

Table SI. Top 30 genes with increased expression following drug administration in T24 cells.

Gene Symbol	baseMean	log ₂ FoldChange	P-value	Regulation
SNORD3A	269.3567	7.427850859	4.228×10 ⁻⁵¹	Up
RTBDN	164.2857	5.178619868	1.343×10 ⁻⁴²	Up
CYP1A1	213.3485	5.159484762	1.001×10 ⁻⁶⁷	Up
TMEM59L	493.8279	4.829709488	4.988×10 ⁻⁵³	Up
ANGPTL4	147.79	4.685439079	9.900×10 ⁻⁵³	Up
TGFBI	1147.838	4.655577558	2.979×10 ⁻¹³⁵	Up
DHRS2	241.8156	4.584216808	2.786×10 ⁻⁷²	Up
CRLF1	412.8227	4.34266648	6.969×10 ⁻⁵⁷	Up
H1-2	1437.297	4.305817142	1.042×10 ⁻¹⁴⁹	Up
PMEL	175.6108	4.160130745	3.091×10 ⁻⁵⁸	Up
KLRC2	123.3127	3.972189069	3.810×10 ⁻³⁴	Up
SERPINB7	618.9671	3.931711422	1.616×10 ⁻⁵⁶	Up
SLC29A4	200.5833	3.91779084	8.099×10 ⁻³³	Up
PCSK1N	154.758	3.667083124	4.746×10 ⁻³⁷	Up
SYP	150.3304	3.613976879	2.894×10 ⁻⁴⁰	Up
MIR210HG	147.2965	3.551313416	1.280×10 ⁻⁴²	Up
GOLGA7B	147.9875	3.511399168	1.104×10 ⁻³⁵	Up
CPA4	652.5317	3.497556988	4.877×10 ⁻⁷⁵	Up
CLU	595.6684	3.474019376	2.904×10 ⁻³⁵	Up
EGR1	6839.261	3.45796925	3.901×10 ⁻⁶	Up
SPA17	211.6236	3.419640705	2.217×10 ⁻⁵⁰	Up
REEP6	185.0888	3.387957045	5.417×10 ⁻³⁰	Up
KRTAP2-3	173.2655	3.356216916	3.844×10 ⁻³¹	Up
ALDOC	800.8559	3.332115039	1.203×10 ⁻⁶⁶	Up
TRAPPC6A	224.6041	3.308837436	4.308×10 ⁻⁴⁴	Up
KRT15	193.3915	3.221075151	4.552×10 ⁻⁴⁶	Up
RPS10-NUDT3	120.8863	3.203781583	3.476×10 ⁻³⁵	Up
HCFC1R1	1526.997	3.144508223	7.197×10 ⁻⁶⁸	Up
FAM229B	391.426	3.130258334	3.677×10 ⁻⁵³	Up
LINC00460	106.8678	3.127835067	6.015×10 ⁻²⁴	Up

Table SII. Top30 genes with reduced expression after drug administration in T24 cells.

Gene Symbol	baseMean	log ₂ FoldChange	P-value	Regulation
ERFE	496.7322	-3.533838738	3.033×10 ⁻⁵⁶	Down
UNC5B	126.5911	-3.528489298	4.470×10 ⁻³⁴	Down
MIR503HG	321.98	-3.406050859	2.175×10 ⁻⁵⁵	Down
SHISA3	140.6715	-3.325891714	7.950×10 ⁻³⁸	Down
KCTD15	144.8561	-3.243344022	3.868×10 ⁻³²	Down
STAT5A	162.0547	-3.236865759	5.692×10 ⁻³⁹	Down
THBD	1988.54	-3.010168664	3.598×10 ⁻⁹	Down
ADM2	656.5779	-2.990315607	9.812×10 ⁻⁴²	Down
IRF7	370.9707	-2.977859071	3.508×10 ⁻⁴⁰	Down
SYNE3	545.5686	-2.954074917	3.321×10 ⁻⁴⁹	Down
LRATD2	159.8801	-2.950635488	2.765×10 ⁻²⁸	Down
COCH	139.337	-2.944226943	2.329×10 ⁻³⁰	Down
OAS2	257.4526	-2.582881692	1.279×10 ⁻³⁴	Down
PPL	281.1094	-2.496690394	1.171×10 ⁻²⁶	Down
ABCC9	243.2568	-2.475418001	2.936×10 ⁻²¹	Down
MCOLN3	146.9624	-2.413766615	3.242×10 ⁻²²	Down
PHF21B	170.057	-2.397378811	3.582×10 ⁻²¹	Down
DMTN	366.4386	-2.395575953	1.174×10 ⁻²⁶	Down
ESM1	341.357	-2.35937347	1.012×10 ⁻¹⁷	Down
IL27RA	227.6516	-2.354335766	6.594×10 ⁻³¹	Down
GADD45A	1901.912	-2.338096989	2.185×10 ⁻³⁶	Down
ADAM8	256.3733	-2.313793559	1.375×10 ⁻²⁵	Down
ANO9	105.1682	-2.294052642	1.971×10 ⁻¹⁵	Down
KLF4	446.4819	-2.281552857	1.450×10 ⁻²⁵	Down
PHF11	120.2819	-2.234614831	2.577×10 ⁻¹⁹	Down
PXDN	404.7345	-2.230758062	1.253×10 ⁻²⁴	Down
IRX2	102.2559	-2.22530773	5.951×10 ⁻⁵	Down
ZBED3	124.4531	-2.204288197	5.737×10 ⁻¹⁸	Down
HEY1	212.5886	-2.143008838	1.932×10 ⁻²⁴	Down
TNC	1241.96	-2.131338668	4.501×10 ⁻²⁷	Down

