Regeneration *Drosophila melanogaster*
Non parametric regression

04/07/2016

Outline

Non parametric regression

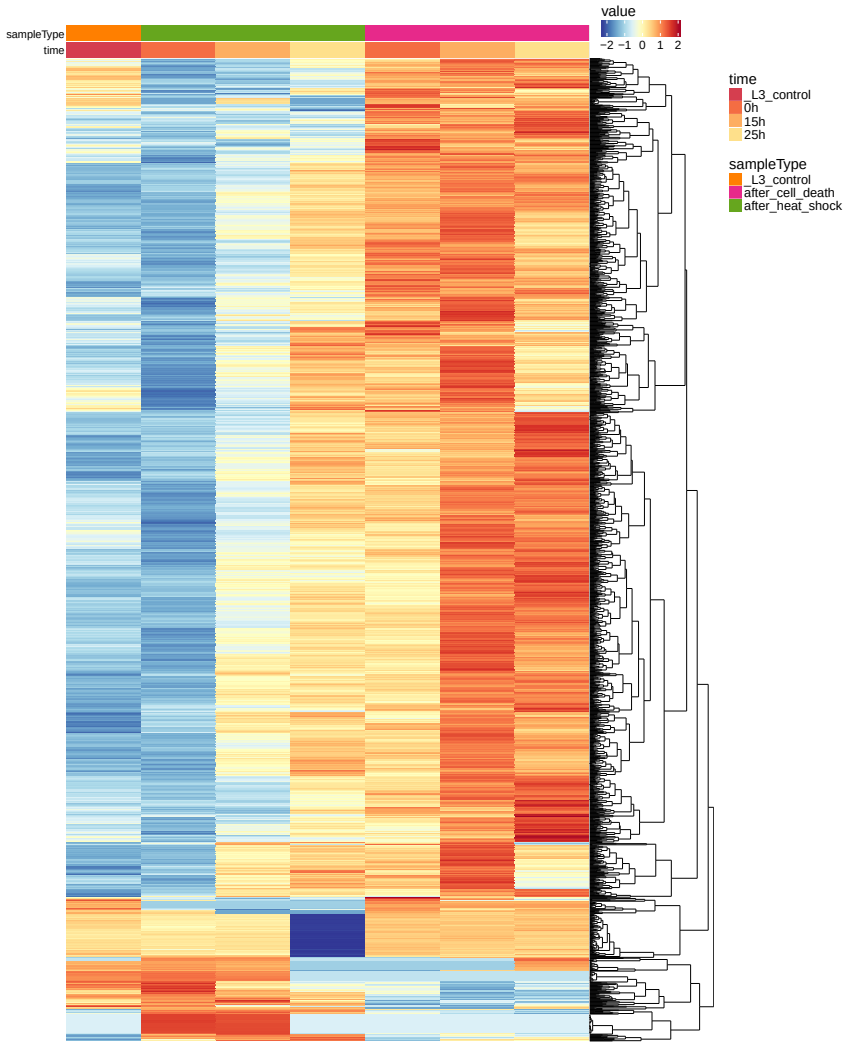
- Filter: upregulation 0h after heatshock VS 0h after cell death
- Gene classes

