

Table S1: List of upregulated genes in response to activation of LAD2 cells by A549-TMV (fold change, >1.5; P < 0.05.)

Gene name	Fold change	P-value
WARS	4.81682	1.20E-123
EGR1	4.747762	4.72E-23
EGR3	3.672329	9.11E-16
NR4A3	3.237475	1.34E-13
KLHDC7B	3.140831	9.71E-13
SLC7A11	2.844831	4.89E-11
CCL4	2.829609	1.80E-10
AC018413.1	2.679487	1.42E-09
CCL18	2.596566	2.72E-20
TRIB3	2.574964	9.31E-15
SNHG7	2.55128	1.06E-49
FOSB	2.534071	1.13E-08
ATF4	2.528172	1.35E-86
CCL4L2	2.519323	8.19E-09
SELENOM	2.489205	2.97E-14
EPB41L4A-AS1	2.458576	2.67E-22
MAP1LC3A	2.447241	2.76E-12
LINC02365	2.44588	3.59E-16
ZNF581	2.435573	3.20E-16
CCL3L1	2.433458	3.20E-08
PCDHB15	2.395269	2.31E-08
DDIT3	2.369201	3.48E-16
EGR2	2.356106	5.40E-08
HIST3H2A	2.344537	6.51E-31
CFAP70	2.328838	2.07E-07
GARS	2.327175	2.56E-42
RGS20	2.323101	1.50E-07
CCPG1	2.284361	6.68E-17
BIRC3	2.258823	9.97E-11
ATF3	2.225794	4.19E-07
C6orf48	2.219108	1.12E-42
FCRLA	2.210092	3.09E-07
PSAT1	2.18568	1.42E-06
C5orf47	2.183919	1.30E-12
DAAM1	2.180419	3.59E-09
SLC3A2	2.175255	4.18E-18
LINC01873	2.168777	9.62E-12
AKAP5	2.168704	1.64E-08
CADM1	2.130143	9.89E-13
TMEM45A	2.113973	3.19E-07
BEX2	2.099039	3.14E-31
AC087473.1	2.096212	4.26E-13
AC131649.2	2.084935	2.68E-07
RASEF	2.079836	1.01E-06

<b>XPOT</b>	2.074602	5.73E-14
<b>CCDC18-AS1</b>	2.071087	9.08E-14
<b>PLIN2</b>	2.051607	4.49E-28
<b>RSL24D1</b>	2.043412	8.91E-29
<b>BMP7</b>	2.012223	9.57E-09
<b>AC006548.3</b>	2.006746	2.50E-10
<b>CCL3</b>	2.00189	4.79E-06
<b>PRNP</b>	2.001033	4.99E-06
<b>IER3</b>	1.992283	5.24E-09
<b>PCK2</b>	1.985291	4.53E-07
<b>YPEL4</b>	1.982208	2.57E-05
<b>GAS5</b>	1.979888	2.04E-27
<b>CTSF</b>	1.97523	3.57E-10
<b>EVI2A</b>	1.972849	5.87E-23
<b>CEBPB</b>	1.971092	1.02E-21
<b>MTHFD2</b>	1.954214	1.12E-28
<b>LRRC75A</b>	1.953826	1.39E-07
<b>CA5A</b>	1.936203	3.53E-11
<b>SPACA3</b>	1.933486	3.54E-05
<b>TNFRSF12A</b>	1.932322	2.18E-06
<b>RASGEF1B</b>	1.926406	7.75E-06
<b>PTGS2</b>	1.919871	5.47E-05
<b>AC093627.4</b>	1.919831	5.82E-05
<b>UBXN1</b>	1.913741	1.32E-27
<b>SNHG8</b>	1.913723	1.02E-18
<b>LY96</b>	1.912752	4.87E-05
<b>LRRC75A-AS1</b>	1.899769	5.17E-12
<b>TNF</b>	1.899733	6.20E-06
<b>SPP1</b>	1.895489	2.12E-05
<b>SARS</b>	1.894817	1.22E-32
<b>BFSP1</b>	1.885954	9.34E-05
<b>CRISPLD1</b>	1.88539	6.24E-05
<b>AC021242.3</b>	1.879448	0.000107096
<b>AC068448.1</b>	1.876629	5.81E-05
<b>CSNK2A2</b>	1.872943	6.55E-18
<b>GPR34</b>	1.867772	4.82E-13
<b>DUSP4</b>	1.865189	2.28E-19
<b>Z99755.3</b>	1.864255	6.75E-13
<b>HS3ST2</b>	1.862199	7.77E-12
<b>AC099550.1</b>	1.860596	1.03E-05
<b>AC005632.4</b>	1.857766	1.05E-06
<b>AC074349.1</b>	1.8557	3.30E-10
<b>XIRP1</b>	1.851535	7.82E-06
<b>SPRY2</b>	1.833385	0.000179215
<b>LINC00506</b>	1.828317	0.000187719
<b>PIGN</b>	1.827877	1.37E-07
<b>MIPOL1</b>	1.821275	6.35E-07
<b>DPH5</b>	1.8166	1.92E-15

