

Table S3. Genes dysregulated by NUP98-HOXA9/N51S

Probeset I.D.	Fold Change		Gene Name	Accession Number	Gene Symbol
	Exp.1	Exp.2			
241676_x_at	35.43	4.27			
1565920_at	17.29	2.42			
221577_x_at	15.65	3.15	<i>growth differentiation factor 15</i>	NM_004864	GDF15
227834_at	14.84	70.14	<i>taxilin beta</i>	NM_153235	TXLNB
240878_at	12.89	7.20	<i>fibroblast growth factor 11</i>	NM_199339	FGF11
1558404_at	9.67	4.75		XM_927425 /// XM_939517 /// XM_939537	
209841_s_at	7.13	2.65	<i>leucine rich repeat neuronal 3</i>	NM_018334	LRRN3
211341_at	6.26	1.84	<i>POU class 4 homeobox 1</i>	NM_006237	POU4F1
236892_s_at	6.03	2.48			
1557647_a_at	5.75	2.29			
1556842_at	5.14	2.15			
207589_at	4.71	2.79	<i>adrenergic, alpha-1B-, receptor</i>	NM_000679	ADRA1B
226279_at	4.23	1.96	<i>protease, serine, 23</i>	NM_007173	PRSS23
229309_at	4.11	2.57			
224156_x_at	4.06	4.07	<i>interleukin 17 receptor B</i>	NM_018725	IL17RB
1560723_at	3.81	3.58			
234520_at	3.71	14.41			
1569551_at	3.66	2.41	<i>GRAM domain containing 1C</i>	NM_017577	GRAMD1C
204748_at	3.62	4.16	<i>prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)</i>	NM_000963	PTGS2
231909_x_at	3.61	1.74	<i>outer dense fiber of sperm tails 2-like</i>	NM_001007022 /// NM_020729	ODF2L
209870_s_at	3.52	2.10	<i>amyloid beta (A4) precursor protein-binding, family A, member 2 (X11-like)</i>	NM_005503	APBA2
233701_at	3.38	1.92	<i>neuropilin 1</i>	NM_001024628 /// NM_001024629 /// NM_003873	NRP1
223900_s_at	3.34	3.27	<i>polybromo 1</i>	NM_018165 /// NM_018313 /// NM_181042	PBRM1

229756_at	3.32	2.51	<i>inhibitor of DNA binding 2, dominant negative helix-loop-helix protein</i>	NM_002166	ID2
1561486_at	3.29	1.89			
206962_x_at	3.23	6.27			
216692_at	3.20	2.34	<i>zinc finger protein 337</i>	NM_015655	ZNF337
1554997_a_at	3.13	4.59	<i>prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)</i>	NM_000963	PTGS2
211269_s_at	3.10	2.60	<i>interleukin 2 receptor, alpha</i>	NM_000417	IL2RA
225056_at	3.08	2.32	<i>signal-induced proliferation-associated 1 like 2</i>	NM_020808	SIPA1L2
231473_at	3.02	3.22			
233944_at	2.97	4.36	<i>contactin associated protein-like 2</i>	NM_014141	CNTNAP2
232499_at	2.90	1.76	<i>inositol 1,4,5-trisphosphate 3-kinase B</i>	NM_002221	ITPKB
238301_at	2.87	2.36			
215368_at	2.86	2.58	<i>nebulin</i>	NM_004543	NEB
231804_at	2.81	2.15	<i>relaxin/insulin-like family peptide receptor 1</i>	NM_021634	RXFP1
223884_at	2.75	1.80	<i>opticin</i>	NM_014359	OPTC
206401_s_at	2.69	2.84	<i>microtubule-associated protein tau</i>	NM_005910 /// NM_016834 /// NM_016835 /// NM_016841	MAPT
205600_x_at	2.63	1.88	<i>homeobox B5</i>	NM_002147	HOXB5
238733_at	2.59	2.74	<i>carboxypeptidase M</i>	NM_001005502 /// NM_001874 /// NM_198320	CPM
1561405_s_at	2.59	1.98	<i>cation channel, sperm associated 2</i>	NM_054020 /// NM_172095 /// NM_172097	CATSPER2
208436_s_at	2.56	2.02	<i>interferon regulatory factor 7</i>	NM_001572 /// NM_004029 /// NM_004031	IRF7
204622_x_at	2.56	2.77	<i>nuclear receptor subfamily 4, group A, member 2</i>	NM_006186 /// NM_173171 /// NM_173172 /// NM_173173	NR4A2
213010_at	2.55	2.32	<i>protein kinase C, delta binding protein</i>	NM_145040	PRKCDBP
205749_at	2.55	2.31	<i>cytochrome P450, family 1, subfamily A, polypeptide 1</i>	NM_000499	CYP1A1
1561740_at	2.54	2.23			
227174_at	2.54	2.89	<i>WD repeat domain 72</i>	NM_182758	WDR72

