

Table S8. Annotations produced by the HIR 2013/GSLA for downregulated genes.

Job Number: GSLA12289154420552

Cutoff used:

Q1: density ≥ 0.01

Q2: $p \leq 0.0005$

Meaning:

Q1: inter-geneset interaction density is greater than expected.

Q2: the observed interaction density can only be observed in the biologically correct interactome topology.

Categories selected: GO biological process

Species: Homo sapiens

Interaction dataset selected: HIR

#Subjob Number: GSLA12289154420552_0

#Description: #top100-HIR

#Quaried GeneSet: MVB12B, EHD4, APOL3, IRF8, CXCL11, L2HGDH, TLR7, CXCL9, TOMM5, CXCL10, STX17, POMP, CLUAP1, C21orf91, UTP6, TOMM34, SLC31A2, C19orf12, NXF1, WARS, SYCP1, ISCA1, ARHGAP27, PAPD7, TXK, TNFSF10, CYP51A1, SLC38A5, WARS, RNF114, ALPK1, CYP7B1, GAD1, RAB31, HES4, ADAM19, HARS, WDFY2, SP100, CNBP2, C1QB, MASTL, HRASLS2, IGF2R, SLFN12, PELO, IFIT2, SFT2D2, CSTF3, PUS7, HMGCS1, RTP4, PLA1A, SBK1, SRSF4, ISCA1, RGL1, IFIT3, UGGT2, OASL, IFITM2, CD38, LILRA6, IFITM1, BATF2, DOPEY1, CSTF3, TSPAN13, PSMB10, C17orf67, IFIT1, RBMS2, IFI27, SCYL3, CKAP4, CEACAM1, HSH2D, NUP205, ZNF438, MT2A, LYN, CHRN1, ELMO2, ACSL1, STAT1, FAM111A, CCL5, IDO1, RSAD2, FGL2, SP140, EFR3A, CGNL1, N4BP2L2, CLEC2D, KPNA5, RUNX3, TMEM97, QPRT, APOBEC3G

Term type	Term	Description	Term size	P value	Density	Interaction number	Overlap gene number	Overlap gene(s)	Interactions	Supported term
GO biological process	GO:0017056	structural constituent of nuclear pore	10	0	0.0103	10	1	NUP205	NUP205-HGNC:12017 NUP205-HGNC:29914 NUP205-HGNC:28958 NXF1-HGNC:13722 NXF1-HGNC:8068 NXF1-HGNC:29914 NXF1-NUP205 NXF1-HGNC:28958 NXF1-HGNC:8062 KPNA5-HGNC:29914	N
GO biological process	GO:0019957	C-C chemokine binding	7	0	0.01767	12	0		STAT1-HGNC:2561 STAT1-HGNC:1602 STAT1-HGNC:1606 CXCL9-HGNC:1604 TXK-HGNC:1606 CCL5-HGNC:4035 CCL5-HGNC:1602 CCL5-HGNC:1604 CCL5-HGNC:1606 CXCL10-HGNC:1602 CXCL10-HGNC:1604 CXCL11-HGNC:1604	Y
GO biological process	GO:0042532	negative regulation of tyrosine phosphorylation of STAT protein	Tabl	1.00E-04	0.0103	8	0		LYN-HGNC:9650 LYN-HGNC:29605 LYN-HGNC:19383 LYN-HGNC:19391 STAT1-HGNC:9650 STAT1-HGNC:29605 STAT1-HGNC:19383 TXK-HGNC:19383	N
GO biological process	GO:0098789	pre-mRNA cleavage required for polyadenylation	6	3.00E-04	0.01718	10	0		SRSF4-HGNC:7659 SRSF4-HGNC:13871 SRSF4-HGNC:30098 SRSF4-HGNC:7658 RBMS2-HGNC:7659 CSTF3-HGNC:7659 NXF1-HGNC:7659 NXF1-HGNC:7658 KPNA5-HGNC:7659 KPNA5-HGNC:7658	N

