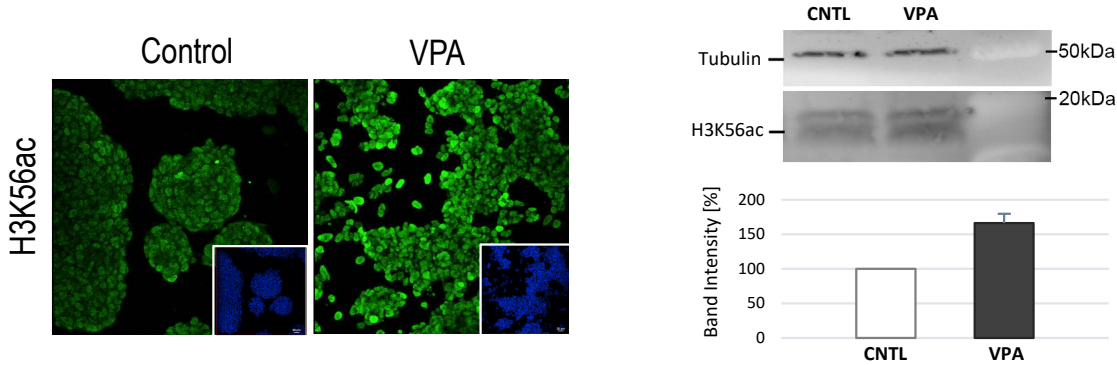
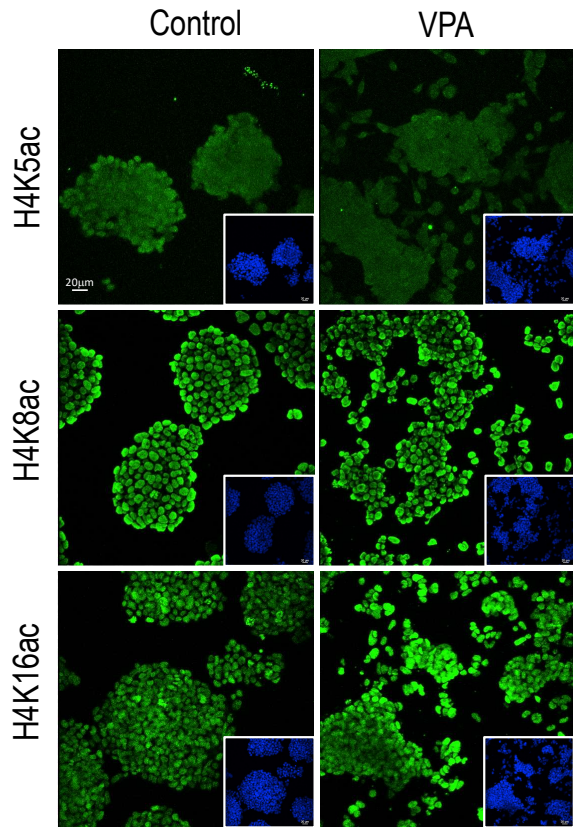


Supplemental Figure S1

A)

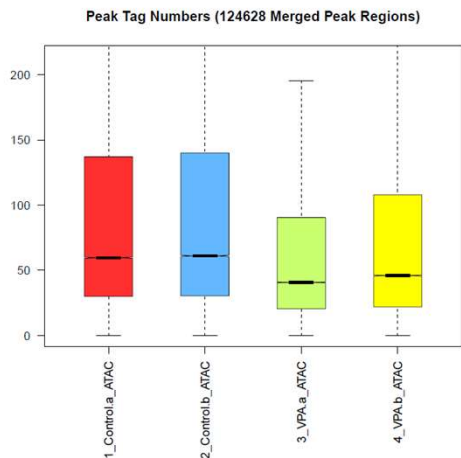


B)

