

Supporting Information for

IFIH1 (MDA5) is required for innate immune detection of intron-containing RNA expressed from the HIV-1 provirus

Mehmet Hakan Guney, Karthika Nagalekshmi, Sean Matthew McCauley, Claudia Carbone, Ozkan Aydemir, and Jeremy Luban

Corresponding author: Jeremy Luban
Email: jeremy.luban@umassmed.edu

This PDF file includes:

Tables S1 to S4

Table S1. Differentially expressed genes in dendritic cells with luciferase control knockdown: effect of HIV-1-GFP vs minimal HIV-1 vector

Gene	log2FoldChange	p value	adj p value
USP41	12.73	2.78E-05	4.36E-04
APOBEC3A	10.39	6.43E-13	6.98E-11
CXCL10	10.19	2.67E-20	1.37E-17
ZBP1	10.04	1.02E-05	1.85E-04
RSAD2	9.25	4.36E-24	6.84E-21
IFI44L	8.62	6.29E-15	1.11E-12
CXCL11	8.47	4.59E-03	3.03E-02
IFITM1	8.17	1.48E-07	4.59E-06
IFI27	7.56	7.10E-09	3.02E-07
IFIT1	7.48	6.36E-22	4.49E-19
ISG20	7.47	2.17E-11	1.71E-09
CCL8	7.28	7.50E-15	1.31E-12
ISG15	6.95	8.54E-24	1.04E-20
NEXN	6.94	9.50E-08	3.12E-06
FAM47E-STBD1	6.92	1.05E-04	1.35E-03
IFITM3	6.87	1.85E-15	3.94E-13
NTNG2	6.8	3.90E-23	4.29E-20
MX1	6.77	3.39E-16	8.12E-14
CMPK2	6.53	2.42E-14	3.87E-12
TNFSF10	6.51	8.03E-16	1.82E-13
HES4	6.46	2.78E-09	1.29E-07
IFIT2	6.15	5.10E-24	6.84E-21
GAREM1	5.97	2.39E-05	3.80E-04
GCH1	5.86	4.23E-10	2.44E-08
APOBEC3D	5.84	1.54E-04	1.88E-03
USP18	5.78	6.51E-13	6.98E-11
APOBEC3B	5.78	2.41E-04	2.73E-03
IFIT3	5.71	2.55E-21	1.71E-18
AXL	5.69	2.13E-05	3.44E-04

HSH2D	5.67	3.07E-10	1.87E-08
OASL	5.66	5.02E-15	9.35E-13
GBP4	5.6	4.75E-07	1.27E-05
HAPLN3	5.54	1.85E-06	4.18E-05
HELZ2	5.5	6.03E-20	2.99E-17
HERC5	5.48	1.99E-16	5.14E-14
AC068234.1	5.28	1.04E-03	9.29E-03
STAP1	5.26	1.14E-04	1.46E-03
OR52K3P	5.26	2.66E-08	9.79E-07
HESX1	5.21	1.32E-11	1.09E-09
TRIM31	5.19	1.59E-04	1.93E-03
CD38	5.07	2.19E-17	6.66E-15
CCL3L1	4.98	4.02E-07	1.10E-05
IL15RA	4.94	1.96E-17	6.12E-15
MX2	4.88	1.25E-16	3.43E-14
AC068631.3	4.87	2.50E-04	2.78E-03
EPST11	4.83	3.88E-15	7.64E-13
DDX58	4.55	1.76E-16	4.70E-14
TMEM52B	4.51	6.59E-05	9.11E-04
DSP	4.41	5.64E-06	1.11E-04
AIM2	4.4	2.84E-05	4.41E-04
IFI44	4.39	2.07E-13	2.47E-11
SIGLEC1	4.35	8.36E-09	3.51E-07
OAS3	4.33	4.39E-14	6.33E-12
BATF2	4.32	2.48E-12	2.36E-10
AC010226.1	4.28	4.63E-04	4.70E-03
OTOF	4.18	3.81E-06	7.94E-05
IGFBP4	4.16	1.23E-09	6.17E-08
TLR3	4.13	6.24E-09	2.72E-07
IL27	4.07	2.44E-07	7.25E-06
MFAP5	4.07	3.69E-06	7.73E-05
PLSCR1	4.03	1.38E-14	2.31E-12

AL357054.4	4	7.02E-04	6.68E-03
IFI6	3.92	1.44E-11	1.18E-09
CCL7	3.9	1.29E-09	6.44E-08
CD69	3.89	6.30E-09	2.73E-07
SELL	3.88	9.73E-06	1.77E-04
NT5C3A	3.85	1.54E-12	1.54E-10
OAS2	3.85	2.96E-13	3.51E-11
TMEM229B	3.81	2.73E-08	9.96E-07
HERC6	3.74	2.70E-12	2.55E-10
GBP1	3.71	4.44E-15	8.50E-13
NCF1B	3.68	6.66E-08	2.24E-06
IRF7	3.66	3.05E-14	4.65E-12
AC015911.7	3.66	7.45E-05	1.01E-03
IGF2BP3	3.65	1.45E-05	2.49E-04
USP30-AS1	3.65	4.10E-09	1.84E-07
GMPR	3.63	2.75E-10	1.68E-08
SP140	3.6	1.65E-09	7.90E-08
LYSMD2	3.6	1.35E-09	6.65E-08
IL15	3.59	3.07E-07	8.77E-06
IFIH1	3.58	1.95E-19	8.73E-17
DDX60	3.58	3.12E-12	2.90E-10
DDX60L	3.54	1.18E-10	7.89E-09
STIMATE-MUSTN	3.49	4.68E-15	8.84E-13
SDS	3.45	1.09E-05	1.94E-04
P2RY6	3.44	2.16E-04	2.51E-03
SAMD9L	3.41	5.40E-13	5.98E-11
STIMATE	3.36	2.95E-18	1.07E-15
CMYA5	3.34	6.70E-06	1.29E-04
ABTB2	3.33	6.81E-10	3.59E-08
SAMD9	3.32	2.78E-11	2.15E-09
SCIN	3.29	2.91E-03	2.12E-02
NAPSB	3.28	6.78E-10	3.59E-08

