

SUPPLEMENTARY FIGURE LEGENDS

Supplementary Fig. 1: Autoradiogram of a Northern blot analysis of total RNA isolated from non-infected HepG2 cells or cells infected at a multiplicity of infection of 5 with a control adenovirus expressing GFP or an adenovirus expressing the dn-c-Jun. The position of apoE and the GAPDH mRNAs are indicated.

Supplementary Fig. 2: Western Blotting analysis of cytoplasmic or nuclear extracts of HepG2 cells infected at a multiplicity of infection of 5 with a control adenovirus expressing the Green Fluorescence Protein (GFP) or adenoviruses expressing the dn-c-Jun. The position of wild type c-Jun and dominant negative c-Jun is indicated.

Supplementary Fig. 3. Effect of the WT c-Jun on the hepatic expression of apoE and the plasma lipid levels in C57BL/6 mice infected with an adenovirus expressing the dn-c-Jun. **Panels A and B:** Autoradiograms of Northern blotting analysis of total RNA isolated from the liver of mice 4 days post infection with 2×10^9 pfu of either a control adenovirus expressing GFP or an adenovirus expressing the WT c-Jun. Blot shown in Panel A was hybridized with a probe that detects c-Jun and GAPDH and Panel B was hybridized with a probe that detects apoE and GAPDH as indicated.

Supplementary Fig. 4: Hepatic VLDL-triglyceride secretion of C57BL/6 mice infected with 2×10^9 pfu of either a control adenovirus expressing GFP or adenovirus expressing the dn-c-Jun. Four days post infection three mice per group were fasted for four hours and injected with Triton WR1339. Serum was collected 20, 40, 60 and 90 minutes after administration of the Triton and was analyzed for triglyceride levels.

Supplementary Fig. 5: Molecular pathways presenting with the majority of gene expression changes. The classification was done based on Gene Ontology level 5 categories, for significantly (2% FDR) and highly (>2-fold) changed transcripts.

Supplementary Fig. 6. Autoradiogram of a Northern blot analysis of total RNA isolated from apoE^{-/-} mice infected with 2×10^9 pfu of either a control adenovirus expressing GFP or an adenovirus expressing the c-Jun or an adenovirus expressing WT c-Jun. The positions of Scd-1 and the GAPDH mRNAs are indicated. Quantitation by phosphorimaging showed that the Scd-1 mRNA levels were reduced by 81% and 67% C57BL/6 and apoE^{-/-} mice respectively following treatment with dn-c-Jun. Treatment with WT c-Jun did not affect significantly the Scd-1 mRNA levels in either the C57BL/6 or apoE^{-/-} mice.

Supplementary Fig. 7: Western Blotting analysis of total cell extracts of HepG2 cells infected at a multiplicity of infection of 5 with either a control adenovirus expressing the GFP or increasing amounts of adenoviruses expressing Scd-1.

Supplementary Fig. 8. Cholesterol and triglyceride levels of C57BL/6 mice (**Panels A&B respectively**) and apoE^{-/-} mice (**Panels C&D respectively**). The mice were infected with 2×10^9 pfu of either control adenoviruses expressing GFP or adenovirus expressing the Scd-1. Three groups of mice containing 3-4 mice per group were infected with 2×10^9 pfu of the adenoviruses as indicated in the figure and plasma was collected on the fourth day and analyzed for cholesterol and triglyceride levels.

SUPPLEMENTARY TABLE NOT TO BE INCLUDED IN THE PUBLICATION

Supplementary Table 1: Probe sets significantly and highly changed between dn-c-Jun infected and control apoE^{-/-} mice, as identified by SAM using 2-fold and $\leq 2\%$ median FDR thresholds.

