

Table S1 Proliferation rate (mean \pm standard deviation) of other cancer cells (HepG2, HuH7, Hep3B, TFK-1, and RBE) after ST treatment

Cell lines	24 h proliferation rate (%)				48 h proliferation rate (%)			
	0 μ M	20 μ M	40 μ M	80 μ M	0 μ M	20 μ M	40 μ M	80 μ M
Huh7	100.0 \pm 6.2	96.4 \pm 4.2	93.5 \pm 6.8	85.2 \pm 6.8	100.0 \pm 8.3	92.2 \pm 4.6	84.5 \pm 6.2	75.4 \pm 3.1
Hep3B	100.0 \pm 9.3	99.4 \pm 6.4	95.9 \pm 4.8	90.1 \pm 3.4	100.0 \pm 5.2	94.4 \pm 2.4	84.1 \pm 7.1	71.9 \pm 4.2
HepG2	100.0 \pm 7.4	103.4 \pm 6.5	97.4 \pm 4.1	93.2 \pm 3.9	100.0 \pm 6.7	91.3 \pm 3.9	83.4 \pm 6.2	72.3 \pm 4.7
TFK-1	100.0 \pm 4.3	99.1 \pm 3.8	99.4 \pm 5.5	92.1 \pm 3.1	100.0 \pm 5.8	96.5 \pm 4.3	90.6 \pm 5.5	81.2 \pm 4.8
RBE	100.0 \pm 3.1	98.2 \pm 2.9	96.5 \pm 3.7	90.2 \pm 6.1	100.0 \pm 4.8	95.1 \pm 2.2	91.1 \pm 4.3	82.9 \pm 6.2

Table S2 Differentially expressed genes between the DMSO and ST treatment groups

ID	logFC	AveExpr	t	P.Value	B
CCL20	2.27204	4.311156	4.731326	0.004674	-1.54879
DDIT3	2.187731	6.453646	3.765376	0.012142	-2.51077
SESN2	2.178722	5.615307	4.186065	0.00788	-2.07191
BEX2	2.070522	2.69016	3.335069	0.019437	-2.9918
CSTA	1.956998	1.998668	3.420244	0.017668	-2.89405
VSTM1	1.947008	2.541876	3.095917	0.025567	-3.27266
CXCL8	1.74381	4.30929	2.737948	0.03918	-3.70917
ANKRD1	1.686594	1.697251	2.993806	0.02882	-3.39532
H2AC8	1.632253	3.318004	2.979161	0.029323	-3.41304
SMPD1	1.624774	5.576406	4.051686	0.009021	-2.2087
H4C8	1.618538	2.351247	2.687461	0.041675	-3.77209
H2BC4	1.608081	4.496623	4.492228	0.005847	-1.77195
LMO2	1.553448	2.390835	4.430256	0.006204	-1.83137
OSGIN1	1.545793	4.451013	3.395771	0.018157	-2.92201
SERPINB8	1.502846	2.693821	3.078757	0.026084	-3.29317
CHAC1	1.502082	5.929347	4.958398	0.003805	-1.34556
GLIPR2	1.475819	4.18295	5.457937	0.002476	-0.92693
ETFRF1	1.456551	3.840797	2.836702	0.03476	-3.587
MXD4	1.452658	4.864521	3.36494	0.018795	-2.95738
HMOX1	1.450363	6.716286	2.966155	0.029779	-3.42881
EGR1	1.448895	2.616453	2.668849	0.042638	-3.79536
ABTB1	1.444821	3.130521	2.695912	0.041246	-3.76154
TRIB3	1.422936	6.821997	4.04716	0.009062	-2.21336
WSCD1	1.396538	1.598425	3.289097	0.020475	-3.04507
SERPINI1	1.389437	2.813088	2.923148	0.03134	-3.4811
NGFR	1.389194	1.988147	3.258997	0.021187	-3.08013
SERTAD1	1.389142	5.284962	2.984347	0.029144	-3.40677
CHMP4C	1.354242	2.86117	4.491951	0.005849	-1.77222
EVI5L	1.354228	3.745616	3.984707	0.009659	-2.27807
HMG5	1.347937	2.460601	3.359383	0.018913	-2.96377