HMCN1	3.26	2.98E-03	2.16E-02
XAF1	3.25	7.81E-12	6.76E-10
EIF2AK2	3.24	7.43E-14	9.69E-12
IFI35	3.2	5.51E-13	6.05E-11
ATP10A	3.16	1.12E-07	3.61E-06
SERPING1	3.16	2.75E-07	8.06E-06
SECTM1	3.15	3.28E-06	7.01E-05
CYP19A1	3.14	4.88E-03	3.18E-02
IFITM2	3.12	3.13E-10	1.88E-08
PARP9	3.11	6.47E-13	6.98E-11
NCF1C	3.1	1.80E-06	4.09E-05
NCF1	3.09	1.90E-06	4.29E-05
RTP4	3.09	4.52E-14	6.44E-12
SP110	3.09	5.38E-14	7.60E-12
TRIM5	3.07	1.22E-12	1.26E-10
MVB12B	3.05	2.88E-11	2.20E-09
SCOC-AS1	3.04	3.73E-05	5.57E-04
IRF1-AS1	3	8.47E-08	2.80E-06
LY6E-DT	2.97	3.26E-05	4.97E-04
PDE4B	2.97	5.82E-06	1.14E-04
HIVEP2	2.95	1.98E-04	2.33E-03
PMAIP1	2.94	2.15E-07	6.43E-06
IDO1	2.9	7.02E-04	6.68E-03
TNF	2.9	1.32E-06	3.15E-05
CDKN2D	2.88	1.42E-09	6.95E-08
AP000873.2	2.8	1.43E-03	1.20E-02
RNF213-AS1	2.8	9.20E-11	6.26E-09
TAP1	2.78	1.44E-14	2.38E-12
AL157394.3	2.77	1.31E-03	1.12E-02
AC084871.4	2.76	1.55E-05	2.62E-04
TRIM22	2.74	7.00E-20	3.35E-17
GPBAR1	2.7	4.16E-05	6.13E-04

APOBEC3F	2.66	1.01E-06	2.46E-05
FAM225B	2.66	1.68E-03	1.36E-02
ITIH4	2.65	1.76E-05	2.93E-04
CCL5	2.65	1.47E-07	4.56E-06
FPR2	2.64	7.98E-06	1.50E-04
VAMP5	2.64	1.51E-09	7.36E-08
TOR1B	2.63	4.05E-35	5.43E-31
SMIM2-AS1	2.62	8.46E-03	4.83E-02
STAT1	2.6	9.51E-13	9.88E-11
DHX58	2.59	1.77E-10	1.14E-08
LAMP3	2.58	5.16E-08	1.79E-06
AC119674.2	2.58	7.95E-03	4.61E-02
LILRA5	2.57	1.19E-07	3.81E-06
TESPA1	2.57	3.89E-03	2.68E-02
PPM1K	2.57	3.64E-14	5.36E-12
RABGAP1L	2.56	2.06E-18	7.90E-16
CFB	2.55	7.62E-06	1.45E-04
LGALS2	2.54	3.77E-04	3.94E-03
KITLG	2.51	7.81E-03	4.54E-02
APOBEC3G	2.5	1.33E-14	2.26E-12
AZIN2	2.48	4.42E-04	4.52E-03
AC015911.10	2.48	3.30E-03	2.35E-02
CCL2	2.48	7.55E-16	1.74E-13
GBP5	2.47	3.55E-12	3.23E-10
AC004812.2	2.46	4.23E-05	6.22E-04
PLAAT4	2.46	2.96E-07	8.55E-06
MIR3945HG	2.45	1.34E-04	1.67E-03
CYP1B1-AS1	2.44	8.82E-07	2.19E-05
PTGIR	2.43	2.61E-04	2.90E-03
NAMPTP1	2.42	1.26E-06	3.02E-05
SLFN12L	2.41	2.68E-03	1.99E-02
AC006254.1	2.4	4.87E-04	4.91E-03

HPSE	2.4	7.26E-03	4.28E-02
BIRC3	2.39	5.08E-10	2.80E-08
AC004988.1	2.38	4.31E-23	4.29E-20
PNPT1	2.38	4.03E-03	2.75E-02
ZNF618	2.38	2.61E-10	1.62E-08
PLEKHN1	2.37	1.19E-04	1.52E-03
PARP10	2.36	4.61E-10	2.58E-08
EPHB2	2.35	2.94E-19	1.27E-16
BST2	2.34	7.38E-14	9.69E-12
OLR1	2.33	4.92E-08	1.72E-06
IRF1	2.33	7.31E-25	1.40E-21
CD1D	2.32	2.57E-16	6.51E-14
H4C14	2.31	1.34E-07	4.22E-06
TRIM69	2.3	1.47E-10	9.57E-09
NLRC5	2.29	7.84E-08	2.60E-06
H4C15	2.28	4.65E-04	4.72E-03
SLFN5	2.28	1.27E-11	1.06E-09
GRIN3A	2.27	1.10E-05	1.97E-04
APOL1	2.26	2.55E-09	1.19E-07
PSMB9	2.24	1.03E-08	4.25E-07
LRG1	2.24	1.47E-03	1.23E-02
PARP14	2.24	1.17E-08	4.77E-07
ANXA2R	2.23	2.26E-04	2.61E-03
MLXIPL	2.21	1.04E-02	5.60E-02
UBE2L6	2.21	1.27E-13	1.60E-11
NAMPT	2.21	1.79E-16	4.70E-14
APOL6	2.2	6.81E-14	9.32E-12
LAP3	2.18	1.00E-22	8.98E-20
ENDOD1	2.18	6.90E-05	9.45E-04
MDK	2.18	6.33E-12	5.65E-10
LGALS3BP	2.18	3.14E-07	8.89E-06
TRIM21	2.17	8.03E-21	5.13E-18

MT2A	2.17	5.97E-06	1.16E-04
CCDC7	2.16	4.33E-03	2.91E-02
AJ009632.2	2.16	1.04E-03	9.31E-03
NMI	2.16	3.37E-14	5.02E-12
TRANK1	2.15	3.90E-06	8.09E-05
AC015911.11	2.15	2.81E-05	4.38E-04
BRIP1	2.14	7.02E-04	6.68E-03
SLC18B1	2.14	2.25E-06	5.02E-05
ZNF442	2.13	9.53E-03	5.26E-02
CSRNP1	2.12	6.97E-31	4.47E-27
LAMA5	2.12	6.45E-04	6.23E-03
BISPR	2.12	1.12E-17	3.72E-15
FXVD6	2.11	2.96E-05	4.58E-04
KIAA1958	2.11	1.62E-09	7.83E-08
AC129507.1	2.1	7.79E-04	7.30E-03
IFIT5	2.1	3.59E-15	7.18E-13
APOL3	2.08	3.41E-09	1.54E-07
FIRRE	2.07	9.54E-07	2.34E-05
RNF213	2.07	1.63E-08	6.35E-07
TLR7	2.05	6.49E-04	6.26E-03
FPGT-TNNI3K	2.05	7.87E-03	4.56E-02
LINC01176	2.05	5.45E-05	7.73E-04
PHACTR4	2.05	2.93E-14	4.56E-12
C15orf48	2.04	3.52E-03	2.48E-02
GDF15	2.04	2.72E-08	9.94E-07
H4C8	2.03	4.10E-04	4.23E-03
PML	2.03	8.15E-18	2.80E-15
H2BC20P	2.02	2.02E-04	2.37E-03
HDX	2.02	1.90E-03	1.51E-02
LINC01134	2.01	4.39E-03	2.94E-02
STAT2	2.01	6.36E-11	4.50E-09
ITGB7	2	1.25E-04	1.58E-03