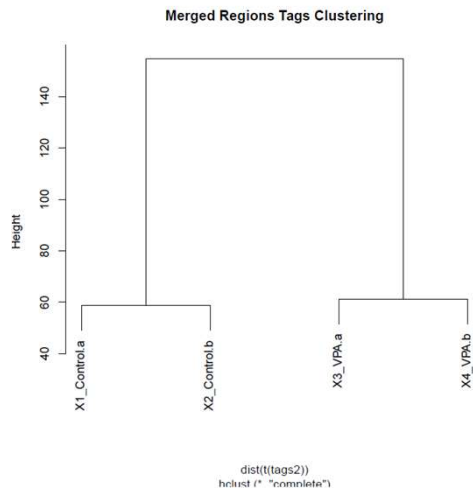


Supplemental Figure S2

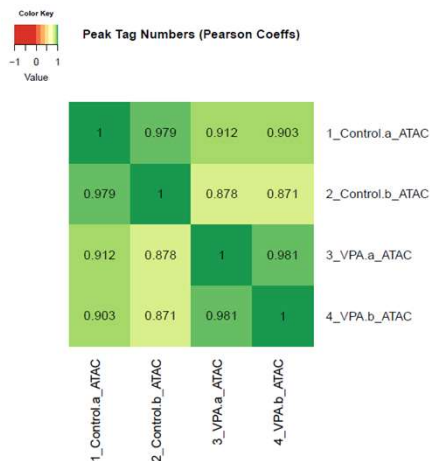
A)



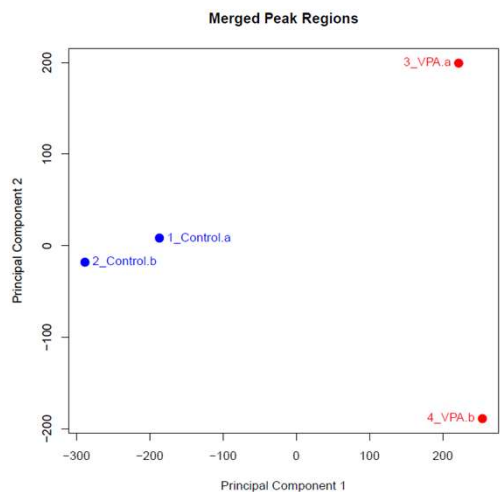
B)



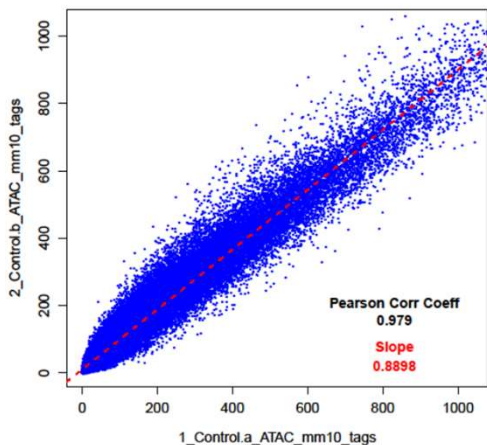
C)



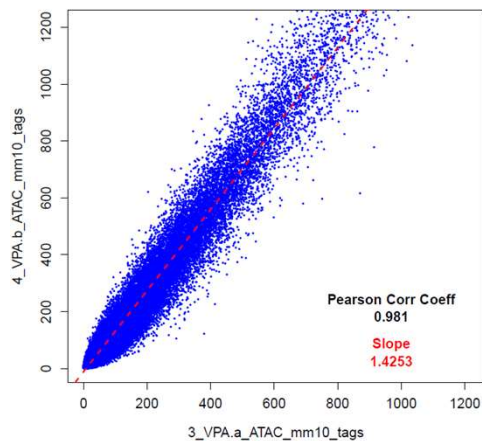
D)