METTL7B	1.34612	2.954947	3.522399	0.015781	-2.77845
ZNF419	1.331389	3.686934	2.714416	0.040322	-3.73846

SRXN1	1.321169	6.307931	3.743079	0.012433	-2.5349
CGB8	1.314429	1.532193	3.14671	0.024103	-3.21224
AAMDC	1.295457	6.599841	3.595235	0.014574	-2.69712
CDRT4	1.294468	1.322854	4.079093	0.008773	-2.18054
CBWD5	1.287134	5.136673	3.884463	0.010714	-2.38337
FAM229B	1.282957	7.370685	2.968053	0.029712	-3.42651
LOC102724770	1.282257	5.652646	2.87515	0.033191	-3.53978
RAB39B	1.276772	2.293279	3.715205	0.012808	-2.56519
SLC7A11	1.275929	2.27447	3.690016	0.013157	-2.59268
PPP1R15A	1.27411	5.546317	2.842634	0.034513	-3.5797
HSPB8	1.261788	3.368188	3.307572	0.02005	-3.02362
LEPROT	1.260082	4.778096	3.375179	0.01858	-2.94562
HERPUD1	1.260035	4.924656	4.24318	0.007445	-2.01472
H2AC7	1.254873	4.058675	3.196224	0.022765	-3.15374
TM4SF19	1.243114	5.016856	3.270985	0.0209	-3.06615
LY96	1.235657	1.910506	2.613836	0.045631	-3.86436
ZNF780A	1.231768	3.856956	2.84349	0.034477	-3.57865
ZNF226	1.230814	4.08568	2.610555	0.045816	-3.86848
MORN2	1.226653	6.131108	3.021007	0.027911	-3.3625
TNF	1.219455	2.518105	3.630551	0.014027	-2.65802
CBWD6	1.212568	4.122939	3.432797	0.017423	-2.87975
CDKN1A	1.195811	7.495157	3.349066	0.019133	-2.97566
CRYL1	1.152383	5.386176	4.600939	0.005276	-1.6693
CXCL3	1.14499	2.608261	3.812165	0.011557	-2.46042
PLK3	1.13863	3.509639	2.879582	0.033015	-3.53435
SLC17A7	1.129402	1.90819	4.903689	0.003996	-1.39376
CLGN	1.128848	2.062467	2.959076	0.03003	-3.4374
ATF3	1.121194	4.511578	2.836129	0.034784	-3.58771
H2AC6	1.114329	5.655435	4.12065	0.008413	-2.1381
PPP4R4	1.112749	2.10968	3.590102	0.014656	-2.70283
TSPAN33	1.109406	3.701713	4.177789	0.007945	-2.08024
SEL1L3	1.1042	1.050471	3.076651	0.026148	-3.29569
ASNS	1.099268	7.209186	5.380923	0.00264	-0.98901
LMF1	1.098576	2.706633	3.140183	0.024286	-3.21999
TRAF1	1.083046	3.697289	4.890819	0.004043	-1.40517
IFITM10	1.082477	2.233134	3.084717	0.025903	-3.28604
GADD45A	1.077276	4.977931	2.911888	0.031764	-3.49484
MPC1	1.072754	4.626306	3.271682	0.020884	-3.06534
H2AC21	1.065947	0.710631	2.958728	0.030042	-3.43782
BLOC1S2	1.057003	3.321991	3.123823	0.024751	-3.23942
PTX3	1.054477	2.413914	3.506123	0.016065	-2.79675
H2BC5	1.053763	5.539526	3.572553	0.014938	-2.72235
CALHM6	1.052959	1.207863	3.090924	0.025716	-3.27862
UAP1	1.048281	4.536363	3.698322	0.013041	-2.58361
TUBE1	1.047423	4.018869	3.72191	0.012716	-2.55789
IFT20	1.037429	4.717317	2.592899	0.046829	-3.8907
PLAAT3	1.030112	4.931274	4.40068	0.006384	-1.85995