SLC22A4	1.99	1.98E-05	3.25E-04
TAGAP	1.99	1.33E-09	6.59E-08
RUBCN	1.99	6.42E-09	2.76E-07
TPI1P2	1.99	8.65E-03	4.90E-02
RIPOR2	1.97	7.43E-03	4.36E-02
PI4K2B	1.96	1.93E-06	4.34E-05
DTX3L	1.96	2.53E-18	9.44E-16
ACSM5	1.96	1.27E-22	1.06E-19
SLC39A14	1.96	3.36E-03	2.38E-02
TMPRSS13	1.95	1.21E-06	2.91E-05
AEN	1.95	4.48E-23	4.29E-20
TNFRSF10C	1.95	8.44E-04	7.76E-03
SYNJ2BP-COX16	1.95	9.50E-03	5.25E-02
TDRD7	1.94	1.25E-15	2.71E-13
TCF4	1.93	2.78E-09	1.29E-07
ALS2CL	1.92	3.99E-03	2.73E-02
NFKBIZ	1.92	4.59E-07	1.24E-05
HLA-F-AS1	1.92	5.12E-03	3.30E-02
OPTN	1.92	1.47E-14	2.39E-12
CMTR1	1.91	2.63E-15	5.35E-13
EXT1	1.9	2.15E-04	2.50E-03
AL357033.4	1.9	4.65E-13	5.24E-11
SHFL	1.9	1.47E-12	1.48E-10
HLA-F	1.9	6.29E-08	2.12E-06
MASTL	1.9	1.25E-08	5.04E-07
NFIX	1.88	1.03E-06	2.51E-05
SPAG1	1.88	1.52E-03	1.26E-02
H2BC21	1.87	3.20E-05	4.90E-04
SP140L	1.87	5.21E-13	5.82E-11
SLAMF7	1.86	4.79E-06	9.69E-05
AC040162.1	1.85	1.14E-06	2.75E-05
TAP2	1.85	2.66E-06	5.82E-05

GRAMD1B	1.84	4.50E-04	4.59E-03
KIAA1671	1.84	4.58E-03	3.03E-02
AL669918.1	1.83	6.63E-11	4.65E-09
SPATS2L	1.82	1.75E-12	1.72E-10
UBE2S	1.82	1.47E-06	3.46E-05
STAG3	1.81	1.49E-08	5.88E-07
CCL3	1.81	2.52E-11	1.97E-09
ENTPD5	1.81	3.30E-16	8.03E-14
CHROMR	1.8	1.86E-12	1.82E-10
CD80	1.8	6.34E-06	1.22E-04
PIWIL4	1.8	3.85E-07	1.06E-05
GVINP1	1.78	2.57E-06	5.67E-05
SHISA5	1.78	7.29E-19	2.96E-16
CNP	1.78	1.14E-17	3.72E-15
AC025423.4	1.78	3.95E-03	2.71E-02
HSD11B1	1.77	5.19E-05	7.48E-04
AL450326.1	1.76	1.09E-02	5.82E-02
TNFSF13B	1.76	2.22E-15	4.58E-13
MYO7B	1.75	4.22E-03	2.85E-02
BLZF1	1.75	1.66E-11	1.33E-09
OAS1	1.75	2.77E-07	8.10E-06
ODF3B	1.74	2.73E-06	5.95E-05
DYNLT1	1.74	3.24E-14	4.88E-12
AC022916.2	1.74	1.11E-02	5.89E-02
ZNF702P	1.73	1.00E-03	8.98E-03
LINC01358	1.73	5.15E-04	5.15E-03
C17orf67	1.73	7.97E-04	7.43E-03
H2AC19	1.71	5.78E-07	1.51E-05
GTPBP1	1.71	3.31E-09	1.51E-07
C1R	1.7	6.40E-04	6.19E-03
AC241585.2	1.7	1.86E-04	2.22E-03
SLC25A28	1.7	1.04E-09	5.27E-08

FBXO6	1.7	1.89E-19	8.73E-17
SAT1	1.7	3.21E-08	1.16E-06
PRDM11	1.7	4.88E-03	3.17E-02
PSME2	1.69	2.66E-14	4.20E-12
IL4I1	1.68	3.94E-04	4.10E-03
UBA7	1.67	3.01E-07	8.64E-06
PGAP1	1.67	5.55E-04	5.48E-03
CASZ1	1.67	4.85E-03	3.16E-02
C1GALT1	1.67	5.87E-14	8.19E-12
AP000331.1	1.67	1.78E-03	1.42E-02
MACC1	1.65	3.74E-05	5.57E-04
ZMYND15	1.64	8.92E-10	4.57E-08
CCL4	1.64	7.78E-04	7.29E-03
LY6E	1.64	4.13E-15	8.01E-13
KIAA1755	1.64	1.10E-02	5.85E-02
RTCB	1.64	1.31E-17	4.18E-15
JADE2	1.63	2.17E-10	1.38E-08
LRRC32	1.63	1.58E-04	1.92E-03
MYH3	1.62	7.74E-03	4.50E-02
ADAR	1.62	1.63E-20	9.52E-18
IFI16	1.62	1.54E-07	4.73E-06
LRRC1	1.61	9.10E-04	8.27E-03
SPHK1	1.61	6.43E-09	2.76E-07
CARD16	1.6	9.36E-09	3.89E-07
ZNF107	1.6	7.17E-11	5.00E-09
GPR180	1.6	4.43E-11	3.26E-09
RAB37	1.6	5.76E-05	8.09E-04
GBP3	1.59	3.80E-25	8.49E-22
AL645933.5	1.59	4.83E-03	3.15E-02
CD274	1.59	1.68E-30	5.62E-27
ADRB2	1.59	5.64E-03	3.54E-02
CGAS	1.58	8.16E-13	8.55E-11