| Affymetrix ID | Gene Name | Symbol | Fold |
|----------------------|---|---------------|-------------|
| 1432466_a_at | apolipoprotein E | ApoE | 40.39 |
| 1424470_a_at | Rap guanine nucleotide exchange factor (GEF) 3 | Rapgef3 | 3.19 |
| 1419152_at | RIKEN cDNA 2810417H13 gene | 2810417H13Rik | -2.00 |
| 1449134_s_at | Spi-C transcription factor (Spi-1/PU.1 related) | Spic | -2.00 |
| 1439764_s_at | RIKEN cDNA C330012H03 gene | C330012H03Rik | -2.01 |
| 1448735_at | ceruloplasmin | Cp | -2.01 |
| 1426645_at | heat shock protein 1, alpha | Hspca | -2.02 |
| 1423062_at | insulin-like growth factor binding protein 3 | Igfbp3 | -2.02 |
| 1460589_at | zinc finger protein 597 | Zfp597 | -2.04 |
| 1425212_a_at | tumor necrosis factor receptor superfamily, member 19 | Tnfrsf19 | -2.04 |
| 1430633_s_at | RIKEN cDNA C430045I18 gene | C430045I18Rik | -2.04 |
| 1456700_x_at | Myristoylated alanine rich protein kinase C substrate | Marcks | -2.05 |
| 1437456_x_at | YTH domain family 1 | Ythdf1 | -2.05 |
| 1420847_a_at | fibroblast growth factor receptor 2 | Fgfr2 | -2.05 |
| 1444607_at | Similar to corneodesmosin precursor; S protein; differentiated keratinocyte S protein precursor | Cdsn | -2.05 |
| 1420697_at | solute carrier family 15, member 3 | Slc15a3 | -2.06 |
| 1445626_at | Lectin, galactose binding, soluble 3 | Lgals3 | -2.06 |
| 1443626_at | Transcribed locus | --- | -2.06 |
| 1457035_at | expressed sequence AI607873 | AI607873 | -2.06 |

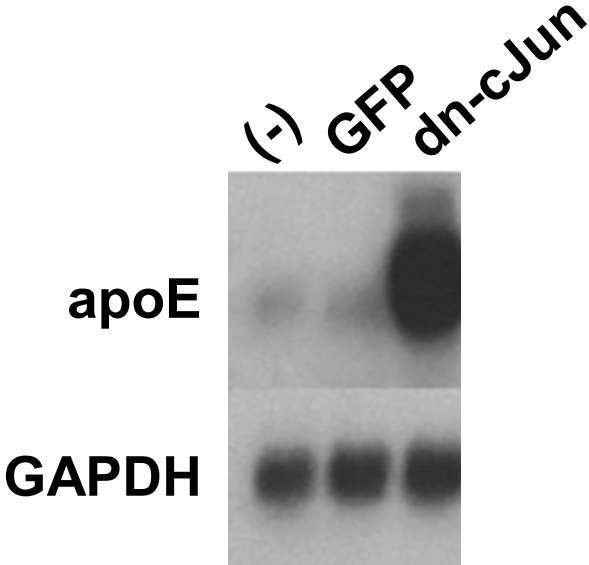
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|--------------|--|---------------|-------|
| 1439255_s_at | transmembrane 7 superfamily member 1 | Tm7sf1 | -2.06 |
| 1426262_at | cDNA sequence BC024969 | BC024969 | -2.06 |
| 1427595_at | --- | --- | -2.07 |
| 1435281_at | carnitine palmitoyltransferase 1c | Cpt1c | -2.07 |
| 1425294_at | SLAM family member 8 | Slamf8 | -2.07 |
| 1418969_at | S-phase kinase-associated protein 2 (p45) | Skp2 | -2.07 |
| 1438535_at | pleckstrin homology domain interacting protein | Phip | -2.08 |
| 1435627_x_at | MARCKS-like protein | Mlp | -2.08 |
| 1436643_x_at | hepcidin antimicrobial peptide 2 | Hamp2 | -2.10 |
| 1418571_at | tumor necrosis factor receptor superfamily, member 12a | Tnfrsf12a | -2.11 |
| 1439567_at | T-box 3 | Tbx3 | -2.11 |
| 1452656_at | zinc finger, DHHC domain containing 2 | Zdhhc2 | -2.11 |
| 1432362_at | RIKEN cDNA 1700022C02 gene | 1700022C02Rik | -2.12 |
| 1445708_x_at | RIKEN cDNA 3110021A11 gene | 3110021A11Rik | -2.12 |
| 1443981_at | --- | --- | -2.13 |
| 1444139_at | DNA-damage-inducible transcript 4-like | Ddit4l | -2.13 |
| 1437585_x_at | zinc finger protein 161 | Zfp161 | -2.13 |
| 1428903_at | RIKEN cDNA 3110037I16 gene | 3110037I16Rik | -2.13 |
| 1420438_at | orosomuroid 2 | Orm2 | -2.13 |
| 1459322_at | Synaptic nuclear envelope 2 | Syne2 | -2.13 |
| 1417031_at | RIKEN cDNA 2310028N02 gene | 2310028N02Rik | -2.13 |
| 1447734_x_at | aldolase 1, A isoform, pseudogene 2 | Aldoa-ps2 | -2.13 |
| 1434401_at | zinc finger, CCHC domain containing 2 | Zcchc2 | -2.14 |
| 1450156_a_at | hyaluronan mediated motility receptor (RHAMM) | Hmmr | -2.14 |
| 1437516_at | EST AA407452 | AA407452 | -2.14 |