GO biological process	GO:0000502	proteasome complex	47	0	0.0103	47	1	PSMB10	POMP-HGNC:9532 POMP-HGNC:9533 POMP-HGNC:9536 POMP-HGNC:9537 POMP-HGNC:9539 POMP-HGNC:9541 POMP-HGNC:9540 POMP-HGNC:9544 POMP-HGNC:9542 POMP-HGNC:9543 POMP-HGNC:9546 HARS-HGNC:16889 HARS-HGNC:9559 TOMM34-HGNC:12666 CNDP2-HGNC:16889 NXF1-HGNC:1237 WARS-HGNC:16889 WARS-HGNC:9559 WARS-HGNC:9561 PSMB10-HGNC:9531 PSMB10-HGNC:9532 PSMB10-HGNC:9533 PSMB10-HGNC:9534 PSMB10-HGNC:9535 PSMB10-HGNC:9536 PSMB10-HGNC:9537 PSMB10-HGNC:9539 PSMB10-HGNC:16889 PSMB10-HGNC:9541 PSMB10-HGNC:9540 PSMB10-HGNC:9544 PSMB10-HGNC:9545 PSMB10-HGNC:9542 PSMB10-HGNC:9543 PSMB10-HGNC:9548 PSMB10-HGNC:9546 PSMB10-HGNC:9547 PSMB10-HGNC:9564 PSMB10-HGNC:22985 PSMB10-HGNC:9530 PSMB10-HGNC:9552 PSMB10-HGNC:9551 PELO-HGNC:9561 HMGCS1-HGNC:16889 HMGCS1-HGNC:9559 HMGCS1-HGNC:9561 HMGCS1-HGNC:9549	N
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GO biological process	GO:0060334	regulation of interferon-gamma-mediated signaling pathway	21	1.00E-04	0.01374	28	2	TXK STAT1	LYN-TXK LYN-HGNC:19383 LYN-HGNC:6192 LYN-HGNC:6190 LYN-HGNC:9650 LYN-HGNC:19391 LYN-STAT1 STAT1-TXK STAT1-HGNC:5439 STAT1-HGNC:19383 STAT1-HGNC:6192 STAT1-HGNC:6190 STAT1-HGNC:9650 STAT1-HGNC:5258 STAT1-HGNC:2752 STAT1-STAT1 HARS-HGNC:5258 SP100-HGNC:12502 HES4-HGNC:5258 PAPD7-HGNC:5258 CNDP2-HGNC:5258 TXK-TXK TXK-HGNC:19383 TXK-HGNC:6192 TXK-HGNC:6190 TXK-STAT1 KPNA5-HGNC:12502 HMGCS1-HGNC:12502	Y
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GO biological process	GO:0019773	proteasome core complex, alpha-subunit complex	8	2.00E-04	0.01417	11	0		POMP-HGNC:9532 POMP-HGNC:9533 POMP-HGNC:9536 PSMB10-HGNC:9531 PSMB10-HGNC:9532 PSMB10-HGNC:9533 PSMB10-HGNC:9534 PSMB10-HGNC:9535 PSMB10-HGNC:9536 PSMB10-HGNC:9530 PSMB10-HGNC:22985	N
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GO biological process	GO:0016493	C-C chemokine receptor activity	5	3.00E-04	0.01237	6	0		STAT1-HGNC:1602 STAT1-HGNC:1606 TXK-HGNC:1606 CCL5-HGNC:1602 CCL5-HGNC:1606 CXCL10-HGNC:1602	Y
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GO biological process	GO:0005839	proteasome core complex	17	0	0.01637	27	1	PSMB10	POMP-HGNC:9544 POMP-HGNC:9532 POMP-HGNC:9542 POMP-HGNC:9533 POMP-HGNC:9543 POMP-HGNC:9536 POMP-HGNC:9537 POMP-HGNC:9546 POMP-HGNC:9539 POMP-HGNC:9541 POMP-HGNC:9540 PSMB10-HGNC:9531 PSMB10-HGNC:9544 PSMB10-HGNC:9532 PSMB10-HGNC:9545 PSMB10-HGNC:9542 PSMB10-HGNC:9533 PSMB10-HGNC:9543 PSMB10-HGNC:9534 PSMB10-HGNC:9535 PSMB10-HGNC:9536 PSMB10-HGNC:9537 PSMB10-HGNC:9546 PSMB10-HGNC:9539 PSMB10-HGNC:9530 PSMB10-HGNC:9541 PSMB10-HGNC:9540	N