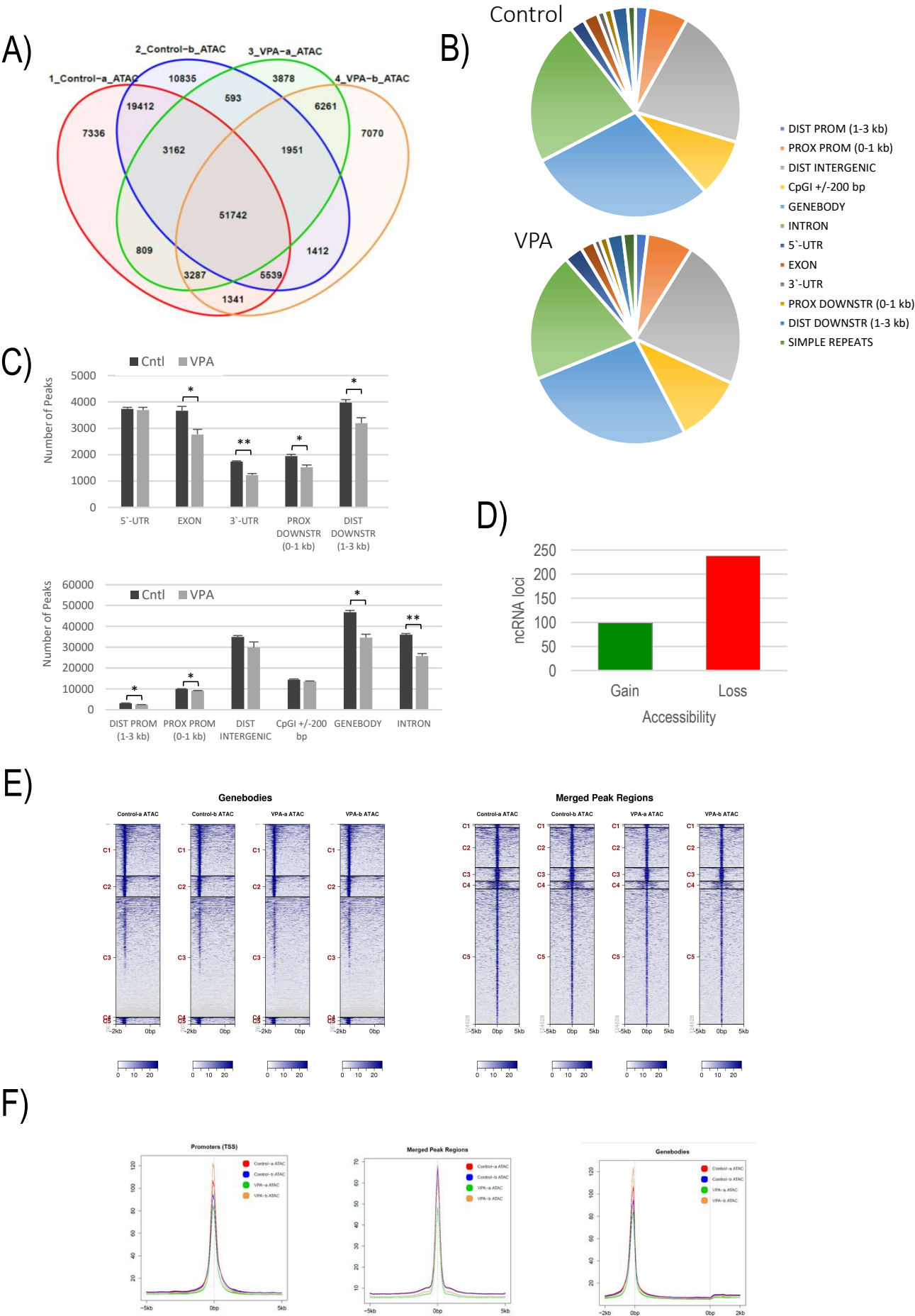
E)



F)