TNFRSF12A	1.022102	9.685506	3.417195	0.017728	-2.89753
CD82	1.019314	3.992295	4.022609	0.009292	-2.23872
UBE2W	1.013196	2.139976	3.007201	0.028368	-3.37914

NDUFA4	1.012714	8.144502	2.741806	0.038996	-3.70438
ASDURF	1.011897	3.142381	2.638267	0.044274	-3.83368
SMIM29	1.01161	6.744834	3.982268	0.009683	-2.28061
ITPKC	1.006387	3.724902	2.965336	0.029807	-3.4298
ABHD16A	1.006095	5.209587	3.177992	0.023248	-3.17524
DHRS2	1.002312	2.128792	3.242408	0.021592	-3.09952
RPS6KA2	1.001818	1.342085	2.8879	0.032688	-3.52416
COL11A1	-1.0017	1.445507	-3.96409	0.009866	-2.29959
PALM	-1.00277	3.562673	-3.85521	0.011046	-2.41444
RAP1GAP2	-1.00611	2.829393	-6.02056	0.001578	-0.49897
PSPC1	-1.00735	3.986919	-2.94182	0.030651	-3.45837
ADM	-1.01037	4.648584	-5.73132	0.001981	-0.71349
C19orf25	-1.01179	4.664937	-3.27454	0.020816	-3.06201
CD24	-1.01195	1.288419	-7.89605	0.000434	0.650687
MCM5	-1.01619	5.521586	-2.77768	0.037332	-3.65988
NRM	-1.02299	4.866351	-3.59685	0.014548	-2.69533
LRFN1	-1.02612	4.651136	-3.41016	0.017868	-2.90556
PGGHG	-1.02721	2.305485	-4.16629	0.008037	-2.09183
RARG	-1.02966	4.516652	-4.93763	0.003876	-1.36379
CHI3L2	-1.03405	1.502807	-6.53334	0.001076	-0.14532
ARL4C	-1.03583	3.551251	-5.02468	0.003588	-1.28779
HAS3	-1.03639	1.340574	-6.32855	0.00125	-0.28262
CCDC51	-1.03805	4.680543	-3.73216	0.012578	-2.54675
PMEPA1	-1.03861	3.508569	-5.18925	0.003108	-1.14735
MCM2	-1.04331	5.326142	-2.66507	0.042837	-3.80009
ADRA1B	-1.04356	4.918809	-9.3447	0.00019	1.313178
SH3BP1	-1.04374	2.270665	-3.37636	0.018556	-2.94427
GATD3A	-1.04409	1.932923	-2.77237	0.037573	-3.66646
ARHGEF16	-1.0459	3.263346	-3.25086	0.021385	-3.08964
THOC6	-1.05134	5.100222	-4.14137	0.00824	-2.11706
GSN	-1.05316	7.758712	-5.45866	0.002474	-0.92635
UNG	-1.05424	5.334742	-2.62474	0.04502	-3.85065
MTMR11	-1.05513	2.149536	-4.0877	0.008697	-2.17173
GGT5	-1.05913	1.166121	-5.02894	0.003574	-1.28411
GJB2	-1.05973	2.718326	-3.27037	0.020915	-3.06687
CCDC106	-1.06386	5.823817	-4.43845	0.006156	-1.82347
NOTCH4	-1.06702	1.059464	-4.8369	0.004244	-1.45326
PTMA	-1.07393	9.25978	-2.62811	0.044833	-3.84642
OOEP	-1.07404	2.506014	-4.86825	0.004126	-1.42524
IGFBP6	-1.07415	3.712377	-6.02735	0.00157	-0.49407
NGEF	-1.07735	3.90835	-4.8848	0.004064	-1.41051
LIG1	-1.07768	3.894903	-2.96192	0.029929	-3.43395
C2CD4C	-1.07782	1.239508	-3.77364	0.012036	-2.50184
NR4A2	-1.07871	1.428975	-3.37234	0.01864	-2.94888
SLC29A1	-1.08144	6.749359	-3.7724	0.012052	-2.50318
CLIC3	-1.08647	2.741221	-2.96489	0.029823	-3.43034