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GO biological process	GO:0046831	regulation of RNA export from nucleus	12	1.00E-04	0.0103	12	0		LYN-HGNC:18116 LYN-HGNC:11470 SRSF4-HGNC:7659 SRSF4-HGNC:13871 PAPD7-HGNC:25994 NUP205-HGNC:12017 RBMS2-HGNC:7659 CSTF3-HGNC:7659 NXF1-HGNC:7659 NXF1-HGNC:2750 NXF1-HGNC:8062 KPNA5-HGNC:7659	N
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GO biological process	GO:0051292	nuclear pore complex assembly	9	1.00E-04	0.0103	9	1	NUP205	NUP205-HGNC:12017 NUP205-HGNC:29914 NUP205-HGNC:28958 NXF1-HGNC:8068 NXF1-HGNC:29914 NXF1-NUP205 NXF1-HGNC:28958 NXF1-HGNC:8062 KPNA5-HGNC:29914	N
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GO biological process	GO:0019774	proteasome core complex, beta-subunit complex	11	0	0.01686	18	1	PSMB10	POMP-HGNC:9544 POMP-HGNC:9542 POMP-HGNC:9543 POMP-HGNC:9537 POMP-HGNC:9546 POMP-HGNC:9539 POMP-HGNC:9541 POMP-HGNC:9540 PSMB10-HGNC:9544 PSMB10-HGNC:9545 PSMB10-HGNC:9542 PSMB10-HGNC:9543 PSMB10-HGNC:31963 PSMB10-HGNC:9537 PSMB10-HGNC:9546 PSMB10-HGNC:9539 PSMB10-HGNC:9541 PSMB10-HGNC:9540	N
GO biological process	GO:0045590	negative regulation of regulatory T cell differentiation	5	0	0.01237	6	0		LYN-HGNC:2505 STAT1-HGNC:6116 STAT1-HGNC:6972 TNFSF10-HGNC:11934 IRF8-HGNC:6116 TXK-HGNC:2505	Y
GO biological process	GO:0019054	modulation by virus of host cellular process	14	1.00E-04	0.01251	17	0		QPRT-HGNC:6394 CD38-HGNC:1678 STAT1-HGNC:6394 TNFSF10-HGNC:1509 RUNX3-HGNC:30306 SRSF4-HGNC:8565 NUP205-HGNC:30306 NXF1-HGNC:6394 NXF1-HGNC:6400 NXF1-HGNC:6396 CEACAM1-HGNC:1678 KPNA5-HGNC:6395 KPNA5-HGNC:6394 KPNA5-HGNC:6400 KPNA5-HGNC:6396 KPNA5-HGNC:21839 KPNA5-HGNC:6397	N
GO biological process	GO:0019048	modulation by virus of host process	23	3.00E-04	0.01075	24	0		LYN-HGNC:6091 QPRT-HGNC:6394 CD38-HGNC:1678 STAT1-HGNC:9437 STAT1-HGNC:6394 STAT1-HGNC:6091 TNFSF10-HGNC:1509 RUNX3-HGNC:30306 SRSF4-HGNC:8565 NUP205-HGNC:30306 TXK-HGNC:6091 NXF1-HGNC:6400 NXF1-HGNC:6396 NXF1-HGNC:6394 CEACAM1-HGNC:13523 CEACAM1-HGNC:6091 CEACAM1-HGNC:1641 CEACAM1-HGNC:1678 KPNA5-HGNC:6400 KPNA5-HGNC:6396 KPNA5-HGNC:6397 KPNA5-HGNC:6395 KPNA5-HGNC:6394 KPNA5-HGNC:21839	N