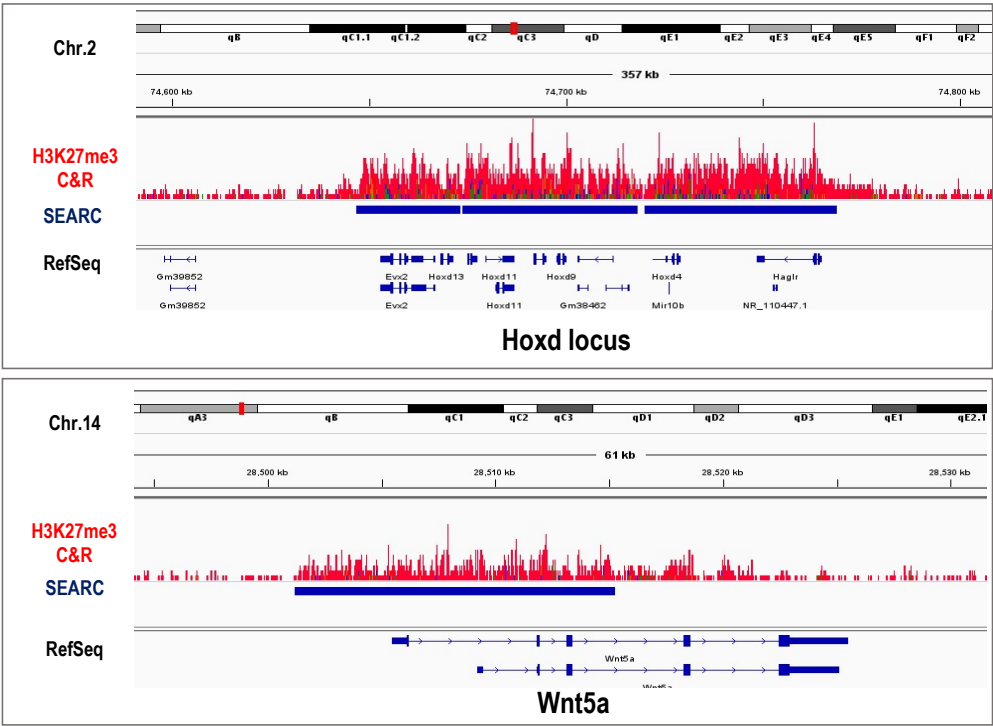


Supplemental Figure S3

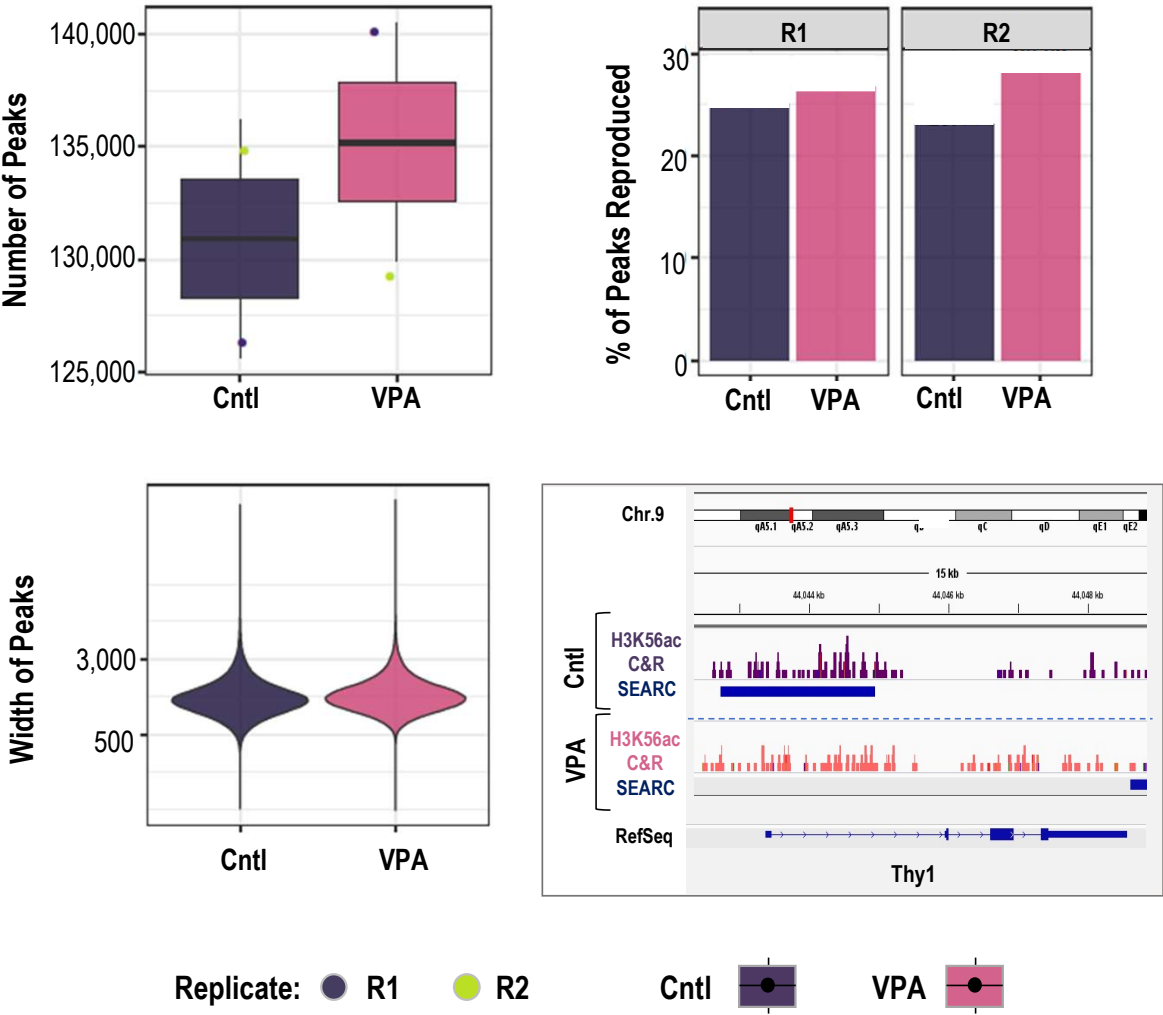


Supplemental Figure S4

