Table S1. Primers sequence used in qPCR analyses.

Gene	Gene description	Forward (5´- 3´)	Reverse (5´- 3´)
APOL9a	Apolipoprotein 9a	cagtggatacctgtatagcctgg	tctgcctctgtctgctatgg
b-ACT	b-actin	ctaaggccaaccgtgaaaag	accagaggcatacagggaca
DBF4	DBF4-type zinc finger-containing protein 1	tatggacggcgataaatgtg	tcgagatcttcgtatttctgtaagc
L5R	Vaccinia virus WR092 gene	ccatggatgacaactcaaaca	tcatctgcgaagaacatcgt
A8R	Vaccinia virus WR127 gene	gatgcgttgacgctgtaaaa	tgcatccttttgatgcgata
GAPDH	Glyceraldehyde-3-phosphate dehydrogenase	ctcccactcttccaccttcg	cataccaggaaatgagcttgacaa
IRF9	Interferon regulatory factor 9	cagcaactgcaactctgagc	actcggccaccatagatgaa
MRPL2	Mitochondrial ribosomal protein L2	gagcaatgtcctccttcagc	tcttccaggacacaaacttgg
OAS1a	2'-5'-oligoadenylate synthetase 1	agcggaacttcctgaagcag	caggcaaagacagtgagcaa

Table S2. Significant differentially expressed genes after IFN induction.