<b>GZMB</b>	1.816203	6.91E-06
<b>KCNQ1OT1</b>	1.810482	2.81E-07
<b>FOS</b>	1.807978	9.63E-05
<b>TNFRSF4</b>	1.80637	0.000110389
<b>SLC7A1</b>	1.799737	1.37E-07
<b>LINC00504</b>	1.793325	6.53E-29
<b>UGDH-AS1</b>	1.793181	0.000163715
<b>BIRC7</b>	1.792677	8.82E-12
<b>TCTEX1D2</b>	1.791659	0.00033216
<b>IRS2</b>	1.79098	3.01E-07
<b>IGBP1</b>	1.790358	1.35E-20
<b>PHLDA1</b>	1.784328	0.000380915
<b>BBC3</b>	1.784262	1.50E-11
<b>C4orf32</b>	1.782558	1.49E-05
<b>ZFAS1</b>	1.78109	4.29E-13
<b>TBC1D8B</b>	1.779953	1.93E-07
<b>AC019322.4</b>	1.779861	3.62E-06
<b>AL356056.1</b>	1.776183	1.09E-06
<b>EIF1</b>	1.775985	2.59E-30
<b>GBP2</b>	1.773753	1.47E-05
<b>IL18</b>	1.756892	7.87E-21
<b>KLHL24</b>	1.747089	2.89E-09
<b>AC007333.2</b>	1.745276	0.00022248
<b>HMP19</b>	1.74261	0.000534821
<b>AL954642.1</b>	1.741974	0.000614701
<b>MARS</b>	1.741904	1.28E-17
<b>AC093525.6</b>	1.739609	0.000461334
<b>AC025048.2</b>	1.739124	0.000376408
<b>IARS</b>	1.737063	3.13E-09
<b>SORBS3</b>	1.735059	8.25E-07
<b>AC044836.1</b>	1.727091	0.000789641
<b>AC025741.1</b>	1.725808	0.000734384
<b>LYRM9</b>	1.724622	0.000447327
<b>AC091825.1</b>	1.722677	0.000789987
<b>AC108134.3</b>	1.722638	2.78E-09
<b>GPR146</b>	1.722554	0.000805336
<b>MTURN</b>	1.715784	7.63E-08
<b>AC091544.5</b>	1.713536	0.000658952
<b>TDRD3</b>	1.711926	1.20E-27
<b>SEMA6A</b>	1.711802	0.000540738
<b>GABARAPL1</b>	1.703206	0.000338287
<b>LINC00173</b>	1.701922	5.95E-05
<b>ZNF528-AS1</b>	1.7004	0.000388777
<b>RUNDC3A-AS1</b>	1.698274	0.000208772
<b>AC026904.2</b>	1.697644	1.61E-05
<b>HCG20</b>	1.693653	0.0007683
<b>AC245140.2</b>	1.693512	0.001221671
<b>RBM43</b>	1.693018	6.79E-05