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|--------------|--|---------------|-------|
| 1439301_at | RAD51-like 1 (<i>S. cerevisiae</i>) | Rad5111 | -2.14 |
| 1460626_at | DNA segment, Chr 5, ERATO Doi 606, expressed | D5Erttd606e | -2.15 |
| 1445882_at | Transcribed locus | --- | -2.15 |
| 1434255_at | phosphofurin acidic cluster sorting protein 1-like | Pacs11 | -2.17 |
| 1419943_s_at | cyclin B1 | Ccnb1 | -2.17 |
| 1450050_at | histone cell cycle regulation defective homolog A (<i>S. cerevisiae</i>) | Hira | -2.18 |
| 1427347_s_at | --- | --- | -2.18 |
| 1429557_at | minichromosome maintenance deficient 8 (<i>S. cerevisiae</i>) | Mcm8 | -2.18 |
| 1447894_x_at | vacuolar protein sorting 52 (yeast) | Vps52 | -2.18 |
| 1417019_a_at | cell division cycle 6 homolog (<i>S. cerevisiae</i>) | Cdc6 | -2.19 |
| 1438751_at | RIKEN cDNA 130106K10 gene | E130106K10Rik | -2.19 |
| 1431203_at | serologically defined colon cancer antigen 8 | Sdccag8 | -2.19 |
| 1416412_at | neutral sphingomyelinase (N-SMase) activation associated factor | Nsmaf | -2.19 |
| 1449519_at | growth arrest and DNA-damage-inducible 45 alpha | Gadd45a | -2.19 |
| 1439377_x_at | cell division cycle 20 homolog (<i>S. cerevisiae</i>) | Cdc20 | -2.22 |
| 1454903_at | --- | --- | -2.22 |
| 1455804_x_at | 3-oxoacid CoA transferase 1 | Oxct1 | -2.22 |
| 1453769_at | RIKEN cDNA 2610318C08 gene | 2610318C08Rik | -2.22 |
| 1439426_x_at | P lysozyme structural | Lzp-s | -2.24 |
| 1439376_x_at | --- | --- | -2.24 |
| 1424229_at | dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 3 | Dyrk3 | -2.25 |
| 1426063_a_at | GTP binding protein (gene overexpressed in skeletal muscle) | Gem | -2.26 |

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|--------------|---|---------------|-------|
| 1424190_at | phosphatidylinositol glycan, classC | Pigc | -2.26 |
| 1418572_x_at | tumor necrosis factor receptor superfamily, member 12a | Tnfrsf12a | -2.26 |
| 1422954_at | zinc finger protein 60 | Zfp60 | -2.27 |
| 1425642_at | cDNA sequence BC004690 | BC004690 | -2.29 |
| 1450063_at | formin 2 | Fmn2 | -2.29 |
| 1435802_at | gene model 157, (NCBI) | Gm157 | -2.32 |
| 1416021_a_at | fatty acid binding protein 5, epidermal | Fabp5 | -2.32 |
| 1420444_at | solute carrier family 22 (organic cation transporter), member 3 | Slc22a3 | -2.32 |
| 1444706_at | Neuron navigator 2 | Nav2 | -2.33 |
| 1452338_s_at | intersectin 1 (SH3 domain protein 1A) | Itsn1 | -2.33 |
| 1426092_a_at | tripartite motif protein 34 | Trim34 | -2.34 |
| 1458374_at | expressed sequence C79407 | C79407 | -2.35 |
| 1428069_at | cell division cycle associated 7 | Cdca7 | -2.36 |
| 1428083_at | RIKEN cDNA 2310043N10 gene | 2310043N10Rik | -2.37 |
| 1440184_at | similar to p47 protein isoform a | LOC434492 | -2.37 |
| 1436905_x_at | lysosomal-associated protein transmembrane 5 | Laptm5 | -2.37 |
| 1443669_at | Zinc finger, FYVE domain containing 28 | Zfyve28 | -2.37 |
| 1420570_x_at | T-cell leukemia/lymphoma 1B, 3 | Tcl1b3 | -2.38 |
| 1420380_at | chemokine (C-C motif) ligand 2 | Ccl2 | -2.39 |
| 1443911_at | Exportin 1, CRM1 homolog (yeast) | Xpo1 | -2.40 |
| 1447679_s_at | BMS1-like, ribosome assembly protein (yeast) | Bms1l | -2.40 |
| 1450381_a_at | B-cell leukemia/lymphoma 6 | Bcl6 | -2.43 |
| 1442531_at | DNA segment, Chr 12, ERATO Doi 123, expressed | D12Ertd123e | -2.43 |
| 1418872_at | ATP-binding cassette, sub-family B (MDR/TAP), member 1B | Abcb1b | -2.44 |