Gene symbol	Mock FPKM	IFN FPKM	log2(FC)	p-value	Description
Mx2	0	1,42489	Inf	5,00E-05	myxovirus (influenza virus) resistance 2 [Source:MGI Symbol;Acc:MGI:97244]
Rtp4	0,224564	19,468	6,44	5,00E-05	receptor transporter protein 4 [Source:MGI Symbol;Acc:MGI:1915025]
Ddx58	0,3487	20,9985	5,91	5,00E-05	DEAD (Asp-Glu-Ala-Asp) box polypeptide 58 [Source:MGI Symbol;Acc:MGI:2442858]
Xaf1	0,221216	11,3076	5,68	5,00E-05	XIAP associated factor 1 [Source:MGI Symbol;Acc:MGI:3772572]
Igtp	0,119031	4,99169	5,39	0,00015	interferon gamma induced GTPase [Source:MGI Symbol;Acc:MGI:107729]
Oasl1	0,317158	13,1148	5,37	5,00E-05	2'-5' oligoadenylate synthetase-like 1 [Source:MGI Symbol;Acc:MGI:2180849]
Oas1b	0,139622	4,96127	5,15	5,00E-05	2'-5' oligoadenylate synthetase 1B [Source:MGI Symbol;Acc:MGI:97430]
Isg15	0,578739	17,5302	4,92	5,00E-05	ISG15 ubiquitin-like modifier [Source:MGI Symbol;Acc:MGI:1855694]
Rhod	18,0381	345,836	4,26	5,00E-05	ras homolog gene family, member D [Source:MGI Symbol;Acc:MGI:108446]
Parp14	0,0977489	1,71159	4,13	5,00E-05	poly (ADP-ribose) polymerase family, member 14 [Source:MGI Symbol;Acc:MGI:1919489]
Trim21	0,430314	6,05298	3,81	5,00E-05	tripartite motif-containing 21 [Source:MGI Symbol;Acc:MGI:106657]
Apol9a	2,08982	26,6401	3,67	5,00E-05	apolipoprotein L 9a [Source:MGI Symbol;Acc:MGI:3606001]
Oas1g	0,776779	8,88173	3,52	5,00E-05	2'-5' oligoadenylate synthetase 1G [Source:MGI Symbol;Acc:MGI:97429]
Helz2	2,50527	23,8868	3,25	5,00E-05	helicase with zinc finger 2, transcriptional coactivator [Source:MGI Symbol;Acc:MGI:2385169]
Slfn2	0,252734	1,98815	2,98	0,00015	schlafen 2 [Source:MGI Symbol;Acc:MGI:1313258]
Oas1a	1,41434	10,2379	2,86	5,00E-05	2'-5' oligoadenylate synthetase 1A [Source:MGI Symbol;Acc:MGI:2180860]
Apol9b	2,66209	18,551	2,80	5,00E-05	apolipoprotein L 9b [Source:MGI Symbol;Acc:MGI:1919148]
Trim30a	1,07502	7,16009	2,74	5,00E-05	tripartite motif-containing 30A [Source:MGI Symbol;Acc:MGI:98178]
Samd9l	1,47019	9,24891	2,65	5,00E-05	sterile alpha motif domain containing 9-like [Source:MGI Symbol;Acc:MGI:1343184]
Slfn5	0,36026	2,24497	2,64	5,00E-05	schlafen 5 [Source:MGI Symbol;Acc:MGI:1329004]
Irgm1	7,42535	46,0772	2,63	5,00E-05	immunity-related GTPase family M member 1 [Source:MGI Symbol;Acc:MGI:107567]
Parp12	0,493812	2,73206	2,47	5,00E-05	poly (ADP-ribose) polymerase family, member 12 [Source:MGI Symbol;Acc:MGI:2143990]
Irf9	6,37807	33,2275	2,38	5,00E-05	interferon regulatory factor 9 [Source:MGI Symbol;Acc:MGI:107587]
Rnf213	5,66188	26,3644	2,22	5,00E-05	ring finger protein 213 [Source:MGI Symbol;Acc:MGI:1289196]
Stat2	2,5659	11,7023	2,19	5,00E-05	signal transducer and activator of transcription 2 [Source:MGI Symbol;Acc:MGI:103039]
Tor3a	10,1315	36,1723	1,84	5,00E-05	torsin family 3, member A [Source:MGI Symbol;Acc:MGI:1353652]
H2-Q1	3,41199	11,8566	1,80	5,00E-05	histocompatibility 2, Q region locus 1 [Source:MGI Symbol;Acc:MGI:95928]
Il15	2,12905	6,78449	1,67	5,00E-05	interleukin 15 [Source:MGI Symbol;Acc:MGI:103014]
Stat1	2,63919	8,31407	1,66	5,00E-05	signal transducer and activator of transcription 1 [Source:MGI Symbol;Acc:MGI:103063]
Ifi35	3,66682	11,2891	1,62	5,00E-05	interferon-induced protein 35 [Source:MGI Symbol;Acc:MGI:1917360]
Eif2ak2	7,79477	22,6396	1,54	5,00E-05	eukaryotic translation initiation factor 2-alpha kinase 2 [Source:MGI Symbol;Acc:MGI:1353449]
Kcne4	3,37498	8,97622	1,41	5,00E-05	potassium voltage-gated channel, Isk-related subfamily, gene 4 [Source:MGI Symbol;Acc:MGI:1891125]
Lgals3bp	31,7365	81,3106	1,36	5,00E-05	lectin, galactoside-binding, soluble, 3 binding protein [Source:MGI Symbol;Acc:MGI:99554]
Bst2	12,9175	32,3267	1,32	5,00E-05	bone marrow stromal cell antigen 2 [Source:MGI Symbol;Acc:MGI:1916800]
Egr1	3,44869	8,61428	1,32	5,00E-05	early growth response 1 [Source:MGI Symbol;Acc:MGI:95295]
Ifi27	41,3458	102,436	1,31	5,00E-05	interferon, alpha-inducible protein 27 [Source:MGI Symbol;Acc:MGI:1277180]
Pnpla6	6,39246	14,3499	1,17	5,00E-05	patatin-like phospholipase domain containing 6 [Source:MGI Symbol;Acc:MGI:1354723]
Trim25	13,252	29,4216	1,15	5,00E-05	tripartite motif-containing 25 [Source:MGI Symbol;Acc:MGI:102749]
Ifitm3	168,338	362,716	1,11	5,00E-05	interferon induced transmembrane protein 3 [Source:MGI Symbol;Acc:MGI:1913391]
Mrgprf	12,0076	25,4772	1,09	5,00E-05	MAS-related GPR, member F [Source:MGI Symbol;Acc:MGI:2384823]
Ier3	50,7915	102,292	1,01	5,00E-05	immediate early response 3 [Source:MGI Symbol;Acc:MGI:104814]
Akr1b3	351,422	700,47	1,00	5,00E-05	aldo-keto reductase family 1, member B3 (aldose reductase) [Source:MGI Symbol;Acc:MGI:1353494]
Wdr43	93,5366	49,7774	-0,91	1,00E-04	WD repeat domain 43 [Source:MGI Symbol;Acc:MGI:1919765]
Cd3eap	35,5701	17,7292	-1,00	0,00015	CD3E antigen, epsilon polypeptide associated protein [Source:MGI Symbol;Acc:MGI:1917583]
Ubc	299,551	138,413	-1,11	5,00E-05	ubiquitin C [Source:MGI Symbol;Acc:MGI:98889]
Rps19-ps2	5,09322	0	-Inf	5,00E-05	ribosomal protein S19, pseudogene 2 [Source:MGI Symbol;Acc:MGI:3647073]