<b>HOMER3</b>	1.692832	0.000171049
<b>CAPN10-AS1</b>	1.692357	0.001120272
<b>NXPH4</b>	1.690915	0.000567614
<b>TRIB1</b>	1.687507	0.00110435
<b>MIATNB</b>	1.686542	0.001329504
<b>SPP2</b>	1.681657	0.00137178
<b>CNIH3</b>	1.680122	4.63E-05
<b>PCDHB9</b>	1.678873	0.000702661
<b>SAT2</b>	1.674606	1.89E-07
<b>AL139246.6</b>	1.672904	0.000537993
<b>ZNF540</b>	1.672388	4.12E-06
<b>BSN</b>	1.672063	0.001584279
<b>FFAR1</b>	1.668103	0.001113593
<b>LINC00920</b>	1.666199	0.000908172
<b>NBR2</b>	1.660286	7.60E-05
<b>ITGBL1</b>	1.660027	2.65E-09
<b>HERPUD1</b>	1.657013	2.42E-20
<b>SAT1</b>	1.656564	8.04E-31
<b>APOC1</b>	1.655728	0.000238485
<b>GATA3</b>	1.654542	0.001675138
<b>LINC01146</b>	1.653358	0.001525844
<b>ROR1-AS1</b>	1.649819	0.001237154
<b>STAMBPL1</b>	1.649736	0.000427919
<b>ADM2</b>	1.647096	0.00111239
<b>TAF1D</b>	1.645023	8.32E-12
<b>CREM</b>	1.644161	0.002294443
<b>NR2F2-AS1</b>	1.642349	0.001971267
<b>EIF3G</b>	1.642036	1.78E-11
<b>AL117378.1</b>	1.641118	0.001836444
<b>AC004988.1</b>	1.638693	8.50E-09
<b>GDF15</b>	1.638668	1.15E-25
<b>AP000432.2</b>	1.638402	0.000132306
<b>AC144831.1</b>	1.63633	0.001936612
<b>AC016831.5</b>	1.635728	0.00240484
<b>AL118516.1</b>	1.634437	0.000137551
<b>NINJ1</b>	1.6311	0.000184087
<b>PPY</b>	1.629709	1.38E-07
<b>LRRK1</b>	1.629124	0.001167979
<b>AL355377.2</b>	1.628531	5.28E-06
<b>XBP1</b>	1.628117	4.37E-06
<b>LY6G5C</b>	1.624458	0.001316233
<b>EIF3E</b>	1.624277	3.97E-25
<b>RAB39B</b>	1.623393	0.000360317
<b>FOXO1</b>	1.622876	0.001479682
<b>EMP2</b>	1.621872	0.002547126
<b>NTNG2</b>	1.621755	0.002241194
<b>ZNF277</b>	1.619849	2.30E-05
<b>CTTN</b>	1.619746	0.00242586

AP001160.4	1.617124	0.002037834
FYN	1.615315	0.002992844
NFKBIL1	1.61283	0.000446492
LGALS3	1.612285	1.54E-18
LINC01967	1.612237	0.003219437
CASQ1	1.612148	2.42E-07
SHMT2	1.610779	1.97E-09
EIF4EBP1	1.60882	2.65E-11
ENTHD1	1.608042	2.49E-17
NFKBID	1.607658	0.000174618
CCDC122	1.607364	0.003500834
CD69	1.606962	7.68E-05
SDAD1P1	1.606667	0.003509511
TMEM212	1.601863	0.000502023
FAR2P4	1.600332	6.96E-05
NEGR1	1.598378	0.003679822
CDKN1B	1.598329	9.69E-05
KIAA1217	1.594955	0.000826939
AC107958.2	1.594209	0.004163467
MAFF	1.591601	0.002132146
ZNF442	1.589255	0.004025004
BCAS4	1.589208	0.003542943
Z95114.4	1.589135	0.004468202
TUBE1	1.58905	0.000866045
ZNF667-AS1	1.588773	2.01E-06
TXLNB	1.588616	0.002198823
RPS4Y1	1.586131	3.90E-15
PITPNA-AS1	1.585739	0.000871793
RAB2B	1.583105	3.74E-13
HSD17B11	1.582851	2.40E-16
RALGPS2	1.581455	3.71E-05
AC074183.2	1.581425	0.003676371
EIF2S3	1.578331	1.60E-09
FABP5	1.576252	0.004156498
SNX18	1.575794	0.002698382
ANK2	1.57554	0.002866006
LINC01918	1.575508	1.75E-08
TFPI	1.574598	0.003929292
HELLPAR	1.573158	3.25E-07
CREB3L3	1.573129	0.000595719
CPB2-AS1	1.572856	0.004504779
PIM3	1.572574	4.58E-07
ZFAND1	1.57226	1.14E-05
UBXN11	1.571754	8.47E-05
LINC00520	1.570828	2.00E-11
ANKRD42	1.570133	0.000353509
AC147067.1	1.569705	0.000586265
AC027279.1	1.568423	0.00387749