ATACSeq

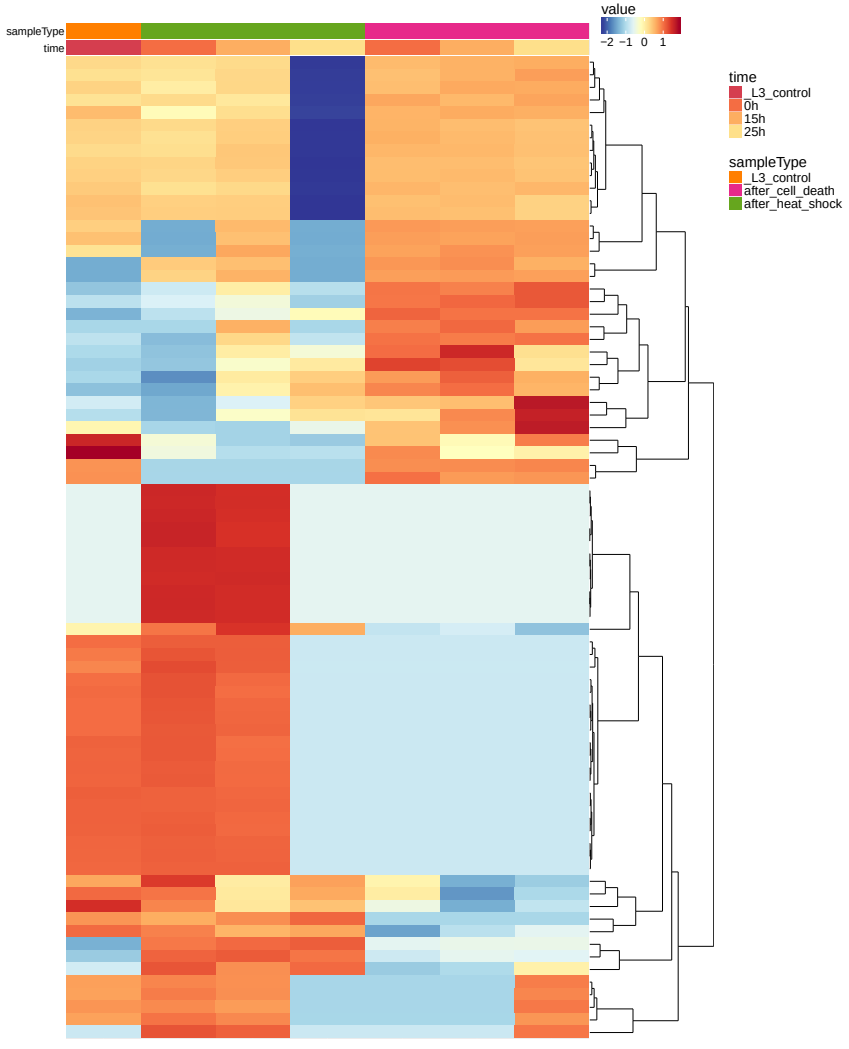
- Aggregation plots
- Heatmaps
- Peaks

Non parametric regression - 1716 protein-coding genes

p-value＜0.5 and statistical value ＞0