Table SIII. Top30 genes with increased expression after drug administration in T24-EGFR-OE cells.

GeneSymbol	baseMean	log ₂ FoldChange	P-value	Regulation
SNORD3A	269.3567	7.427850859	4.228×10 ⁻⁵¹	Up
RTBDN	164.2857	5.178619868	1.343×10 ⁻⁴²	Up
CYP1A1	213.3485	5.159484762	1.001×10 ⁻⁶⁷	Up
TMEM59L	493.8279	4.829709488	4.988×10 ⁻⁵³	Up
ANGPTL4	147.79	4.685439079	9.900×10 ⁻⁵³	Up
TGFBI	1147.838	4.655577558	2.979×10 ⁻¹³⁵	Up
DHRS2	241.8156	4.584216808	2.786×10 ⁻⁷²	Up
CRLF1	412.8227	4.34266648	6.969×10 ⁻⁵⁷	Up
H1-2	1437.297	4.305817142	1.043×10 ⁻¹⁴⁹	Up
PMEL	175.6108	4.160130745	3.091×10 ⁻⁵⁸	Up
KLRC2	123.3127	3.972189069	3.810×10 ⁻³⁴	Up
SERPINB7	618.9671	3.931711422	1.616×10 ⁻⁵⁶	Up
SLC29A4	200.5833	3.91779084	8.099×10 ⁻³³	Up
PCSK1N	154.758	3.667083124	4.746×10 ⁻³⁷	Up
SYP	150.3304	3.613976879	2.894×10 ⁻⁴⁰	Up
MIR210HG	147.2965	3.551313416	1.280×10 ⁻⁴²	Up
GOLGA7B	147.9875	3.511399168	1.104×10 ⁻³⁵	Up
CPA4	652.5317	3.497556988	4.877×10 ⁻⁷⁵	Up
CLU	595.6684	3.474019376	2.904×10 ⁻³⁵	Up
EGR1	6839.261	3.45796925	3.901×10 ⁻⁶	Up
SPA17	211.6236	3.419640705	2.217×10 ⁻⁵⁰	Up
REEP6	185.0888	3.387957045	5.417×10 ⁻³⁰	Up
KRTAP2-3	173.2655	3.356216916	3.844×10 ⁻³¹	Up
ALDOC	800.8559	3.332115039	1.203×10 ⁻⁶⁶	Up
TRAPPC6A	224.6041	3.308837436	4.308×10 ⁻⁴⁴	Up
KRT15	193.3915	3.221075151	4.552×10 ⁻⁴⁶	Up
RPS10-NUDT3	120.8863	3.203781583	3.476×10 ⁻³⁵	Up
HCFC1R1	1526.997	3.144508223	7.197×10 ⁻⁶⁸	Up
FAM229B	391.426	3.130258334	3.677×10 ⁻⁵³	Up
LINC00460	106.8678	3.127835067	6.015×10 ⁻²⁴	Up

Table SIV. Top30 genes with reduced expression after drug administration in T24-EGFFR-OE cells.