CBR1	1.57	8.21E-14	1.06E-11
SCAMP1-AS1	1.57	3.51E-06	7.45E-05
RNF19B	1.57	2.02E-20	1.08E-17
LILRB1	1.57	1.00E-30	4.47E-27
C4orf33	1.56	5.45E-07	1.43E-05
PHLDA2	1.56	3.13E-04	3.36E-03
TYMP	1.55	5.04E-05	7.28E-04
FAM122C	1.55	3.72E-04	3.91E-03
AC025171.2	1.54	1.34E-04	1.67E-03
AL353807.5	1.53	1.04E-06	2.52E-05
CXorf21	1.52	1.61E-08	6.30E-07
TENT5A	1.52	3.44E-06	7.31E-05
AC004241.1	1.52	1.60E-04	1.94E-03
PHF11	1.52	3.86E-10	2.24E-08
SLC1A4	1.51	2.45E-04	2.76E-03
AL133367.1	1.51	3.88E-03	2.68E-02
TLN2	1.51	5.49E-05	7.77E-04
MYD88	1.51	7.28E-14	9.69E-12
STX11	1.5	5.78E-29	1.55E-25
TRIM25	1.5	3.66E-17	1.05E-14
PIK3CD-AS1	1.5	1.04E-02	5.60E-02
NCOA7	1.49	3.41E-12	3.13E-10
ZNFX1	1.49	4.89E-19	2.05E-16
BAHCC1	1.49	3.50E-05	5.30E-04
GIMAP6	1.49	1.81E-04	2.16E-03
RAP2C-AS1	1.49	5.05E-03	3.26E-02
SMAD3	1.48	5.35E-08	1.85E-06
NUB1	1.48	4.42E-10	2.51E-08
AC004241.5	1.48	6.34E-03	3.88E-02
DUSP5	1.48	8.40E-12	7.18E-10
SCLT1	1.48	5.47E-06	1.08E-04
IL12RB1	1.47	1.43E-07	4.46E-06

TRIM56	1.47	7.05E-14	9.54E-12
SYNE2	1.47	6.64E-03	4.00E-02
BLNK	1.47	1.53E-05	2.59E-04
LILRB4	1.47	3.05E-12	2.86E-10
SUSD3	1.47	1.70E-03	1.38E-02
SSB	1.46	7.01E-12	6.14E-10
TMEM268	1.45	3.60E-06	7.63E-05
STAC3	1.45	5.19E-15	9.54E-13
AGRN	1.45	9.99E-06	1.82E-04
SWT1	1.45	5.40E-07	1.42E-05
CENPN	1.44	7.94E-04	7.41E-03
STARD4	1.44	5.84E-22	4.35E-19
C3AR1	1.44	2.65E-08	9.79E-07
FAM72B	1.43	2.48E-03	1.87E-02
GTF2IP12	1.42	8.28E-04	7.66E-03
ZNF546	1.42	2.01E-03	1.59E-02
KPNA5	1.42	3.66E-06	7.70E-05
PLAAT3	1.41	8.17E-16	1.83E-13
NRIP1	1.41	2.44E-12	2.34E-10
AF127936.1	1.4	1.16E-03	1.02E-02
BTN3A3	1.4	1.55E-08	6.11E-07
ST3GAL5-AS1	1.4	3.43E-03	2.42E-02
SAMD4A	1.39	4.81E-07	1.28E-05
CD40	1.39	6.07E-15	1.09E-12
LINC01232	1.39	7.71E-03	4.50E-02
MT1X	1.39	3.63E-04	3.83E-03
SRGAP2C	1.38	4.93E-09	2.18E-07
CALHM6	1.38	5.39E-03	3.43E-02
ANGPTL4	1.38	2.42E-11	1.89E-09
BACE2	1.38	1.45E-05	2.49E-04
PARP12	1.38	1.14E-15	2.50E-13
FUT4	1.38	1.95E-12	1.88E-10

FAM225A	1.37	1.62E-04	1.96E-03
RGL1	1.37	1.08E-11	9.03E-10
NAPA	1.36	6.24E-14	8.63E-12
BCL2L13	1.36	7.76E-18	2.74E-15
PANX1	1.36	1.68E-08	6.54E-07
LINC01426	1.36	6.25E-03	3.84E-02
WARS1	1.36	1.62E-20	9.52E-18
SNN	1.36	4.54E-10	2.55E-08
FAM72A	1.36	9.62E-05	1.26E-03
SRGAP2	1.35	5.28E-10	2.87E-08
HCP5	1.34	2.29E-05	3.66E-04
RORA	1.34	1.09E-02	5.82E-02
SKIL	1.34	2.50E-04	2.78E-03
CCDC88C	1.33	1.49E-03	1.23E-02
MRPL40	1.33	3.85E-09	1.73E-07
PCGF5	1.32	1.97E-11	1.57E-09
HYLS1	1.32	9.81E-03	5.37E-02
ASPHD2	1.32	1.92E-06	4.33E-05
RIMKLB	1.31	7.23E-09	3.06E-07
ZFAND4	1.31	5.47E-03	3.47E-02
HSPA1A	1.31	1.46E-22	1.15E-19
FKRP	1.31	5.81E-06	1.14E-04
RBCK1	1.31	9.19E-11	6.26E-09
AC245297.4	1.31	2.13E-03	1.65E-02
BRCA2	1.31	3.11E-03	2.24E-02
F3	1.3	4.54E-04	4.63E-03
HSPA1B	1.3	7.37E-11	5.12E-09
C1S	1.3	5.08E-03	3.28E-02
GIMAP2	1.3	5.42E-06	1.07E-04
CYSLTR1	1.3	5.69E-06	1.12E-04
METTL4	1.3	3.12E-06	6.71E-05
JUP	1.3	1.68E-04	2.03E-03

H2BC5	1.29	1.18E-03	1.03E-02
ENPP2	1.29	4.70E-04	4.76E-03
POLR1B	1.29	1.47E-05	2.51E-04
FRG1CP	1.29	2.16E-07	6.45E-06
CASP1	1.29	7.31E-09	3.08E-07
PSMB8	1.29	3.82E-10	2.22E-08
ORAI2	1.28	3.14E-12	2.90E-10
MNDA	1.28	1.26E-10	8.32E-09
ARHGAP27	1.27	3.52E-07	9.82E-06
TTC38	1.27	1.53E-09	7.41E-08
ARMH1	1.27	1.65E-05	2.76E-04
ZC3H12D	1.27	9.11E-03	5.10E-02
JAK3	1.27	9.86E-04	8.87E-03
RAD9A	1.27	1.16E-06	2.78E-05
ZBED1	1.26	1.49E-10	9.67E-09
CAMK1G	1.26	9.84E-03	5.38E-02
RNASEH1-AS1	1.26	7.62E-03	4.45E-02
IRAK2	1.26	1.08E-03	9.59E-03
AKAP7	1.26	1.47E-03	1.23E-02
TRIM26	1.26	4.28E-13	4.90E-11
SDSL	1.26	1.36E-10	8.87E-09
LINC01127	1.25	3.79E-03	2.63E-02
NADK	1.25	5.42E-11	3.87E-09
LRRC37A3	1.25	1.04E-04	1.35E-03
HEG1	1.25	9.97E-09	4.13E-07
MTMR11	1.24	2.84E-04	3.10E-03
SLFN12	1.24	5.28E-06	1.05E-04
PARP15	1.24	1.63E-03	1.33E-02
ARHGAP11B	1.24	5.81E-03	3.63E-02
GSTT2B	1.24	1.08E-02	5.79E-02
RASGEF1B	1.24	4.28E-10	2.44E-08
UNC93B1	1.24	7.68E-10	4.04E-08