Table S3. VACV gene expression after infection with UV-inactivated VACV.

VACV WR gene	FPKM (1)	Temporal Expression (2)
196	448,453	E1.2
089	334,426	E1.1
158	257,419	E1.1
053	250,594	E1.1
038	228,898	E1.1
059	176,753	E1.1
184	154,072	E1.2
160	149,1	E1.1
034	117,086	E1.1
083	108,275	E1.2
041	107,406	E1.2
032	90,2349	E1.1
112	86,678	E1.2
047	84,7748	E1.2
029	82,5136	E1.1
156	63,8192	E1.1
172	63,774	E1.1
169	62,592	E1.2
190	60,2621	E1.1
031	57,8544	E1.2
200	56,199	E1.1
154	53,0669	E1.2
050	52,7462	E1.1
188	44,3952	E1.2
094	43,4401	E1.2
022	41,9533	E1.1
072	40,2754	E1.1
046	39,0076	E1.2
039	36,1997	E1.1
021	35,4091	E1.2
103	35,3938	E1.1
194	33,5508	E1.1
193	33,394	E1.2
174	33,2188	E1.1
124	32,9562	E1.2
159	29,7016	E1.1
037	28,6559	E1.1

VACV WR gene	FPKM (1)	Temporal Expression (2)
043	27,483	E1.2
061	26,18	E1.1
173	26,1105	E1.2
054	24,4903	E1.1
191	24,1053	PR
201	23,857	E1.2
127	23,538	E1.1
170	23,3367	E1.2
195	23,0083	E1.1
165	21,6519	E1.2
117	20,2527	E1.2
028	18,7823	E1.2
023	18,4036	E1.2
152	16,1524	E1.2
109	15,664	E1.2
060	15,6077	E1.1
068	15,4175	E1.1
183	15,0487	E1.2
024	13,6144	E1.2
177	13,4575	E1.1
045	13,4289	E1.2
181	12,5421	E1.2
175	12,2789	E1.2
030	12,2445	E1.2
143	12,0635	E1.2
044	11,964	E1.2
202	10,018	E1.2
137	9,63951	PR
055	8,78575	E1.2
114	8,30566	E1.1
178	8,12113	E1.2
040	7,61685	E1.2
042	7,22993	E1.2
095	7,20461	E1.2
051	7,12493	E1.2
110	6,78521	E1.2

(1) FPKM, Fragments Per Kilobase Of Exon Per Million Fragments Mapped.
(2) **Temporal expression according to *Yang Z., et al*.** E1.1=Early subclaster 1, E1.2=Early subclaster 2 and PR=Post replicative.

Table S4. Significant differentially expressed host genes after infection with inactivated VACV.