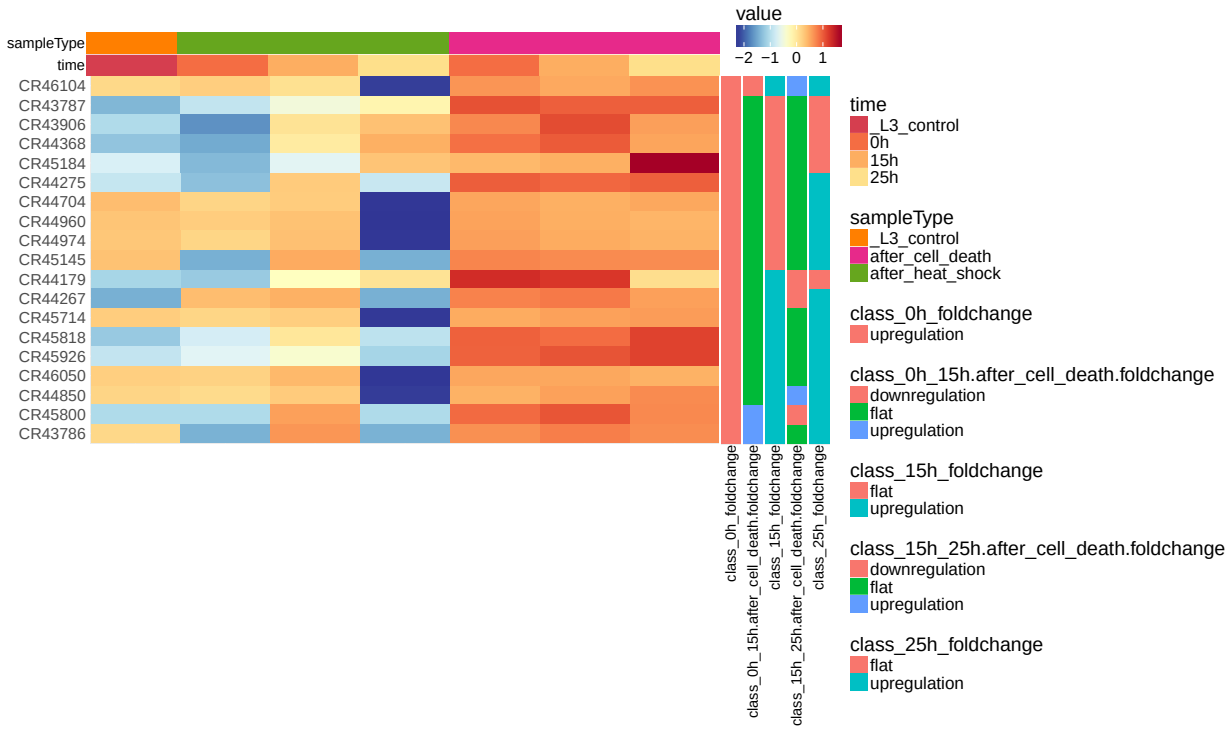


Non parametric regression - 78 non-coding genes

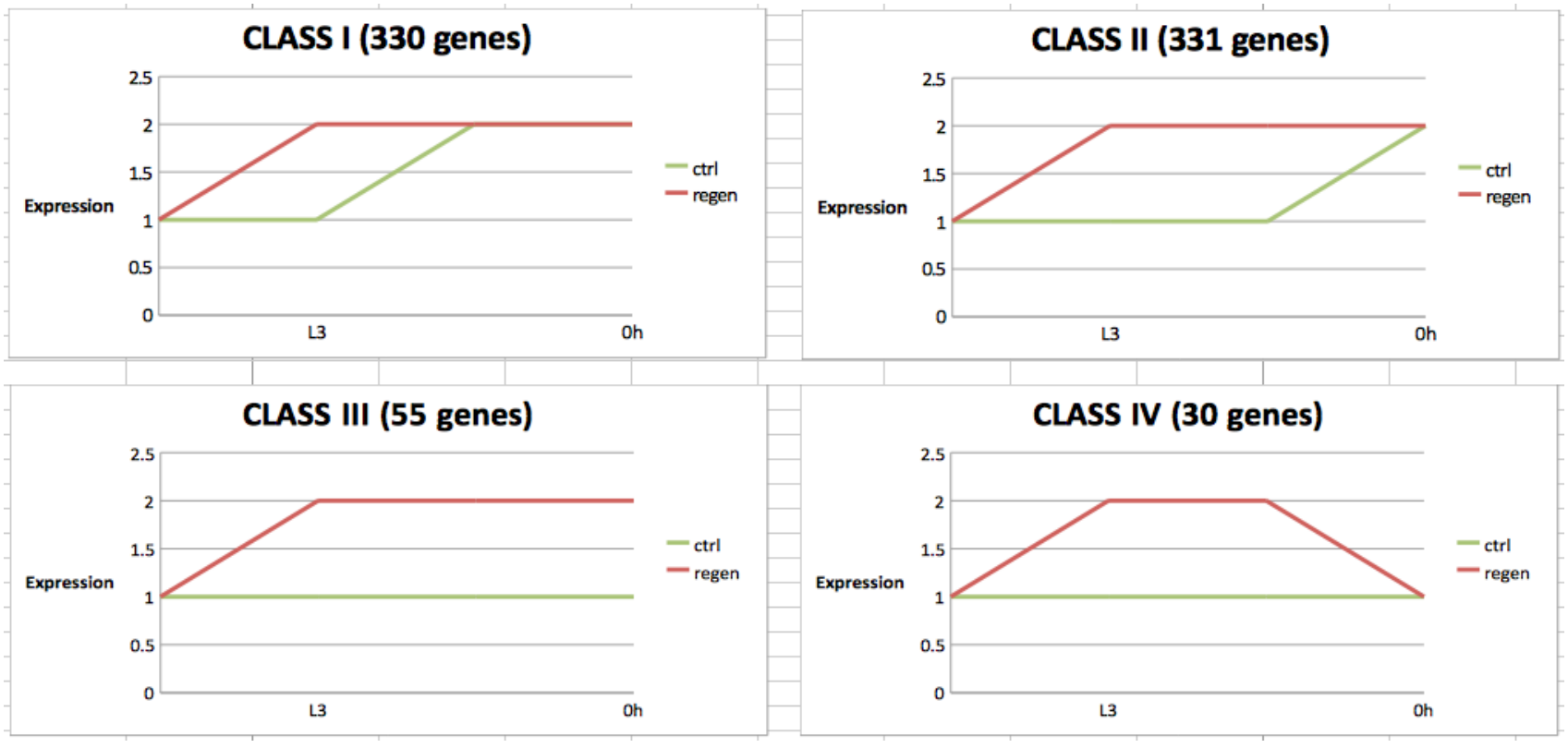


NPReg, upregulation 0h - 830 protein-coding genes

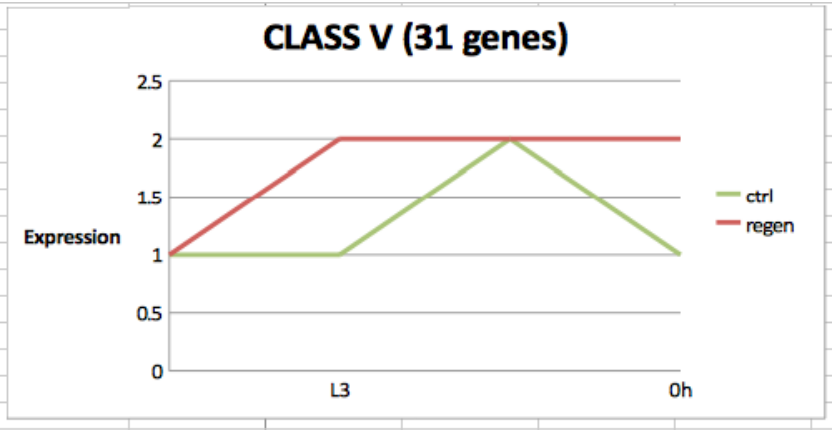