216823_at	2.52	1.94		XM_495839 /// XM_926528 /// XM_931362 /// XM_937069 /// XM_943171 /// XM_943177	
219049_at	2.51	4.00	chondroitin sulfate N-acetylgalactosaminyltransferase 1	NM_018371	CSGALNACT1
222227_at	2.45	3.94	zinc finger protein 236	NM_007345	ZNF236
204811_s_at	2.44	3.23	calcium channel, voltage-dependent, alpha 2/delta subunit 2	NM_001005505 /// NM_006030	CACNA2D2
1552669_at	2.44	7.88	protein phosphatase 1, regulatory (inhibitor) subunit 3B	NM_024607	PPP1R3B
202284_s_at	2.41	2.87	cyclin-dependent kinase inhibitor 1A (p21, Cip1)	NM_000389 /// NM_078467	CDKN1A
239036_at	2.40	1.85	eukaryotic translation initiation factor 2C, 1	NM_012199	EIF2C1
242002_at	2.38	1.95	Na ⁺ /K ⁺ transporting ATPase interacting 2	NM_001040214	NKAIN2
228766_at	2.35	1.86			
203158_s_at	2.32	2.05	glutaminase	NM_014905	GLS
214180_at	2.30	1.77	mannosidase, alpha, class 1C, member 1	NM_020379	MAN1C1
1555122_at	2.28	2.05	G protein-coupled receptor 125	NM_145290	GPR125
226232_at	2.22	1.89			
1552715_a_at	2.22	4.34	relaxin/insulin-like family peptide receptor 1	NM_021634	RXFP1
220014_at	2.21	2.16	proline rich 16	NM_016644	PRR16
244235_at	2.18	2.07	influenza virus NS1A binding protein	NM_006469 /// NM_016389	IVNS1ABP
230594_at	2.18	3.06	leucine-rich PPR-motif containing	NM_133259	LRPPRC
211000_s_at	2.17	1.79	interleukin 6 signal transducer (gp130, oncostatin M receptor)	NM_002184 /// NM_175767	IL6ST
242805_at	2.16	1.99	cyclin C	NM_001013399 /// NM_005190	CCNC
227553_at	2.16	2.77	nudE nuclear distribution gene E homolog (A. nidulans)-like 1	NM_001025579 /// NM_030808	NDEL1
217581_at	2.13	24.28	pyruvate kinase, muscle	NM_002654 /// NM_182470 /// NM_182471	PKM2
204439_at	2.13	6.80	interferon-induced protein 44-like	NM_006820	IFI44L

211597_s_at	2.13	3.53	HOP homeobox	NM_032495 /// NM_139211 /// NM_139212	HOPX
240728_at	2.12	4.06	phospholipase C, beta 4	NM_000933 /// NM_182797	PLCB4
242134_at	2.11	2.16	transducin-like enhancer of split 4 (E(sp1) homolog, Drosophila)	NM_007005	TLE4
214688_at	2.09	2.82			
1568889_at	2.09	1.76	Fanconi anemia,	NM_001018115	FANCD2
241604_at	2.09	6.31	ATPase, class VI, type 11A	NM_015205 /// NM_032189	ATP11A
214888_at	2.08	2.58	calpain 2, (m/II) large subunit	NM_001748	CAPN2
209555_s_at	2.07	2.42	CD36 molecule (thrombospondin receptor)	NM_000072 /// NM_001001547 /// NM_001001548	CD36
218675_at	2.07	3.04	solute carrier family 22, member 17	NM_016609 /// NM_020372	SLG22A17
230011_at	2.06	2.14	meiosis inhibitor 1	NM_152513	MEI1
211722_s_at	2.06	1.99	histone deacetylase 6	NM_006044	HDAC6
233587_s_at	2.06	2.31	signal-induced proliferation- associated 1 like 2	NM_020808	SIPA1L2
1569688_at	2.05	2.07	flavin containing monooxygenase 5	NM_001461	FMO5
224895_at	2.05	3.37	Yes-associated protein 1, 65kDa	NM_006106	YAP1
231412_at	2.05	1.84	triggering receptor expressed on myeloid cells 1	NM_018643	TREM1
219434_at	2.04	2.81			
211753_s_at	2.04	2.47	relaxin 1	NM_006911	RLN1
1556212_x_at	2.03	1.94		XM_929541 /// XM_941868	
1563166_at	2.02	1.96	geranylgeranyl diphosphate synthase 1	NM_001037277 /// NM_001037278 /// NM_004837	GGPS1
236799_at	2.01	1.89	serine/threonine/tyrosine kinase 1	NM_020961	STYK1
221696_s_at	2.01	1.86		NM_018423	
243846_x_at	2.01	1.96		XM_926804	
1561328_at	1.99	11.50		XM_934514 /// XM_934516 /// XM_945782 /// XM_945783	
233541_at	1.97	2.51			