IRF9	1.24	4.37E-11	3.24E-09
ZC3H12C	1.24	1.70E-07	5.17E-06
MOV10	1.22	8.73E-11	6.00E-09
SLC41A2	1.21	5.13E-04	5.13E-03
RARG	1.21	2.07E-03	1.62E-02
SCO2	1.21	3.91E-06	8.10E-05
AC244197.3	1.21	4.17E-03	2.82E-02
SCARB2	1.21	1.72E-20	9.58E-18
PPA1	1.21	3.25E-10	1.94E-08
SP100	1.21	5.28E-10	2.87E-08
H2AC6	1.2	4.00E-07	1.10E-05
CDC73	1.2	1.44E-13	1.77E-11
CDYL2	1.2	5.62E-04	5.54E-03
SLC25A23	1.2	8.91E-03	5.01E-02
ATF3	1.2	6.38E-11	4.50E-09
STAT4	1.19	1.60E-04	1.94E-03
AF117829.1	1.19	1.22E-03	1.05E-02
CHMP5	1.19	1.48E-13	1.81E-11
GBP2	1.19	1.33E-08	5.34E-07
SIGLEC8	-1.21	1.40E-08	5.55E-07
ADAM12	-1.21	7.97E-07	2.01E-05
LINC02035	-1.22	3.26E-07	9.21E-06
FSCN1	-1.23	8.34E-04	7.70E-03
CXCR2	-1.24	2.68E-04	2.97E-03
KLF4	-1.25	3.02E-14	4.65E-12
SSBP2	-1.25	7.67E-05	1.03E-03
FMO5	-1.26	5.51E-03	3.49E-02
LINS1	-1.27	1.08E-08	4.43E-07
DIXDC1	-1.27	2.28E-04	2.61E-03
AC010442.1	-1.28	4.67E-03	3.08E-02
NAT8L	-1.28	3.62E-03	2.53E-02
DPCD	-1.3	2.20E-04	2.54E-03

KANTR	-1.3	9.62E-03	5.30E-02
DACT1	-1.31	2.84E-04	3.10E-03
CD28	-1.31	2.36E-03	1.79E-02
PADI2	-1.31	8.91E-03	5.01E-02
YPEL3	-1.32	1.35E-06	3.21E-05
WNT5B	-1.32	5.44E-08	1.88E-06
EIF4BP6	-1.33	6.30E-03	3.86E-02
ORC6	-1.33	3.22E-04	3.45E-03
BCL11A	-1.34	2.51E-04	2.80E-03
MID1IP1	-1.36	6.85E-17	1.91E-14
CENPP	-1.38	3.30E-03	2.35E-02
CRB2	-1.39	5.44E-05	7.73E-04
ST8SIA6	-1.39	5.30E-06	1.05E-04
KRT79	-1.4	3.30E-05	5.03E-04
CYGB	-1.41	1.50E-11	1.23E-09
AC132812.1	-1.43	4.06E-03	2.77E-02
DNAL1	-1.44	3.76E-04	3.93E-03
IER3	-1.45	1.20E-08	4.86E-07
OBSL1	-1.46	2.14E-03	1.66E-02
NFE2	-1.47	1.28E-08	5.15E-07
PPBP	-1.47	1.32E-03	1.13E-02
AC126474.2	-1.47	3.78E-04	3.95E-03
SPACA9	-1.48	1.17E-03	1.02E-02
TMEM45B	-1.48	1.48E-06	3.48E-05
PCARE	-1.49	8.26E-12	7.10E-10
ENHO	-1.5	2.68E-10	1.66E-08
LINC02610	-1.51	4.10E-03	2.79E-02
PRKAR2B	-1.51	4.19E-04	4.30E-03
AC009690.1	-1.51	1.61E-03	1.32E-02
STK39	-1.54	6.26E-09	2.73E-07
AC124068.1	-1.57	6.92E-07	1.77E-05
APBA1	-1.57	5.57E-03	3.51E-02

CXCR1	-1.58	8.76E-07	2.17E-05
IL22RA2	-1.58	6.88E-08	2.30E-06
PPM1H	-1.59	5.15E-03	3.31E-02
IRS2	-1.6	4.40E-13	5.00E-11
PDE2A	-1.62	3.62E-04	3.82E-03
CHTF18	-1.64	5.95E-03	3.70E-02
AC144831.1	-1.65	2.52E-06	5.56E-05
CCL28	-1.65	9.98E-05	1.30E-03
MFSD6L	-1.65	2.22E-03	1.71E-02
SLC25A25-AS1	-1.66	6.05E-03	3.74E-02
TDRD9	-1.68	8.10E-04	7.54E-03
TCHH	-1.68	6.91E-05	9.46E-04
ADGRB2	-1.7	1.04E-02	5.60E-02
ADAMTS15	-1.71	1.30E-06	3.10E-05
FAM126A	-1.72	1.07E-13	1.37E-11
SESN3	-1.74	1.64E-12	1.63E-10
ROR1-AS1	-1.74	6.85E-04	6.57E-03
ERVFRD-1	-1.75	8.94E-03	5.02E-02
ABLIM1	-1.78	1.13E-02	6.00E-02
SRGAP1	-1.79	8.04E-03	4.65E-02
ANLN	-1.8	1.84E-03	1.47E-02
ASF1B	-1.81	7.60E-04	7.15E-03
MYORG	-1.86	5.63E-04	5.54E-03
AC135048.1	-1.86	2.44E-04	2.75E-03
CENPU	-1.87	1.07E-03	9.49E-03
CACNB4	-1.88	4.87E-04	4.91E-03
RAB33A	-1.88	2.11E-05	3.43E-04
GINS4	-1.92	4.80E-08	1.68E-06
RIMBP3B	-1.94	4.47E-04	4.57E-03
SMAD6	-1.97	8.10E-05	1.09E-03
MBOAT2	-1.97	8.50E-04	7.80E-03
AC096921.2	-1.99	9.84E-03	5.38E-02