NPReg, upregulation 0h - 19 non-coding genes

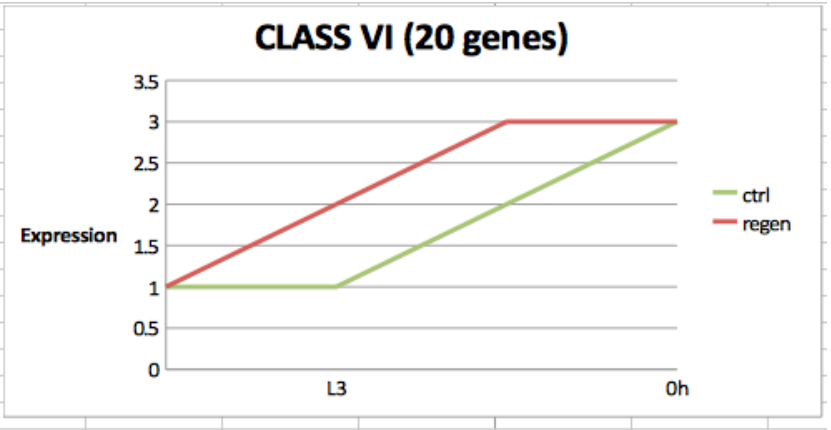


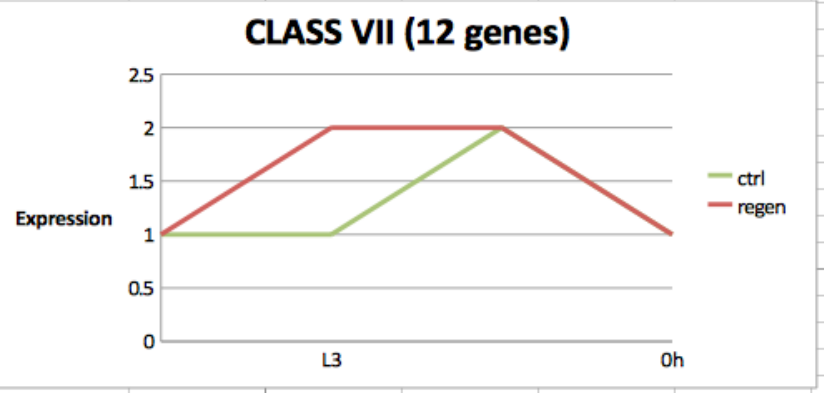
NPReg, upregulation 0h - 830 protein-coding genes