230942_at	1.96	1.93	CKLF-like MARVEL transmembrane domain containing 5	NM_001037288 /// NM_138460	CMTM5
1553080_at	1.94	9.88	casein alpha s2-like A	XM_379270 /// XM_934777 /// XM_943519 /// XM_943523	CSN1S2A
221679_s_at	1.92	2.11	abhydrolase domain containing 6	NM_020676	ABHD6
206341_at	1.91	2.10	interleukin 2 receptor, alpha	NM_000417	IL2RA
207486_x_at	1.90	3.50	chimerin (chimaerin) 2	NM_001039936 /// NM_004067	CHN2
44783_s_at	1.88	2.60	hairy/enhancer-of-split related with YRPW motif 1	NM_001040708 /// NM_012258	HEY1
1559573_at	1.86	2.15	insulin-like growth factor binding protein 5	NM_000599	IGFBP5
211959_at	1.85	1.82			
206932_at	1.85	3.33	cholesterol 25-hydroxylase chemokine (C-C motif) ligand 28	NM_003956 NM_148672	CH25H CCL28
224240_s_at	1.85	1.97			
226029_at	1.85	2.59	vang-like 2 (van gogh, Drosophila)	NM_020335	VANGL2
240038_at	1.84	2.79	elongation factor, RNA polymerase II, 2	NM_012081	ELL2
210200_at	1.84	1.78	WW domain containing E3 ubiquitin protein ligase 2	NM_007014 /// NM_199423 /// NM_199424	WWP2
234486_at	1.84	2.15	olfactory receptor, family 51, subfamily B, member 2	NM_033180	OR51B2
235684_s_at	1.83	1.75	sestrin 3 deoxynucleotidyltransferase, terminal	NM_144665 NM_001017520 /// NM_004088	SESN3 DNMT
1566363_at	1.82	2.04			
216813_at	1.81	1.76	zinc finger protein 192 myxovirus (influenza virus) resistance 1, interferon- inducible protein p78 (mouse)	NM_006298 NM_002462	ZNF192 MX1
206579_at	1.80	2.04			
202086_at	1.80	5.88			
1557120_at	1.80	7.21	eukaryotic translation elongation factor 1 alpha 1	NM_001402	EEF1A1
206488_s_at	1.78	2.41	CD36 molecule (thrombospondin receptor)	NM_000072 /// NM_001001547 /// NM_001001548	CD36
1562103_at	1.78	2.36	Janus kinase 1 (a protein tyrosine kinase)	NM_002227	JAK1