GeneSymbol	baseMean	log ₂ FoldChange	P-value	Regulation
PAPPA2	118.6635	-4.258213496	5.129×10 ⁻³⁶	Down
IL1RL1	366.0331	-3.895848064	4.283×10 ⁻⁵⁶	Down
ALDH1L2	168.8048	-3.470290191	6.452×10 ⁻³⁶	Down
ERFE	489.9617	-3.447012612	1.305×10 ⁻³⁵	Down
SYNE3	555.4826	-3.283045386	6.242×10 ⁻⁴³	Down
COCH	169.0518	-3.183226671	2.025×10 ⁻⁴⁰	Down
THBD	1649.786	-3.107105252	1.131×10 ⁻²⁴	Down
ABCC9	376.8961	-3.071891065	9.296×10 ⁻³⁰	Down
IRF7	239.4337	-2.871235829	6.201×10 ⁻²¹	Down
LRATD2	201.6394	-2.817802174	1.944×10 ⁻³⁷	Down
OBSCN	110.522	-2.738770346	6.381×10 ⁻²²	Down
CTSS	128.3144	-2.733434609	3.309×10 ⁻²⁰	Down
ADM2	496.4556	-2.731615914	3.663×10 ⁻²²	Down
PXDN	527.284	-2.723966283	1.076×10 ⁻²²	Down
GADD45A	2905.997	-2.6566432	7.261×10 ⁻³⁷	Down
STAT5A	151.403	-2.655624294	6.620×10 ⁻²³	Down
EDNRA	117.1854	-2.588459945	4.609×10 ⁻²¹	Down
MIR503HG	298.8073	-2.587362744	7.965×10 ⁻³⁸	Down
ADAM8	326.885	-2.517290903	3.774×10 ⁻¹⁵	Down
MCOLN3	175.8159	-2.506055753	2.089×10 ⁻¹⁹	Down
IRX2	113.2234	-2.50503829	8.751×10 ⁻¹⁶	Down
UNC5B	206.0739	-2.492158554	1.056×10 ⁻¹⁶	Down
KCNS1	213.5114	-2.428296548	4.600×10 ⁻²⁰	Down
FGF2	1538.252	-2.40005495	1.157×10 ⁻²⁶	Down
FOXO3B	134.4406	-2.32505397	1.758×10 ⁻¹⁴	Down
ZBED3	115.8782	-2.305311572	2.786×10 ⁻¹³	Down
ZXDB	292.43	-2.300955592	8.147×10 ⁻²⁷	Down
FOXL2NB	127.746	-2.290109999	7.3899×10 ⁻¹⁸	Down
LRRC37A4P	121.3136	-2.261845806	1.123×10 ⁻²⁰	Down
KLF4	303.0248	-2.210748479	4.695×10 ⁻¹⁷	Down

Table SV. Nanodrop 2000 detected RNA concentration.

Number	Sample	Volume (μl)	Concentration		A260/280	Grade
			($\text{ng}/\mu\text{L}$)	Mass (μg)		
1	T24-CON-1	40	637.1	25.48	2.04	A
2	T24-CON-2	40	818.9	32.76	2.02	A
3	T24-CON-3	40	593.7	23.75	2.04	A
4	T24-EXP-1	40	477	19.08	1.99	A
5	T24-EXP-2	40	417.9	16.72	1.99	A
6	T24-EXP-3	40	622.7	24.91	2.08	A
7	OE-CON-1	40	963.1	38.52	2.06	A
8	OE-CON-2	40	986.9	39.48	2.06	A
9	OE-CON-3	40	862.6	34.5	2.04	A
10	OE-EXP-1	40	597.2	23.89	2.04	A
11	OE-EXP-2	40	618.6	24.74	2.06	A
12	OE-EXP-3	40	528.2	21.13	2.06	A

Table VI. Data quality statistics of the sample.

Sample	Length	Reads	Bases	Q20 (%)	Q30 (%)	GC (%)	N (ppm)
T24-CON-1	144.98	43,208,194	6,264,260,218	98.07	94.53	50.86	6.56
T24-CON-2	144.25	44,700,036	6,448,134,465	97.93	94.14	50.10	6.11
T24-CON-3	145.75	55,387,430	8,072,707,209	97.91	94.07	50.49	6.17
T24-EXP-1	143.77	50,737,738	7,294,725,758	98.09	94.59	52.68	6.11
T24-EXP-2	144.08	42,751,224	6,159,752,692	98.13	94.66	52.35	6.51
T24-EXP-3	143.49	50,188,860	7,201,736,968	98.27	94.95	50.50	6.12
OE-CON-1	144.37	52,923,316	7,640,586,342	97.99	94.26	50.38	6.06
OE-CON-2	142.73	51,066,052	7,288,848,984	98.02	94.36	50.06	6.18
OE-CON-3	143.98	43,273,412	6,230,380,045	98.05	94.49	51.76	6.53
OE-EXP-1	145.63	53,434,986	7,781,682,118	98.16	94.71	51.69	6.18
OE-EXP-2	146.24	45,884,350	6,710,108,649	97.66	93.55	52.13	6.10
OE-EXP-3	147.85	49,318,016	7,291,599,048	98.07	94.46	52.25	5.96