Gene symbol	Mock FPKM	PLWUV_VACV FPKM	log2(FC)	p-value	Description
Pou5f1	0	0,387441	Inf	4,00E-04	POU domain, class 5, transcription factor 1 [Source:MGI Symbol;Acc:MGI:101893]
Ccl5	0	0,525911	Inf	5,00E-05	chemokine (C-C motif) ligand 5 [Source:MGI Symbol;Acc:MGI:98262]
Fosb	1,358	7,22105	2,41073	5,00E-05	FBJ osteosarcoma oncogene B [Source:MGI Symbol;Acc:MGI:95575]
H3f3a-ps2	4,32726	21,1427	2,28864	3,00E-04	H3 histone, family 3A, pseudogene 2 [Source:MGI Symbol;Acc:MGI:1101758]
Rnaset2b	0,584778	2,37846	2,02407	3,00E-04	ribonuclease T2B [Source:MGI Symbol;Acc:MGI:3702087]
Pgk1-rs7	1,58989	6,32818	1,99286	5,00E-05	phosphoglycerate kinase-1, related sequence-7 [Source:MGI Symbol;Acc:MGI:97562]
Gm11808	44,2146	156,197	1,82077	5,00E-05	predicted gene 11808 [Source:MGI Symbol;Acc:MGI:3649356]
Apbb2	19,4623	67,1926	1,78762	1,00E-04	amyloid beta (A4) precursor protein-binding, family B, member 2 [Source:MGI Symbol;Acc:MGI:108405]
Gm13826	32,051	108,813	1,76341	2,00E-04	predicted gene 13826 [Source:MGI Symbol;Acc:MGI:3651519]
H2-Q1	3,37993	11,42	1,7565	5,00E-05	histocompatibility 2, Q region locus 1 [Source:MGI Symbol;Acc:MGI:95928]
Rps13-ps2	10,7971	33,9251	1,65171	5,00E-05	ribosomal protein S13, pseudogene 2 [Source:MGI Symbol;Acc:MGI:3704295]
Gm2000	13,7296	40,6802	1,56704	0,00015	predicted gene 2000 [Source:MGI Symbol;Acc:MGI:3780170]
Gm10288	21,5221	62,0438	1,52747	5,00E-05	predicted gene 10288 [Source:MGI Symbol;Acc:MGI:3704227]
Gm12918	22,5483	58,528	1,37611	1,00E-04	predicted gene 12918 [Source:MGI Symbol;Acc:MGI:3652005]
Tpt1-ps3	50,9163	120,877	1,24734	5,00E-05	tumor protein, translationally-controlled, pseudogene 3 [Source:MGI Symbol;Acc:MGI:2664997]
Rps23-ps	45,0603	105,712	1,23021	5,00E-05	ribosomal protein S23, pseudogene [Source:MGI Symbol;Acc:MGI:3705429]
Serpine1	97,491	228,655	1,22983	5,00E-05	serine (or cysteine) peptidase inhibitor, clade E, member 1 [Source:MGI Symbol;Acc:MGI:97608]
Rps6-ps4	31,1679	72,6403	1,22071	5,00E-05	ribosomal protein S6, pseudogene 4 [Source:MGI Symbol;Acc:MGI:3650907]
Dusp5	9,01692	20,1282	1,15851	5,00E-05	dual specificity phosphatase 5 [Source:MGI Symbol;Acc:MGI:2685183]
Spsb1	6,66087	13,6779	1,03806	0,00035	splA/ryanodine receptor domain and SOCS box containing 1 [Source:MGI Symbol;Acc:MGI:1921896]
Klf16	13,4366	26,9624	1,00478	0,00015	Kruppel-like factor 16 [Source:MGI Symbol;Acc:MGI:2153049]
Mid1	42,8261	84,6937	0,983766	2,00E-04	midline 1 [Source:MGI Symbol;Acc:MGI:1100537]
Hmox1	41,1287	75,07	0,868091	0,00055	heme oxygenase (decycling) 1 [Source:MGI Symbol;Acc:MGI:96163]
Mif	764,154	422,391	-0,855282	0,00025	macrophage migration inhibitory factor [Source:MGI Symbol;Acc:MGI:96982]
Sod3	59,645	31,9188	-0,901998	0,00015	superoxide dismutase 3, extracellular [Source:MGI Symbol;Acc:MGI:103181]
Cxcl1	46,1628	23,8182	-0,954665	0,00055	chemokine (C-X-C motif) ligand 1 [Source:MGI Symbol;Acc:MGI:108068]
Mt1	1080,16	546,469	-0,983029	5,00E-05	metallothionein 1 [Source:MGI Symbol;Acc:MGI:97171]