1568876_a_at	1.77	3.68			
242938_s_at	1.77	1.79	forkhead box K2	NM_004514	FOXK2
204735_at	1.76	2.07	phosphodiesterase 4A, cAMP-specific (phosphodiesterase E2 dunce homolog, Drosophila)	NM_006202	PDE4A
244150_at	1.76	2.68	structural maintenance of chromosomes 1A	NM_006306	SMC1A
215071_s_at	1.76	2.42	histone cluster 1, H2ac	NM_003512	HIST1H2AC
1561181_at	1.75	2.18	AT rich interactive domain 5B (MRF1-like)	NM_032199	ARID5B
1554319_at	1.75	3.43	ribosomal protein S6 kinase, 90kDa, polypeptide 5	NM_004755 /// NM_182398	RPS6KA5
237009_at	1.75	1.78	CD69 molecule	NM_001781	CD69
237891_at	1.75	1.96	Mdm2 p53 binding protein homolog (mouse)	NM_002392 /// NM_006878 /// NM_006879 /// NM_006881 /// NM_006882	MDM2
222802_at	1.74	4.68	endothelin 1	NM_001955	EDN1
243724_at	-1.75	-2.17			
219788_at	-1.75	-1.77	paired immunoglobulin-like type 2 receptor alpha	NM_013439 /// NM_178272 /// NM_178273	PILRA
238607_at	-1.76	-11.64	zinc finger protein 342	NM_145288	ZNF342
204848_x_at	-1.76	-2.34	hemoglobin, gamma A	NM_000184 /// NM_000559	HBG1
1555205_at	-1.77	-2.00			
244190_at	-1.79	-1.77	THAP domain containing 5	NM_182529	THAP5
239602_at	-1.80	-1.93			
232760_at	-1.80	-1.864	testis expressed 15 WD repeats and SOF1 domain containing	NM_031271 NM_015420	TEX15 WDSOF1
220843_s_at	-1.81	-2.57			
238726_at	-1.81	-1.97	ubiquitin specific peptidase 46	NM_022832	USP46
1569022_a_at	-1.82	-2.10	phosphoinositide-3-kinase, class 2, alpha polypeptide	NM_002645	PIK3C2A
205025_at	-1.82	-1.89	zinc finger and BTB domain containing 48	NM_005341	ZBTB48
235675_at	-1.82	-2.13	dihydrofolate reductase-like 1	NM_176815	DHFRL1
1557126_a_at	-1.83	-2.50	phospholipase D1, phosphatidylcholine-specific	NM_002662	PLD1
241104_at	-1.83	-2.16	sorbin and SH3 domain containing 2	NM_003603 /// NM_021069	SORBS2
1570528_at	-1.84	-2.96	xylosyltransferase II	NM_022167	XYLT2
223680_at	-1.84	-1.76		NM_032689 /// XM_927632 /// XM_940452	

1556783_a_at	-1.84	-1.93	chromosome 12 open reading frame 62	NM_032901	C12orf62
213515_x_at	-1.85	-2.43	hemoglobin, gamma A	NM_000184 /// NM_000559	HBG1
1559462_at	-1.85	-2.31	protein kinase, AMP-activated, alpha 1 catalytic subunit	NM_006251 /// NM_206907	PRKAA1
214917_at	-1.86	-1.82			
202490_at	-1.87	-1.87	inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase complex-associated protein	NM_003640	IKBKAP
1564215_at	-1.87	-10.47	myosin XIX	NM_001033579 /// NM_001033580 /// NM_025109	MYO19
204120_s_at	-1.87	-1.98	adenosine kinase	NM_001123 /// NM_006721	ADK
211101_x_at	-1.89	-2.48	leukocyte immunoglobulin-like receptor, subfamily B (with TM and ITIM domains), member 1	NM_006866	LILRB1
221212_x_at	-1.90	-2.16	polybromo 1	NM_018165 /// NM_018313 /// NM_181042	PBRM1
1553644_at	-1.94	-3.34	chromosome 14 open reading frame 49	NM_152592	C14orf49
1557744_at	-1.95	-1.89	hemoglobin, beta pseudogene 1	NR_001589	HBBP1
216063_at	-1.97	-3.08			
1552910_at	-1.99	-3.13	sialic acid binding Ig-like lectin 11	NM_052884	SIGLEC11
217369_at	-2.01	-6.12	immunoglobulin heavy constant gamma 1 (G1m marker)	XM_370973	IGHG1
222881_at	-2.01	-1.90	heparanase	NM_006665	HPSE
211905_s_at	-2.02	-2.15	integrin, beta 4	NM_000213 /// NM_001005619 /// NM_001005731	ITGB4
244818_at	-2.03	-1.91	regulatory factor X, 3 (influences HLA class II expression)	NM_002919 /// NM_134428	RFX3
238810_at	-2.03	-1.74			
236510_at	-2.12	-1.93	HLA complex group 18	XM_933653 /// XM_936164 /// XM_944855	HCG18
204589_at	-2.15	-3.82	NUAK family, SNF1-like kinase, 1	NM_014840	NUAK1
1559528_at	-2.21	-1.79		XM_937486	