KBTBD11	-2.01	2.61E-08	9.74E-07
PEG3	-2.04	5.33E-03	3.39E-02
SDC1	-2.05	2.08E-04	2.43E-03
PRORSD1P	-2.08	2.11E-03	1.64E-02
TTC28	-2.08	8.34E-06	1.56E-04
E2F1	-2.1	1.12E-04	1.44E-03
KPNA2P3	-2.16	3.55E-03	2.49E-02
ZNF835	-2.21	4.40E-03	2.94E-02
AHNAK2	-2.23	1.08E-05	1.93E-04
DUOX1	-2.25	5.28E-06	1.05E-04
SLC16A10	-2.26	8.62E-03	4.89E-02
MKI67	-2.27	2.87E-05	4.46E-04
TFAP4	-2.28	3.45E-04	3.66E-03
AC243960.1	-2.39	8.10E-03	4.67E-02
LINC00921	-2.44	2.02E-03	1.59E-02
IGSF3	-2.5	8.91E-10	4.57E-08
ZNF571-AS1	-2.52	2.38E-03	1.80E-02
GASK1A	-2.53	3.11E-05	4.78E-04
ADGRG6	-2.62	7.61E-03	4.45E-02
CSGALNACT1	-2.65	1.19E-03	1.04E-02
NPHP1	-2.69	2.22E-03	1.71E-02
KIAA1614	-2.73	1.35E-05	2.36E-04
TACSTD2	-2.98	1.30E-03	1.11E-02
TMEM154	-3.18	8.96E-06	1.65E-04
WFDC21P	-3.19	2.99E-04	3.23E-03
CCDC80	-3.3	8.99E-03	5.04E-02
AP001931.2	-3.84	1.57E-03	1.29E-02
SLX1B	-4.66	2.22E-05	3.57E-04
SLC18A2	-5.48	1.68E-05	2.81E-04
AC008878.3	-5.87	4.56E-03	3.02E-02

Table S2. Differentially expressed genes in dendritic cells with IFIH1 knockdown: effect of HIV-1-GFP vs minimal HIV-1 vector

Gene	log2FoldChange	pvalue	padj
CXCL10	7.11	1.26E-07	6.93E-05
RSAD2	6.79	1.21E-13	5.08E-10
NTNG2	6.31	1.28E-10	2.30E-07
IFI44L	5.34	1.05E-06	3.40E-04
IFIT1	4.41	1.45E-08	1.23E-05
MX1	4.34	1.77E-07	8.94E-05
ISG15	4.27	7.69E-10	1.08E-06
OASL	4.22	7.98E-09	8.38E-06
ISG20	4.13	3.33E-04	2.22E-02
CMPK2	4.12	1.59E-06	4.56E-04
IFITM3	3.95	7.64E-06	1.51E-03
USP18	3.68	5.69E-06	1.26E-03
IFIT2	3.51	8.94E-09	8.67E-06
LAMA2	3.49	3.24E-04	2.20E-02
IFIT3	3.36	2.69E-08	1.99E-05
HELZ2	3.3	4.24E-08	2.81E-05
RASAL2-AS1	3.13	6.90E-04	3.46E-02
HERC5	2.71	4.92E-05	5.59E-03
IFI44	2.69	7.32E-06	1.47E-03
EPSTI1	2.68	1.47E-05	2.37E-03
TSPOAP1	2.66	1.06E-04	9.51E-03
COL1A1	2.65	8.29E-04	3.91E-02
ALS2CL	2.49	6.91E-04	3.46E-02
IRF7	2.42	6.41E-07	2.18E-04
MX2	2.4	5.00E-05	5.63E-03
BATF2	2.39	1.52E-04	1.27E-02
DDX58	2.39	1.59E-05	2.42E-03
OAS2	2.39	6.24E-06	1.34E-03
OAS3	2.35	4.50E-05	5.30E-03

RNF144A	2.31	9.86E-04	4.25E-02
SP140	2.29	1.69E-04	1.39E-02
RAB43P1	2.25	9.91E-06	1.79E-03
SLC12A8	2.22	7.28E-09	8.35E-06
FHIT	2.18	9.24E-04	4.08E-02
THAP9	2.15	3.76E-04	2.37E-02
XAF1	2.1	1.09E-05	1.88E-03
CCL5	2.08	4.71E-04	2.75E-02
UXT-AS1	2.06	8.81E-05	8.17E-03
GMPR	2.05	4.69E-04	2.75E-02
OLR1	2.05	3.78E-07	1.49E-04
IFI6	2.04	4.51E-04	2.68E-02
SLC16A1-AS1	2.01	6.25E-06	1.34E-03
GSTM3	1.95	7.25E-04	3.60E-02
APOBEC3F	1.95	4.30E-04	2.63E-02
FCN1	1.92	8.87E-04	4.04E-02
IL15RA	1.88	9.26E-04	4.08E-02
ARMH1	1.82	2.79E-09	3.52E-06
MTMR11	1.82	1.36E-06	4.19E-04
PLSCR1	1.82	5.50E-04	2.95E-02
ABTB2	1.81	1.12E-03	4.50E-02
ANGPTL4	1.8	4.78E-18	3.01E-14
EIF2AK2	1.8	3.51E-05	4.34E-03
DDX60L	1.8	1.14E-03	4.52E-02
ACTL6A	-1.49	7.21E-22	9.10E-18
TIMM23B-AGAP6	-1.56	1.01E-03	4.29E-02
MSH5-SAPCD1	-2.08	1.32E-03	5.06E-02
MBOAT2	-2.52	1.51E-05	2.37E-03
GCOM1	-2.59	6.71E-04	3.41E-02