A)



B)

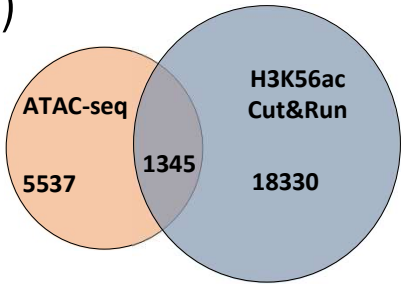


Supplemental Figure S5

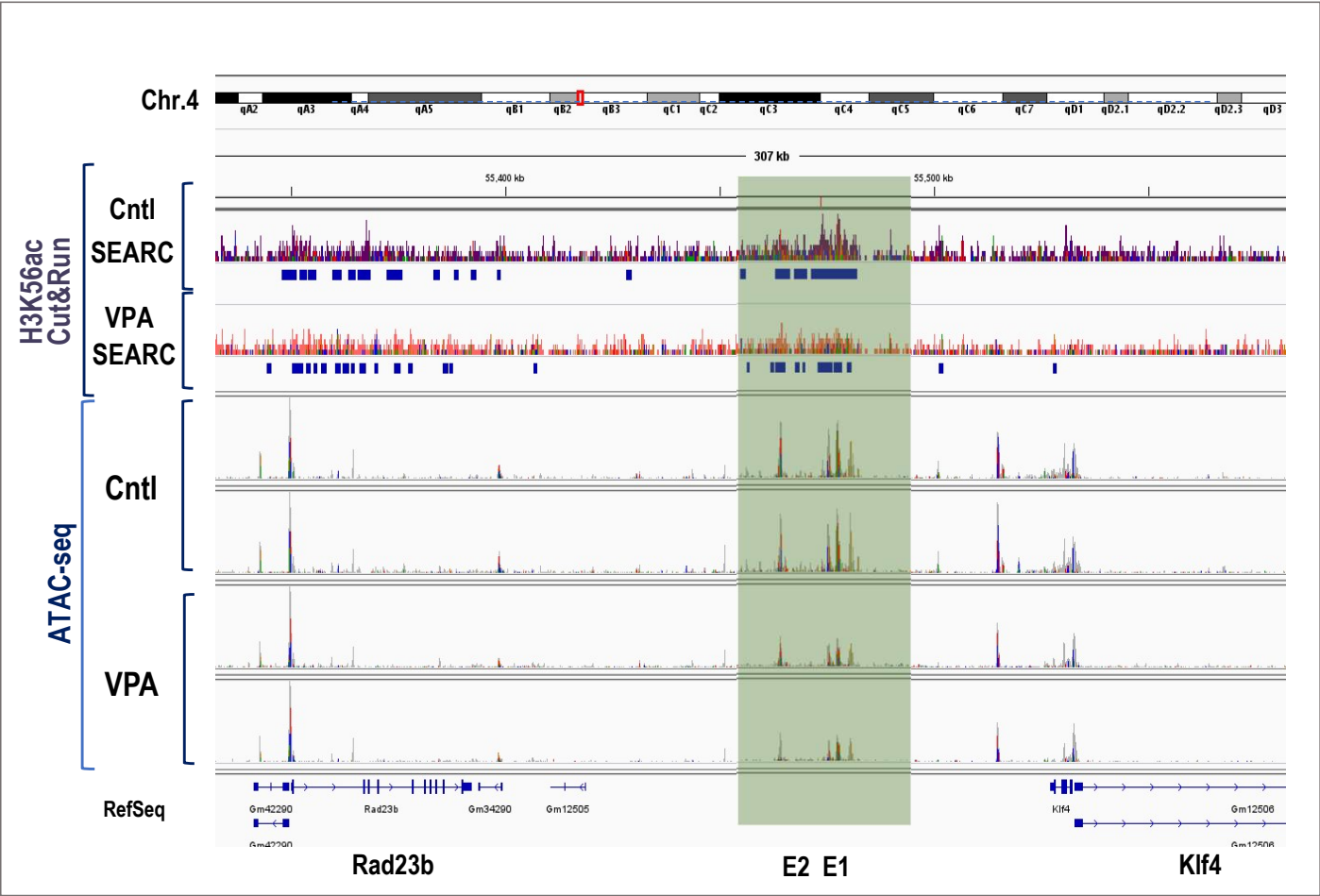
A)