ALYREF	-1.09235	8.0976	-4.01241	0.009389	-2.24928
CHD5	-1.09962	2.944624	-4.61961	0.005185	-1.65187
CTXN1	-1.10239	5.687087	-4.87538	0.004099	-1.41889
ISYNA1	-1.10549	7.164466	-3.91543	0.010375	-2.35065

P2RX5	-1.10711	2.75017	-4.92688	0.003914	-1.37327
TAGLN2	-1.1081	9.627121	-4.83672	0.004245	-1.45342
TNFAIP8L1	-1.10855	2.464802	-5.48782	0.002415	-0.90308
COL5A2	-1.10921	3.991316	-3.12941	0.024591	-3.23278
CRIP2	-1.11444	8.004184	-5.32119	0.002777	-1.03776
CCDC103	-1.11701	1.244762	-5.96031	0.001653	-0.54273
MYEOV	-1.12153	6.298107	-5.60148	0.0022	-0.81353
ZMYND10	-1.12292	1.381709	-5.73944	0.001968	-0.70731
TM4SF18	-1.12616	3.227474	-3.82454	0.011407	-2.44716
UBE2C	-1.12904	7.956073	-2.73797	0.039179	-3.70915
CAV1	-1.13034	5.518068	-2.99163	0.028894	-3.39796
E2F2	-1.13382	2.135161	-2.9625	0.029908	-3.43324
ARHGEF39	-1.13459	4.404863	-3.14444	0.024166	-3.21494
MUC1	-1.14182	2.092224	-4.47959	0.005918	-1.78402
TESMIN	-1.14256	1.598101	-5.28656	0.002859	-1.06627
CITED2	-1.14367	5.337265	-3.44691	0.017152	-2.8637
TYMSOS	-1.14394	2.595943	-3.70303	0.012975	-2.57847
CDC45	-1.14601	4.031252	-2.86554	0.033576	-3.55157
PKMYT1	-1.15081	5.446651	-2.76225	0.038038	-3.679
HCFC1R1	-1.15765	6.523417	-6.45083	0.001143	-0.20003
PLEKHN1	-1.15939	1.7824	-6.11291	0.00147	-0.43282
EFEMP1	-1.15981	2.367872	-3.10387	0.025331	-3.26317
CD55	-1.16245	4.886129	-5.75206	0.001948	-0.69772
SAPCD2	-1.16313	3.460809	-4.17717	0.00795	-2.08086
MMACHC	-1.1643	2.781248	-4.23245	0.007525	-2.02542
PRSS23	-1.16592	6.321051	-5.96945	0.001642	-0.53606
FAM43A	-1.17277	3.966397	-7.28778	0.00064	0.319047
PDGFB	-1.17305	4.395861	-4.749	0.004599	-1.53267
MCM7	-1.18199	7.059317	-2.8429	0.034502	-3.57938
GRIN2D	-1.18482	1.773329	-4.56158	0.005475	-1.70624
DIPK1B	-1.18568	3.866274	-3.29986	0.020226	-3.03256
RIBC2	-1.18626	1.416754	-3.61684	0.014236	-2.67317
MGAT5B	-1.19154	3.655404	-4.23528	0.007504	-2.02259
CD44	-1.19282	7.973285	-3.2568	0.02124	-3.0827
CEND1	-1.19382	4.227492	-3.33378	0.019466	-2.9933
RAB26	-1.19535	4.464609	-3.91126	0.01042	-2.35505
IRX3	-1.19673	3.052498	-6.70786	0.00095	-0.03225
NPTX1	-1.19934	2.097183	-7.01817	0.000766	0.160249
CTRL	-1.2025	2.087279	-3.31793	0.019817	-3.01162
PDE4B	-1.2046	1.853594	-3.06388	0.026541	-3.31097
NR2F1	-1.20822	2.940958	-3.20089	0.022644	-3.14825
RNF182	-1.22033	3.164644	-4.18861	0.00786	-2.06934
AURKA	-1.23318	5.425851	-2.55066	0.049352	-3.94396
SOX18	-1.23828	1.802286	-5.64319	0.002126	-0.78113