Table S3. Plasmids used in this study			
Plasmid Name	Purpose	Notes	Source
pAIP hGMCSF co	expressing human cytokine GM-CSF	SFFV promoter expresses codon-optimized human GM-CSF and puromycin N-acetyltransferase	Addgene #74168
pAIP hIL4 co	expressing human cytokine IL4	SFFV promoter expresses codon-optimized human IL4 and puromycin N-acetyltransferase	Addgene #74169
pSIV Δpsi/Δenv/Δvif/Δvpr	SIVMAC251 gag-pol/vpx	Production of SIV-VLPs containing Vpx protein	Addgene #132928
pMD2.G	VSV Glycoprotein	Pseudotype HIV-1 vectors with VSV Glycoprotein	Addgene #12259
psPAX2	HIV-1 gag-pol	Encodes gag structural proteins and pol enzymes to generate virion particles to generate 3-part lentiviral vector	Addgene #12260
pUC57mini NL4-3 Δenv eGFP	HIV-1 clade B molecular clone	Molecular clone of NL4-3 with deletion of 79 nucleotides following the Env signal peptide and eGFP in place of nef. "HIV-1-GFP" in the manuscript	NIH ARP #13906
pPU HSA miR30 L1221	rescue lentivector for luciferase (control)	SFFV promoter expresses puromycin N-acetyltransferase, exogenous HSA protein, and miR30-based shRNA targeting	Addgene #174221
		Target sequence: 5'-CTTGTCGATGAGAGCGTTTGT A-3'; negative control in knockdown-rescue experiment	
pPU HSA miR30 MDA5	rescue lentivector for MDA5 knockdown	SFFV promoter expresses puromycin N-acetyltransferase, exogenous HSA protein, and miR30-based shRNA targeting	Addgene #174222
		Target sequence: 5'-TTTATACATCATCTTCTCTCGG-3'	
pPU huMDA5 miR30 L1221	rescue lentivector for huMDA5 expression and	SFFV promoter expresses puromycin N-acetyltransferase, exogenous huMDA5 protein, and miR30-based shRNA targeting	Addgene #174223
		Target sequence: 5'-CTTGTCGATGAGAGCGTTTGT A-3'	
pPU huMDA5 miR30 MDA5	rescue lentivector for huMDA5 expression and	SFFV promoter expresses puromycin N-acetyltransferase, exogenous huMDA5 protein, and miR30-based shRNA targeting	Addgene #174224
		Target sequence: 5'-TTTATACATCATCTTCTCTCGG-3'	
pscALPspuro MDA5Δ2CARD	human MDA5 that lacks 2 CARD domains	Encodes codon-optimized huMDA5 with a deletion of 2xCARD domains	Addgene #174225
pscALPspuro MDA5-S88D	human MDA5 S88D mutant	Encodes codon-optimized huMDA5 S88D mutant	Addgene #174226
pscALPspuro MDA5-S88E	human MDA5 S88E mutant	Encodes codon-optimized huMDA5 S88E mutant	Addgene #174227
pscALPspuro Nipah V	Lentivector expressing Nipah virus V protein	Encodes codon-optimized Nipah virus V protein	Addgene #174228
pAPM miR30 L1221	Lentivector for luciferase (control) knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting luciferase. Target sequence: 5'-	Addgene #115846
pAPM miR30 CAPRIN1-ts1	Lentivector for CAPRIN1 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting CAPRIN1. Target sequence: 5'-	Addgene #174229
pAPM miR30 CAPRIN1-ts2	Lentivector for CAPRIN1 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting CAPRIN1. Target sequence: 5'-	Addgene #174230

pAPM miR30 CAPRIN1-ts3	Lentivector for CAPRIN1 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting CAPRIN1. Target sequence: 5'-	Addgene #174231
pAPM miR30 DDX1-ts1	Lentivector for DDX1 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting DDX1. Target sequence: 5'-	Addgene #174232
pAPM miR30 DDX1-ts2	Lentivector for DDX1 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting DDX1. Target sequence: 5'-	Addgene #174233
pAPM miR30 DDX1-ts3	Lentivector for DDX1 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting DDX1. Target sequence: 5'-	Addgene #174234
pAPM miR30 DDX3X-ts1	Lentivector for DDX3X knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting DDX3X. Target sequence: 5'-	Addgene #174235
pAPM miR30 DDX3X-ts2	Lentivector for DDX3X knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting DDX3X. Target sequence: 5'-	Addgene #174236
pAPM miR30 DDX3X-ts3	Lentivector for DDX3X knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting DDX3X. Target sequence: 5'-	Addgene #174237
pAPM miR30 DDX17-ts1	Lentivector for DDX17 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting DDX17. Target sequence: 5'-	Addgene #174238
pAPM miR30 DDX17-ts2	Lentivector for DDX17 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting DDX17. Target sequence: 5'-	Addgene #174239
pAPM miR30 DDX17-ts3	Lentivector for DDX17 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting DDX17. Target sequence: 5'-	Addgene #174240
pAPM miR30 DDX58-ts1	Lentivector for DDX58 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting DDX58. Target sequence: 5'-	Addgene #174241
pAPM miR30 DDX58-ts2	Lentivector for DDX58 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting DDX58. Target sequence: 5'-	Addgene #174242
pAPM miR30 DDX58-ts3	Lentivector for DDX58 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting DDX58. Target sequence: 5'-	Addgene #174243
pAPM miR30 DHX58-ts1	Lentivector for DHX58 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting DHX58. Target sequence: 5'-	Addgene #174244
pAPM miR30 DHX58-ts2	Lentivector for DHX58 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting DHX58. Target sequence: 5'-	Addgene #174245
pAPM miR30 DHX58-ts3	Lentivector for DHX58 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting DHX58. Target sequence: 5'-	Addgene #174246
pAPM miR30 EIF2AK2-ts1	Lentivector for EIF2AK2 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting EIF2AK2. Target sequence: 5'-	Addgene #174247
pAPM miR30 EIF2AK2-ts2	Lentivector for EIF2AK2 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting EIF2AK2. Target sequence: 5'-	Addgene #174248
pAPM miR30 EIF2AK2-ts3	Lentivector for EIF2AK2 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting EIF2AK2. Target sequence: 5'-	Addgene #174249
pAPM miR30 HNRNPK-ts1	Lentivector for HNRNPK knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting HNRNPK. Target sequence: 5'-	Addgene #174250
pAPM miR30 HNRNPK-ts2	Lentivector for HNRNPK knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting HNRNPK. Target sequence: 5'-	Addgene #174251
pAPM miR30 HNRNPK-ts3	Lentivector for HNRNPK knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting HNRNPK. Target sequence: 5'-	Addgene #174252
pAPM miR30 HNRNPR-ts1	Lentivector for HNRNPR knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting HNRNPR. Target sequence: 5'-	Addgene #174253