Gene Symbol	Entrez ID	Gene Name
Ido1	15930	indoleamine 2,3-dioxygenase 1
Ido2	209176	indoleamine 2,3-dioxygenase 2
Tmem132c	92293	transmembrane protein 132C
Fkbp7	51661	FK506 binding protein 7
Plekha3	83435	pleckstrin homology domain-containing, family A (phosphoinositide binding specific) member 3
Fam168a	319604	family with sequence similarity 168, member A
Otog	18419	otogelin
Pfdn1	67199	prefoldin 1
Cystm1	84418	cysteine-rich transmembrane module containing 1
Rai1	19377	retinoic acid induced 1
Olfr9	18373	olfactory receptor 9
9030616G12Rik	77699	RIKEN cDNA 9030616G12 gene (ncRNA)
Ramp1	51801	receptor (calcitonin) activity modifying protein 1
Lsp1	16985	lymphocyte specific 1
Prr33	102724536	proline rich 33
Tnnt3	21957	troponin T3, skeletal, fast
Stk32c	282974	serine/threonine kinase 32C

B)



C)



Supplemental Table S1:

Transcription factor footprinting – TF's with predicted high scores in Control samples

ID	Name	Class	Family
MA0505.1	Nr5a2	Nuclear receptors with C4 zinc fingers	FTZ-F1-related receptors (NR5)
MA0705.1	Lhx8	Homeo domain factors	HD-LIM factors
MA1608.1	Isl1	Homeo domain factors	HD-LIM factors
PB0061.1	Sox11_1	Other Alpha-Helix	High Mobility Group box (HMG)
PB0071.1	Sox4_1	Other Alpha-Helix	High Mobility Group box (HMG)
PB0031.1	Hoxa3_1	Helix-Turn-Helix	Homeo
PH0015.1	Crx	Helix-Turn-Helix	Homeo
PH0035.1	Gsc	Helix-Turn-Helix	Homeo
PH0039.1	Mnx1	Helix-Turn-Helix	Homeo
PH0050.1	Hoxa3	Helix-Turn-Helix	Homeo
PH0052.1	Hoxa5	Helix-Turn-Helix	Homeo
PH0121.1	Obox1	Helix-Turn-Helix	Homeo
PH0123.1	Obox3	Helix-Turn-Helix	Homeo
PH0137.1	Pitx1	Helix-Turn-Helix	Homeo
PH0139.1	Pitx3	Helix-Turn-Helix	Homeo
PH0144.1	Pou2f2	Helix-Turn-Helix	Homeo
PH0145.1	Pou2f3	Helix-Turn-Helix	Homeo
PH0174.1	Vax1	Helix-Turn-Helix	Homeo
PH0175.1	Vax2	Helix-Turn-Helix	Homeo
PB0014.1	Esrra_1	Zinc-coordinating	Hormone-nuclear Receptor
MA0709.1	Msx3	Homeo domain factors	NK-related factors
MA0125.1	Nobox	Homeo domain factors	Paired-related HD factors
MA0682.1	Pitx1	Homeo domain factors	Paired-related HD factors
MA0720.1	Shox2	Homeo domain factors	Paired-related HD factors
MA0627.1	Pou2f3	Homeo domain factors	POU domain factors
MA0142.1	Pou5f1::Sox2	Homeo domain factors::High-mobility group (HMG) domain factors	POU domain factors::SOX-related factors
PB0055.1	Rfx4_1	Winged Helix-Turn-Helix	RFX
MA0143.1	Sox2	High-mobility group (HMG) domain factors	SOX-related factors
MA0143.2	Sox2	High-mobility group (HMG) domain factors	SOX-related factors
MA0514.1	Sox3	High-mobility group (HMG) domain factors	SOX-related factors
MA0515.1	Sox6	High-mobility group (HMG) domain factors	SOX-related factors
MA0141.1	Esrrb	Nuclear receptors with C4 zinc fingers	Steroid hormone receptors (NR3)
MA0141.2	Esrrb	Nuclear receptors with C4 zinc fingers	Steroid hormone receptors (NR3)
MA0592.2	Esrra	Nuclear receptors with C4 zinc fingers	Steroid hormone receptors (NR3)
MA0643.1	Esrrg	Nuclear receptors with C4 zinc fingers	Steroid hormone receptors (NR3)
MA0493.1	Klf1	C2H2 zinc finger factors	Three-zinc finger Krueppel-related factors