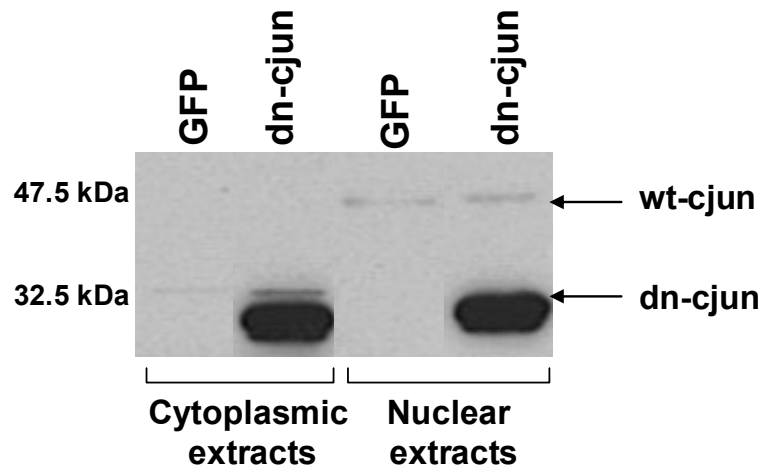
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|--------------|--|---------------------------------------|-------|
| 1433888_at | ATPase, Ca ⁺⁺ transporting, plasma membrane 2 | Atp2b2 | -2.45 |
| 1451798_at | interleukin 1 receptor antagonist | Il1rn | -2.45 |
| 1454617_at | arrestin domain containing 3 | Arrdc3 | -2.46 |
| 1416022_at | fatty acid binding protein 5, epidermal | Fabp5 | -2.47 |
| 1422016_a_at | centromere autoantigen H | Cenph | -2.48 |
| 1437611_x_at | kinesin family member 2C | Kif2c | -2.49 |
| 1421228_at | chemokine (C-C motif) ligand 7 | Ccl7 | -2.51 |
| 1449984_at | chemokine (C-X-C motif) ligand 2 | Cxcl2 | -2.57 |
| 1458287_at | Transcribed locus | --- | -2.65 |
| 1447877_x_at | DNA methyltransferase (cytosine-5) 1 | Dnmt1 | -2.75 |
| 1422642_at | CDC42 effector protein (Rho GTPase binding) 3 | Cdc42ep3 | -2.80 |
| 1432059_x_at | RIKEN cDNA 5031425E22 gene | 5031425E22Rik | -2.82 |
| 1450992_a_at | myeloid ecotropic viral integration site 1 | Meis1 | -2.85 |
| 1426464_at | nuclear receptor subfamily 1, group D, member 1 | Nr1d1 | -2.86 |
| 1426541_a_at | --- | --- | -2.87 |
| 1419004_s_at | B-cell leukemia/lymphoma 2 related protein A1a /// B-cell leukemia/lymphoma 2 related protein A1b /// B-cell leukemia/lymphoma 2 related protein A1d | Bcl2a1a /// Bcl2a1b /// Bcl2a1d | -2.88 |
| 1442771_at | RAD51-like 1 (<i>S. cerevisiae</i>) | Rad5111 | -2.88 |
| 1440304_at | RIKEN cDNA E030004N02 gene | E030004N02Rik | -2.89 |
| 1449153_at | matrix metalloproteinase 12 | Mmp12 | -2.94 |
| 1458163_at | cDNA sequence BC066028 | BC066028 | -3.06 |
| 1416111_at | CD83 antigen | Cd83 | -3.11 |
| 1427729_at | EH-domain containing 2 | Ehd2 | -3.11 |
| 1425271_at | proteasome (prosome, macropain) 26S subunit, ATPase 3, interacting protein | Psmc3ip | -3.17 |
| 1447837_x_at | --- | --- | -3.21 |