229157_at	-2.31	-3.70	<i>amiloride binding protein 1 (amine oxidase (copper-containing))</i>	NM_001091	ABP1
241060_x_at	-2.31	-3.08	<i>tetraspanin 5</i>	NM_005723	TSPAN5
1569566_at	-2.32	-3.23	<i>TBC1 (tre-2/USP6, BUB2, cdc16) domain family, member 1</i>	NM_015173	TBC1D1
217662_x_at	-2.34	-2.31	<i>B-cell receptor-associated protein 29</i>	NM_001008405 /// NM_001008406 /// NM_001008407 /// NM_018844	BCAP29
230768_at	-2.35	-2.60	<i>FERM, RhoGEF and pleckstrin domain protein 2</i>	NM_014808	FARP2
1556743_at	-2.35	-1.96	<i>family with sequence similarity 104, member B</i>	NM_138362	FAM104B
232990_at	-2.41	-1.86			
244193_at	-2.43	-1.82	<i>histamine N-methyltransferase</i>	NM_024902	HNMT
228772_at	-2.51	-2.93		NM_001024074 /// NM_001024075 /// NM_006895	
237835_at	-2.66	-5.38	<i>Williams-Beuren syndrome chromosome region 23</i>	NM_001039145	WBSCR23
221176_x_at	-2.75	-6.04			
231166_at	-2.92	-2.34	<i>G protein-coupled receptor 155</i>	NM_001033045 /// NM_152529	GPR155
1556697_at	-2.93	-10.64	<i>GPRIN family member 3 tetraspanin 4</i>	NM_198281	GPRIN3
217670_at	-2.97	-5.09		NM_001025234 /// NM_001025235 /// NM_001025236 /// NM_001025237 /// NM_001025238 /// NM_001025239 /// NM_003271	TSPAN4
213744_at	-3.03	-2.08	<i>attractin-like 1</i>	NM_207303	ATRNL1
216377_x_at	-3.13	-2.74	<i>alkaline phosphatase, placental-like 2</i>	NM_031313	ALPPL2
230535_s_at	-3.35	-2.61	<i>chymotrypsin-like</i>	NM_001907	CTRL
214377_s_at	-3.54	-2.88			
1560973_a_at	-3.62	-10.32			

220474_at	-3.75	-2.72	solute carrier family 25 (mitochondrial oxodicarboxylate carrier), member 21	NM_030631	SLC25A21
242868_at	-4.12	-4.22	endothelial PAS domain protein 1	NM_001430	EPAS1
229316_at	-4.17	-1.78	chromosome 19 open reading frame 50	NM_024069	C19orf50
235372_at	-4.63	-1.79	Fc receptor-like A	NM_032738	FCRLA
215868_x_at	-4.80	-12.05	SRY (sex determining region Y)-box 5	NM_006940 /// NM_152989 /// NM_178010	SOX5
235874_at	-4.93	-3.06	protease, serine, 35	NM_153362	PRSS35
217552_x_at	-5.39	-2.09	complement component (3b/4b) receptor 1 (Knops blood group)	NM_000573 /// NM_000651	CR1
207633_s_at	-5.44	-1.77	muscle, skeletal, receptor tyrosine kinase	NM_005592	MUSK
240609_at	-6.23	-2.49			
220931_at	-9.85	-4.19		XM_930060 /// XM_941452	
236805_at	-10.05	-5.49	chromosome 9 open reading frame 96	NM_153710	C9orf96
244767_at	-10.39	-12.77			
1557703_at	-10.65	-9.72	membrane-associated ring	NM_022826	7-Mar
220811_at	-10.82	-2.57	proteoglycan 3	NM_006093	PRG3
243855_at	-13.15	-2.73	small nuclear ribonucleoprotein polypeptide N	NM_003097 /// NM_022805 /// NM_022806 /// NM_022807 /// NM_022808	SNRPN
233051_at	-13.26	-4.75	SLIT and NTRK-like family, member 2	NM_032539	SLITRK2
1570006_at	-14.44	-2.22		XM_379100 /// XM_945436	
1555339_at	-15.58	-7.05	RAP1A, member of RAS oncogene family	NM_001010935 /// NM_002884	RAP1A
1566046_at	-19.53	-1.76	DEAH (Asp-Glu-Ala-His) box	NM_019030	DHX29
1555340_x_at	-21.53	-7.98	RAP1A, member of RAS oncogene family	NM_001010935 /// NM_002884	RAP1A
206647_at	-29.82	-3.78	hemoglobin, zeta	NM_005332	HBZ