pAPM miR30 HNRNPR-ts2	Lentivector for HNRNPR knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting HNRNPR. Target sequence: 5'-	Addgene #174254
pAPM miR30 HNRNPR-ts3	Lentivector for HNRNPR knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting HNRNPR. Target sequence: 5'-	Addgene #174255
pAPM miR30 IFI16-ts1	Lentivector for IFI16 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting IFI16. Target sequence: 5'-	Addgene #174256
pAPM miR30 IFI16-ts2	Lentivector for IFI16 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting IFI16. Target sequence: 5'-	Addgene #174257
pAPM miR30 IFI16-ts3	Lentivector for IFI16 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting IFI16. Target sequence: 5'-	Addgene #174258
pAPM miR30 IFIH1-ts1	Lentivector for IFIH1 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting IFIH1. Target sequence: 5'-	Addgene #174259
pAPM miR30 IFIH1-ts2	Lentivector for IFIH1 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting IFIH1. Target sequence: 5'-	Addgene #174260
pAPM miR30 IFIH1-ts3	Lentivector for IFIH1 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting IFIH1. Target sequence: 5'-	Addgene #174261
pAPM miR30 ILF2-ts1	Lentivector for ILF2 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting ILF2. Target sequence: 5'-	Addgene #174262
pAPM miR30 ILF2-ts2	Lentivector for ILF2 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting ILF2. Target sequence: 5'-	Addgene #174263
pAPM miR30 ILF2-ts3	Lentivector for ILF2 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting ILF2. Target sequence: 5'-	Addgene #174264
pAPM miR30 ILF3-ts1	Lentivector for ILF3 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting ILF3. Target sequence: 5'-	Addgene #174265
pAPM miR30 ILF3-ts2	Lentivector for ILF3 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting ILF3. Target sequence: 5'-	Addgene #174266
pAPM miR30 ILF3-ts3	Lentivector for ILF3 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting ILF3. Target sequence: 5'-	Addgene #174267
pAPM miR30 LRPPRC-ts1	Lentivector for LRPPRC knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting LRPPRC. Target sequence: 5'-	Addgene #174268
pAPM miR30 LRPPRC-ts2	Lentivector for LRPPRC knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting LRPPRC. Target sequence: 5'-	Addgene #174269
pAPM miR30 LRPPRC-ts3	Lentivector for LRPPRC knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting LRPPRC. Target sequence: 5'-	Addgene #174270
pAPM miR30 MATR3-ts1	Lentivector for MATR3 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting MATR3. Target sequence: 5'-	Addgene #174271
pAPM miR30 MATR3-ts2	Lentivector for MATR3 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting MATR3. Target sequence: 5'-	Addgene #174272
pAPM miR30 MATR3-ts3	Lentivector for MATR3 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting MATR3. Target sequence: 5'-	Addgene #174273
pAPM miR30 MAVS-ts1	Lentivector for MAVS knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting MAVS. Target sequence: 5'-	Addgene #174274
pAPM miR30 MAVS-ts2	Lentivector for MAVS knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting MAVS. Target sequence: 5'-	Addgene #174275
pAPM miR30 MAVS-ts3	Lentivector for MAVS knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting MAVS. Target sequence: 5'-	Addgene #174276

pAPM miR30 MOV10-ts1	Lentivector for MOV10 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting MOV10. Target sequence: 5'-	Addgene #174277
pAPM miR30 MOV10-ts2	Lentivector for MOV10 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting MOV10. Target sequence: 5'-	Addgene #174278
pAPM miR30 MOV10-ts3	Lentivector for MOV10 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting MOV10. Target sequence: 5'-	Addgene #174279
pAPM miR30 MYD88-ts1	Lentivector for MYD88 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting MYD88. Target sequence: 5'-	Addgene #174280
pAPM miR30 MYD88-ts2	Lentivector for MYD88 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting MYD88. Target sequence: 5'-	Addgene #174281
pAPM miR30 MYD88-ts3	Lentivector for MYD88 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting MYD88. Target sequence: 5'-	Addgene #174282
pAPM miR30 TMEM173-ts1	Lentivector for TMEM173 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting TMEM173. Target sequence: 5'-	Addgene #174283
pAPM miR30 TMEM173-ts2	Lentivector for TMEM173 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting TMEM173. Target sequence: 5'-	Addgene #174284
pAPM miR30 TMEM173-ts3	Lentivector for TMEM173 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting TMEM173. Target sequence: 5'-	Addgene #174285
pAPM miR30 XPO1-ts1	Lentivector for XPO1 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting XPO1. Target sequence: 5'-TTCTGTATCTACATAATCCAGA-3'	Addgene #174286
pAPM miR30 XPO1-ts2	Lentivector for XPO1 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting XPO1. Target sequence: 5'-TATAAGTTGATCATGTTCCCTTA-3'	Addgene #174287
pAPM miR30 XPO1-ts3	Lentivector for XPO1 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting XPO1. Target sequence: 5'-TAACAGTAACAAGAAATCGTTT-3'	Addgene #174288
pAPM miR30 ZC3HAV1-ts1	Lentivector for ZC3HAV1 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting ZC3HAV1. Target sequence: 5'-	Addgene #174289
pAPM miR30 ZC3HAV1-ts2	Lentivector for ZC3HAV1 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting ZC3HAV1. Target sequence: 5'-	Addgene #174290
pAPM miR30 ZC3HAV1-ts3	Lentivector for ZC3HAV1 knockdown	SFFV promoter expresses puromycin N-acetyltransferase and miR30-based shRNA targeting ZC3HAV1. Target sequence: 5'-	Addgene #174291

Table S4. Oligonucleotides used in RT-qPCR of HIV-1 following formaldehyde cross-linking immunoprecipitation (fCLIP)

Name	Sequence
5'LTR-F	5'-TGTTCTGGGCGCCACTGCTAGAGA-3'
5'LTR-R	5'-GGAACCCACTGCTTAAGCCTCAA-3'
gag-F	5'-ACATCAAGCAGCCATGCAAAT-3'
gag-R	5'-TCTGGCCTGGTGCAATAGG-3'
RT-F	5'-AGAAATACAGAAGCAGGGGCA-3'
RT-R	5'-TGGGCACCCTTCATTCTTGC-3'
IN-F	5'-TGGAGAGCAATGGCTAGTGA-3'
IN-R	5'-GCATGGCTTCCCCTTTTAGC-3'
D1A4-F	5'-GATCTCTCGACGCAGGACTC-3'
D1A4-R	5'-TGGTCCTTTCCAAACTGGAT-3'
D4A7-F	5'-CAGGAAGAAGCGGAGACAG-3'
D4A7-R	5'-ATTGGGAGGTGGGTCTGAAAC-3'
ACTB-F	5'-GTGATGGTGGGCATGGGTC-3'
ACTB-R	5'-CCATGTCGTCCCAGTTGGTG-3'