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|--------------|--|-----------|-------|
| 1415965_at | stearoyl-Coenzyme A desaturase 1 | Scd1 | -3.27 |
| 1435122_x_at | DNA methyltransferase (cytosine-5) 1 | Dnmt1 | -3.27 |
| 1417256_at | matrix metalloproteinase 13 | Mmp13 | -3.32 |
| 1437712_x_at | exosome component 4 | Exosc4 | -3.43 |
| 1420330_at | C-type lectin domain family 4, member e | Clec4e | -3.51 |
| 1427381_at | --- | --- | -3.53 |
| 1422155_at | histone 2, H3c2 | Hist2h3c2 | -3.63 |
| 1416290_a_at | proteasome (prosome, macropain) 26S subunit, ATPase, 4 | Psmc4 | -4.67 |
| 1442547_at | Ataxia telangiectasia and rad3 related | Atr | -5.68 |



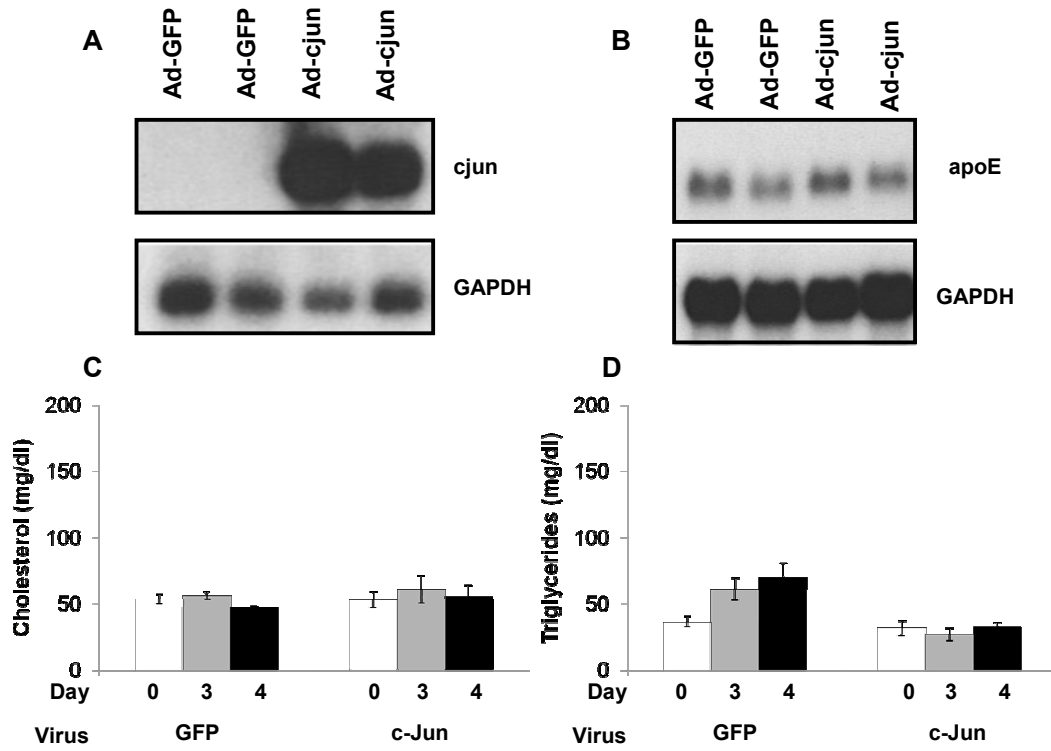
Supplementary Figure 1

SUPPLEMENTARY FIGURE NOT TO BE INCLUDED IN THE PUBLICATION



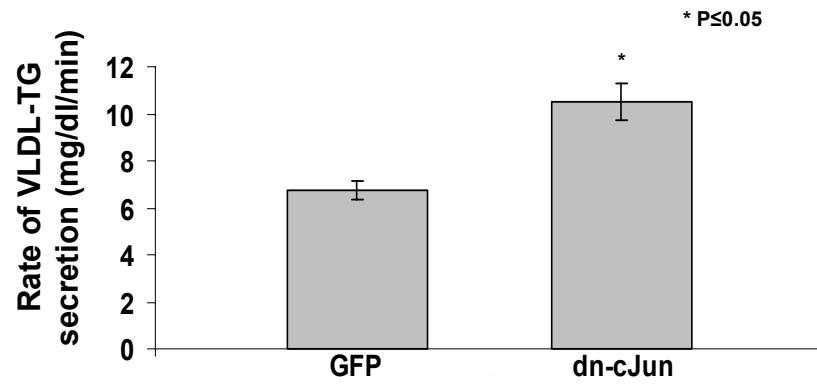
Supplementary Figure 2

SUPPLEMENTARY FIGURE NOT TO BE INCLUDED IN THE PUBLICATION



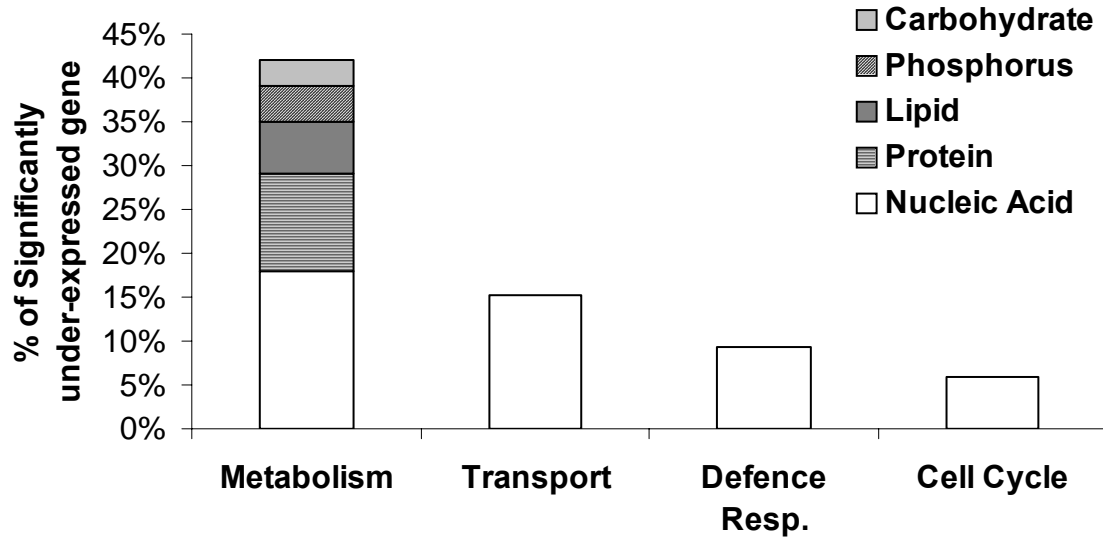
Supplementary Figure 3

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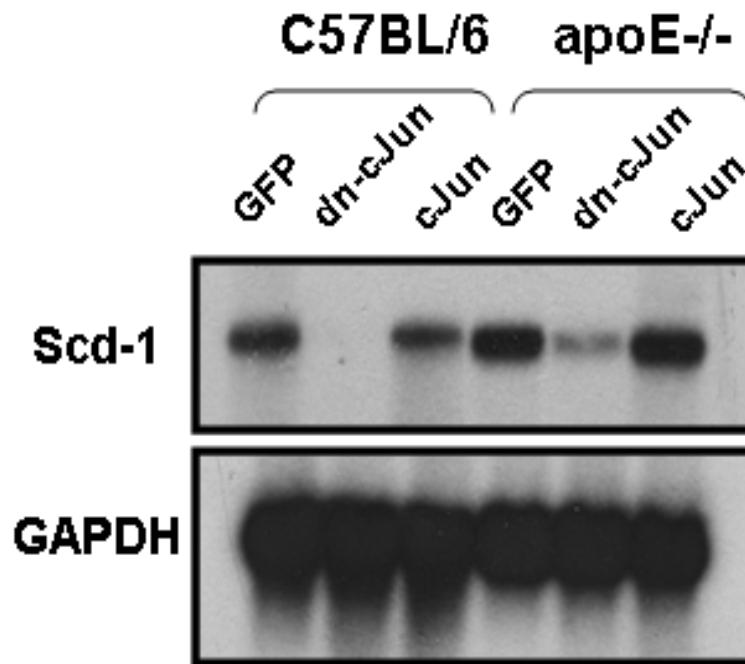
Supplementary Figure 4