Rplp1	4572,05	2272,58	-1,00851	5,00E-05	ribosomal protein, large, P1 [Source:MGI Symbol;Acc:MGI:1927099]
Shfm1	109,21	52,556	-1,05517	5,00E-05	split hand/foot malformation (ectrodactyly) type 1 [Source:MGI Symbol;Acc:MGI:109238]
H2afj	16,3602	7,8444	-1,06045	5,00E-04	H2A histone family, member J [Source:MGI Symbol;Acc:MGI:3606192]
Akr1b3	348,17	163,409	-1,0913	5,00E-05	aldo-keto reductase family 1, member B3 (aldose reductase) [Source:MGI Symbol;Acc:MGI:1353494]
Atp5k	347,388	160,9	-1,11039	5,00E-05	ATP synthase, H+ transporting, mitochondrial F1F0 complex, subunit e [Source:MGI Symbol;Acc:MGI:106636]
Cdkn2d	32,7406	14,9265	-1,13321	1,00E-04	cyclin-dependent kinase inhibitor 2D (p19, inhibits CDK4) [Source:MGI Symbol;Acc:MGI:105387]
Tnfaip8	15,4048	6,72892	-1,19494	0,00015	tumor necrosis factor, alpha-induced protein 8 [Source:MGI Symbol;Acc:MGI:2147191]
Usp17la	6,86756	2,97834	-1,20529	2,00E-04	ubiquitin specific peptidase 17-like A [Source:MGI Symbol;Acc:MGI:107699]
Dab2ip	3,05626	1,30815	-1,22424	2,00E-04	disabled 2 interacting protein [Source:MGI Symbol;Acc:MGI:1916851]
Rplp2	1458,64	583,381	-1,32211	3,00E-04	ribosomal protein, large P2 [Source:MGI Symbol;Acc:MGI:1914436]
Rpl26	269,924	107,829	-1,32381	5,00E-05	ribosomal protein L26 [Source:MGI Symbol;Acc:MGI:106022]
Trib3	37,9265	15,0973	-1,32891	5,00E-05	tribbles homolog 3 (Drosophila) [Source:MGI Symbol;Acc:MGI:1345675]
Layn	8,11526	3,22519	-1,33125	5,00E-05	layilin [Source:MGI Symbol;Acc:MGI:2685357]
Gdf15	11,0194	4,33143	-1,34712	0,00055	growth differentiation factor 15 [Source:MGI Symbol;Acc:MGI:1346047]
Ddit4	7,93632	2,90396	-1,45045	2,00E-04	DNA-damage-inducible transcript 4 [Source:MGI Symbol;Acc:MGI:1921997]
Klf15	4,08803	1,3104	-1,6414	0,00045	Kruppel-like factor 15 [Source:MGI Symbol;Acc:MGI:1929988]
Chac1	19,1486	5,94093	-1,68848	5,00E-05	ChaC, cation transport regulator 1 [Source:MGI Symbol;Acc:MGI:1916315]
Gm5611	21,5466	6,399	-1,75154	5,00E-05	predicted gene 5611 [Source:MGI Symbol;Acc:MGI:3647121]
Phex	0,737842	0,202192	-1,86759	7,00E-04	phosphate regulating gene with homologies to endopeptidases on the X chromosome (hypophosphatemia, vitamin D resistant rickets) [Source:MGI Symbol;Acc:MGI:107489]
Sh2d3c	2,28625	0,618298	-1,88661	5,00E-05	SH2 domain containing 3C [Source:MGI Symbol;Acc:MGI:1351631]
Gm14323	5,46775	0,883133	-2,63024	7,00E-04	predicted gene 14323 [Source:MGI Symbol;Acc:MGI:3650742]
Abcg1	1,03044	0,160843	-2,67954	1,00E-04	ATP-binding cassette, sub-family G (WHITE), member 1 [Source:MGI Symbol;Acc:MGI:107704]
Gm14414	6,22852	0,943767	-2,72239	4,00E-04	predicted gene 14414 [Source:MGI Symbol;Acc:MGI:3652253]
Gm12033	24,1417	0,757299	-4,99452	5,00E-05	predicted gene 12033 [Source:MGI Symbol;Acc:MGI:3650772]
Rab42	0,294648	0	-Inf	7,00E-04	RAB42, member RAS oncogene family [Source:MGI Symbol;Acc:MGI:2441753]
Rps19-ps2	5,04479	0	-Inf	5,00E-05	ribosomal protein S19, pseudogene 2 [Source:MGI Symbol;Acc:MGI:3647073]
Rps19-ps1	5,04479	0	-Inf	5,00E-05	ribosomal protein S19, pseudogene 1 [Source:MGI Symbol;Acc:MGI:3782508]