S ribosomal protein S24	35.6	9	1	15423	0.39
Q07666	KHDR1	KH domain-containing RNA-binding transduction-associated protein 1	26.9	7	2	48227	0.42
Q99832	TCPH	T-complex protein 1 subunit eta	41.03	7	2	59367	0.42
Q9Y490	TLN1	Talin-1	17.23	1	1	269765	0.42
O00625	PIR	Pirin	27.14	4	1	32113	0.43
P09651	ROA1	Heterogeneous nuclear ribonucleoprotein A1	18.66	4	1	38747	0.44
P13473	LAMP2	Lysosome-associated membrane glycoprotein 2	15.55	5	2	44961	0.44
Q15181	IPYR	Inorganic pyrophosphatase	23.08	6	1	32660	0.44
Q32P51	RA1L2	Heterogeneous nuclear ribonucleoprotein A1-like 2	18.66	5	1	34225	0.44
P22234	PUR6	Multifunctional protein ADE2	18.36	4	1	47079	0.46
O15260	SURF4	Surfeit locus protein 4	39.03	7	1	30394	0.47
P18669	PGAM1	Phosphoglycerate mutase 1	33.37	34	5	28804	0.47

P30043	BLVRB	Flavin reductase (NADPH)	20.44	5	1	22119	0.47
Q92597	NDRG1	Protein NDRG1	24.47	5	1	42835	0.47
P52895	AK1C2	Aldo-keto reductase family 1 member C2	19.72	5	1	36735	0.48
P42766	RL35	60S ribosomal protein L35	27.21	14	2	14551	0.5
Q14019	COTL1	Coactosin-like protein	15.94	11	1	15945	0.5
Q7KZF4	SND1	Staphylococcal nuclease domain-containing protein 1	14.84	3	2	101997	0.52
P11940	PABP1	Polyadenylate-binding protein 1	13.25	4	2	70671	0.53
P61204	ARF3	ADP-ribosylation factor 3	21.76	14	2	20601	0.53
P84077	ARF1	ADP-ribosylation factor 1	21.76	14	2	20697	0.53
Q13310	PABP4	Polyadenylate-binding protein 4	13.25	4	2	70783	0.53
Q9UL46	PSME2	Proteasome activator complex subunit 2	18.66	15	2	27402	0.53
P40227	TCPZ	T-complex protein 1 subunit zeta	16.85	4	1	58024	0.54
P55072	TERA	Transitional endoplasmic reticulum ATPase	14.89	5	3	89322	0.54
P55209	NP1L1	Nucleosome assembly protein 1-like 1	16.24	6	2	45374	0.54
Q15185	TEBP	Prostaglandin E synthase 3	24.54	12	2	18697	0.54
P23528	COF1	Cofilin-1	21.2	58	8	18502	0.55
P05455	LA	Lupus La protein	14.04	7	2	46837	0.56
P27348	1433T	14-3-3 protein theta	20.2	13	2	27764	0.56
P37108	SRP14	Signal recognition particle 14 kDa protein	23.24	24	3	14570	0.57
P48643	TCPE	T-complex protein 1 subunit epsilon	14.84	13	4	59671	0.58
P26599	PTBP1	Polypyrimidine tract-binding protein 1	21.83	4	1	57221	0.59
P26641	EF1G	Elongation factor 1-gamma	39.1	16	5	50119	0.59
Q9ULZ3	ASC	Apoptosis-associated speck-like protein containing a CARD	14.21	19	3	21627	0.59
O60218	AK1BA	Aldo-keto reductase family 1 member B10	29.09	27	8	36020	0.6
Q00325	MPCP	Phosphate carrier protein mitochondrial	16.18	3	1	40095	0.6

P05388	RLA0	60S acidic ribosomal protein P0	15.31	13	4	34274	0.61
P08758	ANXA5	Annexin A5	33.96	48	14	35937	0.61
P04083	ANXA1	Annexin A1	31.52	31	9	38714	0.63
P46783	RS10	40S ribosomal protein S10	30.25	10	2	18898	0.63
P49327	FAS	Fatty acid synthase	19.18	3	4	273424	0.63
P60981	DEST	Destrin	22.2	16	3	18506	0.63
P30041	PRDX6	Peroxiredoxin-6	17.65	19	4	25035	0.64
P31948	STIP1	Stress-induced-phosphoprotein 1	20.58	2	1	62639	0.64
P32969	RL9	60S ribosomal protein L9	13.51	5	1	21863	0.64
P62805	H4	Histone H4	28.52	19	2	11367	0.64
Q5IFJ7	RL9	60S ribosomal protein L9	13.51	5	1	21877	0.64
P07099	HYEP	Epoxide hydrolase 1	27.39	32	12	52949	0.65
P07355	ANXA2	Annexin A2	27.18	70	23	38604	0.65
P08133	ANXA6	Annexin A6	13.75	8	5	75873	0.66
Q07020	RL18	60S ribosomal protein L18	17.42	13	2	21634	0.66
P61981	1433G	14-3-3 protein gamma	14.24	16	3	28303	0.67
Q02543	RL18A	60S ribosomal protein L18a	24.76	9	2	20762	0.67
P00441	SODC	Superoxide dismutase [Cu-Zn]	22.18	46	6	15936	0.68
P60174	TPIS	Triosephosphate isomerase	19.63	84	15	26669	0.7
P62258	1433E	14-3-3 protein epsilon	18.24	40	9	29174	0.7
Q9NTK5	OLA1	Obg-like ATPase 1	13.54	7	2	44744	0.71
P29692	EF1D	Elongation factor 1-delta	17.83	13	3	31122	0.72
P04406	G3P	Glyceraldehyde-3-phosphate dehydrogenase	15.87	69	21	36053	0.73
P62328	TYB4	Thymosin beta-4	15.8	16	1	5053	0.73
P63313	TYB10	Thymosin beta-10	15.8	16	1	5026	0.73
Q15084	PDIA6	Protein disulfide-isomerase A6	15.81	13	5	48121	0.73

P07195	LDHB	L-lactate dehydrogenase B chain	15.17	55	14	36639	0.74
Q16881	TRXR1	Thioredoxin reductase 1 cytoplasmic	15.6	11	5	70906	0.74
P31946	1433B	14-3-3 protein beta/alpha	14.05	26	4	28082	0.75
P00338	LDHA	L-lactate dehydrogenase A chain	13.66	61	17	36689	0.76
P10599	THIO	Thioredoxin	13.4	21	2	11737	0.76
P14618	KPYM	Pyruvate kinase PKM	13.52	73	32	57937	0.76

Supplementary S6

Table S6: List of DEPs identified in LN18 cells following si-LINC00221 transfection

Protein Name	Symbol	UniProt ID	Coverage (%)	Unique peptides	Avg. Mass	Significance (-10logP)	Fold-change
Translationally-controlled tumor protein	TPT1	P13693	12	2	19595	18.2	0.49
Histone H4	HIST1H4J	B2R4R0	47	5	11367	14.27	0.72
Mitochondrial-processing peptidase subunit alpha	PMPCA	Q10713	3	1	58253	15.23	2.24
Keratin 10	KRT10	A0A1B0GVI3	6	3	63346	32.7	2.35
RAB35, member RAS oncogene family	RAB35	F5H157	10	1	21214	24.11	2.92
Keratin, type I cytoskeletal 9	KRT9	P35527	6	3	62064	45	3.03