SDC1	-1.24043	5.280592	-4.48388	0.005894	-1.77992
PKP3	-1.25095	4.925351	-5.02996	0.003571	-1.28323
UGDH	-1.26755	3.219181	-5.43684	0.002519	-0.94385
WDR4	-1.27418	4.204124	-3.55069	0.015299	-2.74675
SLC25A10	-1.2759	6.405418	-2.95143	0.030303	-3.44668
RNF208	-1.27759	2.697518	-6.42611	0.001164	-0.21657

CHDH	-1.28844	1.374753	-5.59942	0.002203	-0.81514
PLPPR3	-1.28998	3.126725	-6.25653	0.001319	-0.33214
BEGAIN	-1.29252	3.070641	-7.17026	0.000692	0.250764
ENO3	-1.30264	2.643952	-5.06171	0.003473	-1.25583
ANPEP	-1.32111	6.257453	-3.53769	0.015518	-2.7613
MAP7	-1.32909	2.575488	-4.18131	0.007917	-2.07669
TP53I11	-1.33136	3.902451	-10.592	0.000102	1.76805
CPNE7	-1.33179	2.860568	-3.44473	0.017193	-2.86618
SCARA3	-1.3452	2.718511	-4.9531	0.003823	-1.35021
SUSD2	-1.35325	2.624765	-19.5671	4.47E-06	3.403991
PPP1R14A	-1.35785	9.286301	-4.81526	0.004328	-1.47269
SYT12	-1.35939	2.914845	-5.54752	0.002299	-0.85581
LOC112694756	-1.37193	4.966042	-5.41473	0.002566	-0.96165
SCG2	-1.39256	0.936188	-7.97205	0.000414	0.689697
UCP2	-1.39676	4.60506	-4.9517	0.003828	-1.35143
UHRF1	-1.41948	3.486629	-2.86709	0.033513	-3.54966
SEMA6B	-1.42259	3.421784	-3.06841	0.026401	-3.30556
TNC	-1.4486	1.755119	-6.63311	0.001002	-0.08024
TNS3	-1.4604	3.172736	-3.82227	0.011434	-2.44959
KRT8	-1.46112	8.21251	-6.38232	0.001202	-0.24608
CDA	-1.47956	4.523268	-5.10268	0.00335	-1.22071
LDHA	-1.49667	9.511987	-3.17103	0.023435	-3.18346
DKK1	-1.52173	5.004414	-3.0402	0.027288	-3.3394
CDCA7	-1.52599	2.207915	-4.58035	0.005379	-1.68859
SGK1	-1.53856	4.194493	-4.29627	0.007066	-1.96207
YBX2	-1.54847	4.207082	-4.82069	0.004307	-1.46781
NR4A1	-1.60199	3.256992	-5.61727	0.002172	-0.80124
RASL11A	-1.64321	3.33426	-6.63274	0.001002	-0.08048
KRT81	-1.65647	1.238555	-5.20397	0.003069	-1.135
CCN5	-1.66042	2.776224	-5.48063	0.002429	-0.90881
MISP	-1.68522	3.815992	-3.72258	0.012707	-2.55716
SECTM1	-1.78504	4.706779	-4.21323	0.00767	-2.04464
AGR2	-1.84904	5.045295	-2.67296	0.042424	-3.79022
KRT80	-1.88776	5.289995	-4.68619	0.004873	-1.59019
KCNIP3	-1.90049	2.140015	-8.5975	0.000286	0.991937
B3GNT7	-1.90174	2.299632	-14.4499	2.12E-05	2.724278
STMN3	-1.93409	3.24631	-7.07804	0.000736	0.196175
B4GALNT4	-1.99716	2.881024	-3.59851	0.014522	-2.69348
IL17RB	-2.07372	1.673767	-4.8094	0.004352	-1.47797
PLCH2	-2.22619	3.308441	-4.39158	0.00644	-1.86878
PADI2	-2.30089	1.926317	-15.9815	1.26E-05	2.977732
CRABP2	-2.34175	5.535182	-7.15873	0.000697	0.243991
IGFBP4	-2.43333	5.940887	-6.04017	0.001554	-0.48483