GO biological process	GO:0004713	protein tyrosine kinase activity	93	4.00E-04	0.01817	164	2	LYN IGF2R	LYN-HGNC:3657 LYN-HGNC:3691 LYN-HGNC:4037 LYN-HGNC:4840 LYN-HGNC:3655 LYN-HGNC:3690 LYN-HGNC:3697 LYN-HGNC:1079 LYN-HGNC:427 LYN-HGNC:6906 LYN-LYN LYN-HGNC:5465 LYN-HGNC:6524 LYN-HGNC:8804 LYN-HGNC:9611 LYN-HGNC:11940 LYN-HGNC:12841 LYN-HGNC:8803 LYN-HGNC:77 LYN-HGNC:6091 LYN-HGNC:76 LYN-HGNC:6093 LYN-HGNC:9612 LYN-HGNC:7525 LYN-HGNC:9617 LYN-HGNC:6721 LYN-HGNC:3393 LYN-HGNC:3394 LYN-HGNC:3395 LYN-HGNC:6171 LYN-HGNC:11719 LYN-HGNC:2444 LYN-HGNC:10261 LYN-HGNC:3388 LYN-HGNC:3389 LYN-HGNC:11283 LYN-HGNC:3765 LYN-HGNC:3386 LYN-HGNC:3387 LYN-HGNC:3767 LYN-HGNC:1133 LYN-HGNC:3385 LYN-HGNC:2433 LYN-HGNC:8032 LYN-HGNC:8031 LYN-HGNC:3763 LYN-HGNC:11724 LYN-HGNC:19297 LYN-HGNC:9967 LYN-HGNC:3392 LYN-HGNC:3432 LYN-HGNC:3391 LYN-HGNC:3390 LYN-HGNC:3430 LYN-HGNC:3431 LYN-HGNC:2731 LYN-HGNC:2730 LYN-HGNC:12446 LYN-HGNC:12440 LYN-HGNC:3688 LYN-HGNC:3689 LYN-HGNC:6192 LYN-HGNC:6193 LYN-HGNC:6190 LYN-HGNC:3236 LYN-HGNC:7029 LYN-HGNC:1057 LYN-HGNC:12858 LYN-HGNC:6342 LYN-HGNC:6307 LYN-HGNC:11491 LYN-HGNC:3955 HSH2D-HGNC:3657 HSH2D-LYN HSH2D-HGNC:6524 HSH2D-HGNC:12841 HSH2D-HGNC:2444 HSH2D-HGNC:19297 IGF2R-IGF2R CD38-HGNC:6524 STAT1-HGNC:3657 STAT1-HGNC:3691 STAT1-HGNC:4037 STAT1-HGNC:4840 STAT1-HGNC:3690 STAT1-HGNC:3697 STAT1-HGNC:1079 STAT1-HGNC:6906 STAT1-LYN STAT1-HGNC:5465 STAT1-HGNC:6524 STAT1-HGNC:8804 STAT1-HGNC:9611 STAT1-HGNC:12841 STAT1-HGNC:8803 STAT1-HGNC:77 STAT1-HGNC:6091 STAT1-HGNC:76 STAT1-HGNC:9617 STAT1-HGNC:6171 STAT1-HGNC:11719 STAT1-HGNC:2444 STAT1-HGNC:11283 STAT1-	N

GO biological process	GO:0060330	regulation of response to interferon-gamma	21	0	0.01374	28	2	TXK STAT1	LYN-TXK LYN-HGNC:19383 LYN-HGNC:6192 LYN-HGNC:6190 LYN-HGNC:9650 LYN-HGNC:19391 LYN-STAT1 STAT1-TXK STAT1-HGNC:5439 STAT1-HGNC:19383 STAT1-HGNC:6192 STAT1-HGNC:6190 STAT1-HGNC:9650 STAT1-HGNC:5258 STAT1-HGNC:2752 STAT1-STAT1 HARS-HGNC:5258 SP100-HGNC:12502 HES4-HGNC:5258 PAPD7-HGNC:5258 CNDP2-HGNC:5258 TXK-TXK TXK-HGNC:19383 TXK-HGNC:6192 TXK-HGNC:6190 TXK-STAT1 KPNA5-HGNC:12502 HMGCS1-HGNC:12502	Y
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