<b>SPTLC3</b>	1.5679	0.005251628
<b>VIM</b>	1.566391	3.45E-13
<b>BCL11A</b>	1.566225	0.005878811
<b>AC092119.2</b>	1.565452	0.004154722
<b>S100Z</b>	1.564192	0.000229983
<b>UCKL1-AS1</b>	1.563222	0.006101389
<b>APOL2</b>	1.562939	0.003376997
<b>AC121333.1</b>	1.562688	0.006000649
<b>TIMM9</b>	1.5626	2.95E-05
<b>TMEM182</b>	1.561024	0.004093834
<b>NEDD4</b>	1.560643	0.004686409
<b>TXNIP</b>	1.559466	7.64E-12
<b>H1F0</b>	1.558846	9.15E-14
<b>LINC01481</b>	1.557685	0.001863174
<b>AC015883.1</b>	1.555972	0.006628914
<b>NPY2R</b>	1.55567	0.000361133
<b>CYB561D2</b>	1.555436	0.006467591
<b>SNHG19</b>	1.554631	0.000193573
<b>C11orf1</b>	1.554267	1.11E-08
<b>AZU1</b>	1.553899	0.001065636
<b>NDFIP2</b>	1.552935	7.10E-05
<b>LINC01023</b>	1.551481	0.000219413
<b>BCAS1</b>	1.551131	0.006988641
<b>ATXN3</b>	1.550259	1.30E-08
<b>SRP14-AS1</b>	1.548291	0.004376626
<b>AC083862.2</b>	1.548111	0.005264277
<b>ISCU</b>	1.547278	1.73E-12
<b>DALRD3</b>	1.545288	1.16E-06
<b>AL591441.1</b>	1.544613	0.006118683
<b>NCOA7</b>	1.544155	1.91E-05
<b>OSBPL6</b>	1.542868	0.005575635
<b>AL022311.1</b>	1.542831	0.000224502
<b>KRBOX4</b>	1.541595	0.001276785
<b>AC104662.3</b>	1.541308	0.000612139
<b>CALCOCO1</b>	1.541255	3.63E-07
<b>SNHG12</b>	1.540664	2.63E-05
<b>NEAT1</b>	1.540653	2.15E-07
<b>HIST2H2BE</b>	1.539978	0.001630416
<b>NAB2</b>	1.539752	0.000569845
<b>NATD1</b>	1.539553	0.007921278
<b>JMY</b>	1.53916	0.008135075
<b>RPL5</b>	1.537645	1.71E-20
<b>AC118344.2</b>	1.537632	0.003058323
<b>MPV17L</b>	1.536985	1.00E-05
<b>CSMD1</b>	1.536782	0.005588594
<b>NR4A2</b>	1.535989	0.005283919
<b>LETMD1</b>	1.535525	1.06E-05
<b>AC008074.3</b>	1.533648	0.008053532

TPT1-AS1	1.533015	0.000865021
SSC5D	1.532679	0.005337686
CD22	1.532189	7.04E-14
DNM1P35	1.531087	0.001362189
LOH12CR2	1.531029	0.005123265
ACSL1	1.530405	0.000503658
SRGAP1	1.529715	0.000105406
AC008079.2	1.52887	0.005841635
AC020916.1	1.528059	0.006407453
CREBRF	1.526617	1.51E-09
FMNL2	1.525467	0.006351447
SLC2A11	1.524341	1.31E-06
Z95114.1	1.524236	0.002814622
P3H1	1.522736	0.004871039
ELP2	1.522164	0.000445534
ZNF471	1.522128	0.003804882
ZNF331	1.521475	0.001236185
LINC00900	1.521474	0.000644537
NPM1	1.521333	2.33E-12
LINC00694	1.519657	0.002761386
LINC00672	1.518487	0.00816387
RAB11FIP1	1.518403	4.04E-05
EN2	1.518287	0.007421717
YARS	1.51774	7.55E-09
RILPL1	1.516226	0.000140891
HIC1	1.515921	0.006119431
GIN1	1.515286	0.003865018
ZNF677	1.515112	0.006024959
DNAH1	1.515104	0.005538778
IL1B	1.513992	0.00104329
KLF10	1.513889	0.001435195
AC092068.3	1.513473	0.007737754
CD55	1.512531	1.78E-07
TM4SF19-AS1	1.512257	0.007352596
LINC02099	1.510545	2.40E-05
CHMP1B	1.51026	5.51E-06
ERP29	1.509261	8.95E-11
RPS6KL1	1.509132	0.006115793
AC022400.7	1.508968	4.16E-06
PIGP	1.508635	0.000374513
COL28A1	1.505352	0.008463562
XIAP	1.505122	5.22E-09
AL672032.1	1.501879	0.006551822
ARHGAP12	1.501098	0.00812918
SESN2	1.500479	0.000117007