Supplemental Table S2:

Transcription factor footprinting – TF's with predicted high scores in VPA-treated samples

ID	Name	Class	Family
PB0076.1	Sp4_1	Zinc-coordinating	BetaBetaAlpha-zinc finger
PB0095.1	Zfp161_1	Zinc-coordinating	BetaBetaAlpha-zinc finger
PB0199.1	Zfp161_2	Zinc-coordinating	BetaBetaAlpha-zinc finger
MA0604.1	Atf1	Basic leucine zipper factors (bZIP)	CREB-related factors
MA0609.1	Crem	Basic leucine zipper factors (bZIP)	CREB-related factors
MA0840.1	Creb5	Basic leucine zipper factors (bZIP)	CREB-related factors
PB0008.1	E2F2_1	Winged Helix-Turn-Helix	E2F
PB0009.1	E2F3_1	Winged Helix-Turn-Helix	E2F
PB0112.1	E2F2_2	Winged Helix-Turn-Helix	E2F
PB0113.1	E2F3_2	Winged Helix-Turn-Helix	E2F
PB0020.1	Gabpa_1	Winged Helix-Turn-Helix	Ets
MA0062.2	Gabpa	Tryptophan cluster factors	Ets-related factors
MA1684.1	Foxn1	Fork head / winged helix factors	Forkhead box (FOX) factors
MA0605.1	Atf3	Basic leucine zipper factors (bZIP)	Fos-related factors
MA0099.1	JUN::FOS	Basic leucine zipper factors (bZIP)::Basic leucine zipper factors (bZIP)	Fos-related factors::Jun-related factors
MA0099.2	FOS::JUN	Basic leucine zipper factors (bZIP)::Basic leucine zipper factors (bZIP)	Fos-related factors::Jun-related factors
MA1099.1	Hes1	Basic helix-loop-helix factors (bHLH)	Hairy-related factors
PB0085.1	Tcfap2a_1	Zipper-Type	Helix-Loop-Helix
PB0086.1	Tcfap2b_1	Zipper-Type	Helix-Loop-Helix
PB0087.1	Tcfap2c_1	Zipper-Type	Helix-Loop-Helix
PB0088.1	Tcfap2e_1	Zipper-Type	Helix-Loop-Helix
PB0190.1	Tcfap2b_2	Zipper-Type	Helix-Loop-Helix
MA0150.2	Nfe2l2	Basic leucine zipper factors (bZIP)	Jun-related factors
PB0004.1	Atf1_1	Zipper-Type	Leucine Zipper
PB0038.1	Jundm2_1	Zipper-Type	Leucine Zipper
PB0142.1	Jundm2_2	Zipper-Type	Leucine Zipper
MA0060.1	NFYA	Other alpha	NFY
MA0611.1	Dux	Homeo domain factors	Paired-related HD factors
MA1622.1	Smad2::Smad3	SMAD/NF-1 DNA-binding domain factors::SMAD/NF-1 DNA-binding domain factors	SMAD factors::SMAD factors