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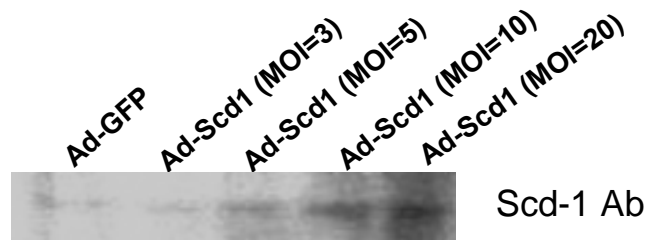
Supplementary Figure 5

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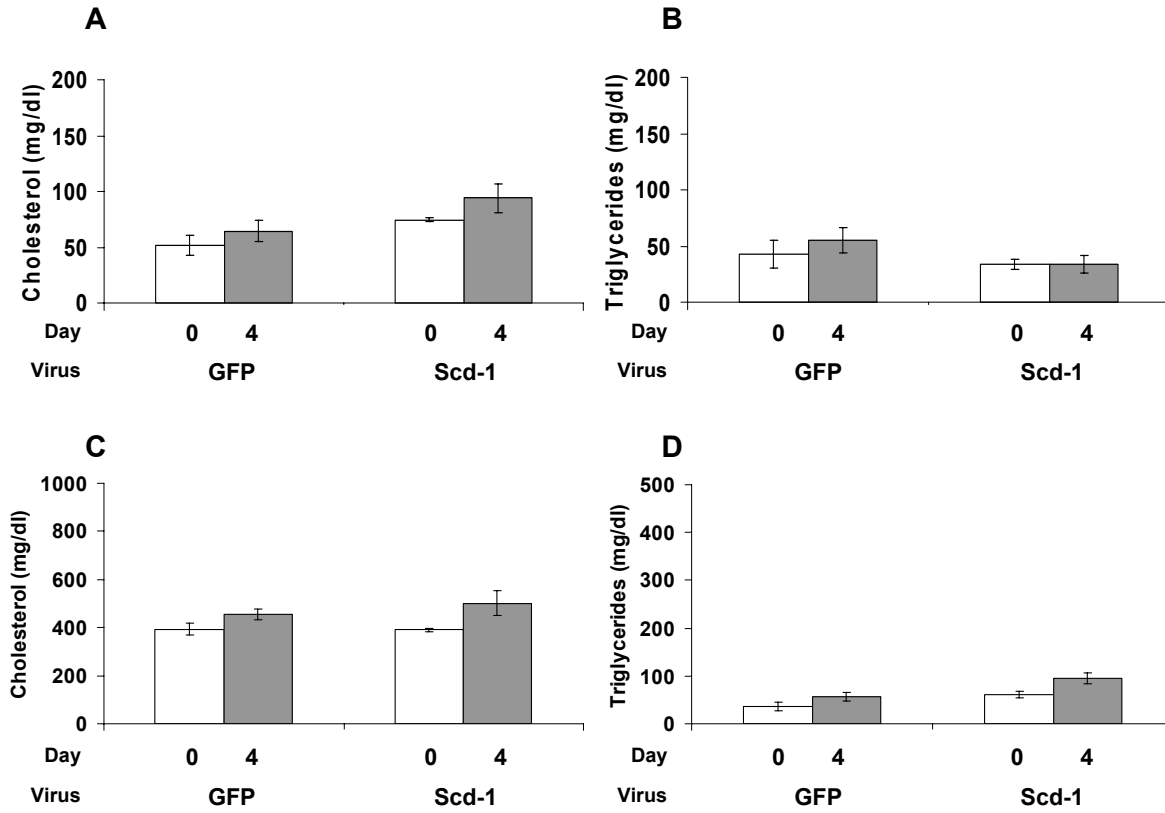
Supplementary Figure 6

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Supplementary Figure 7

SUPPLEMENTARY FIGURE NOT TO BE INCLUDED IN THE PUBLICATION



Supplementary Figure 8