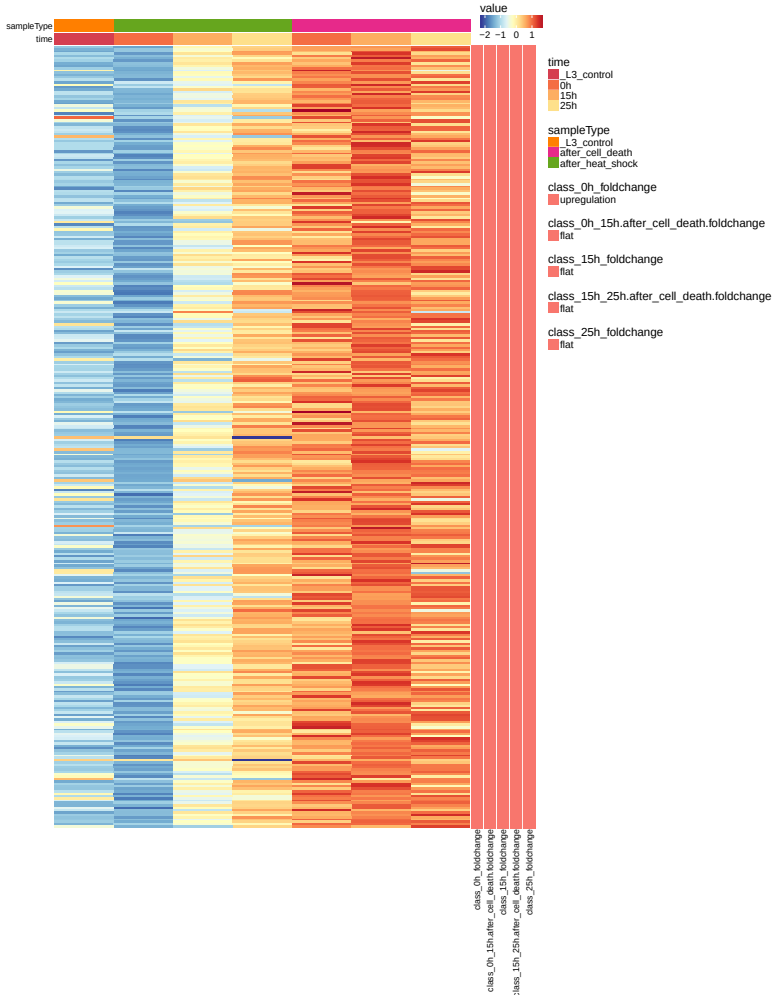
NPReg, upregulation 0h - 19 non-coding genes



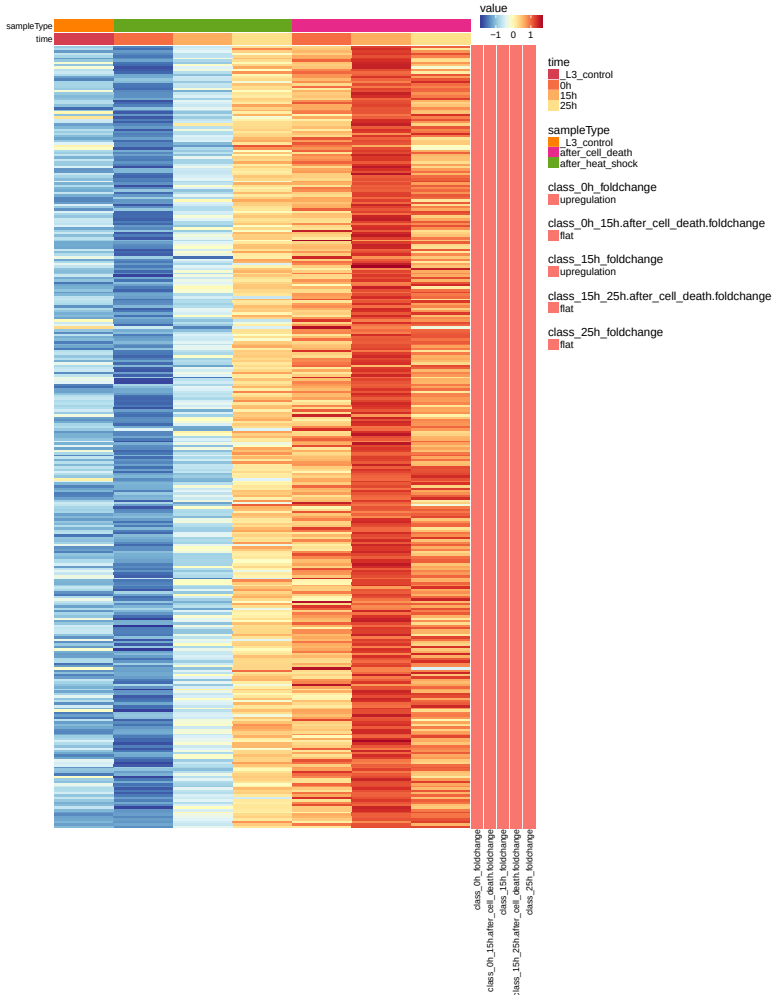




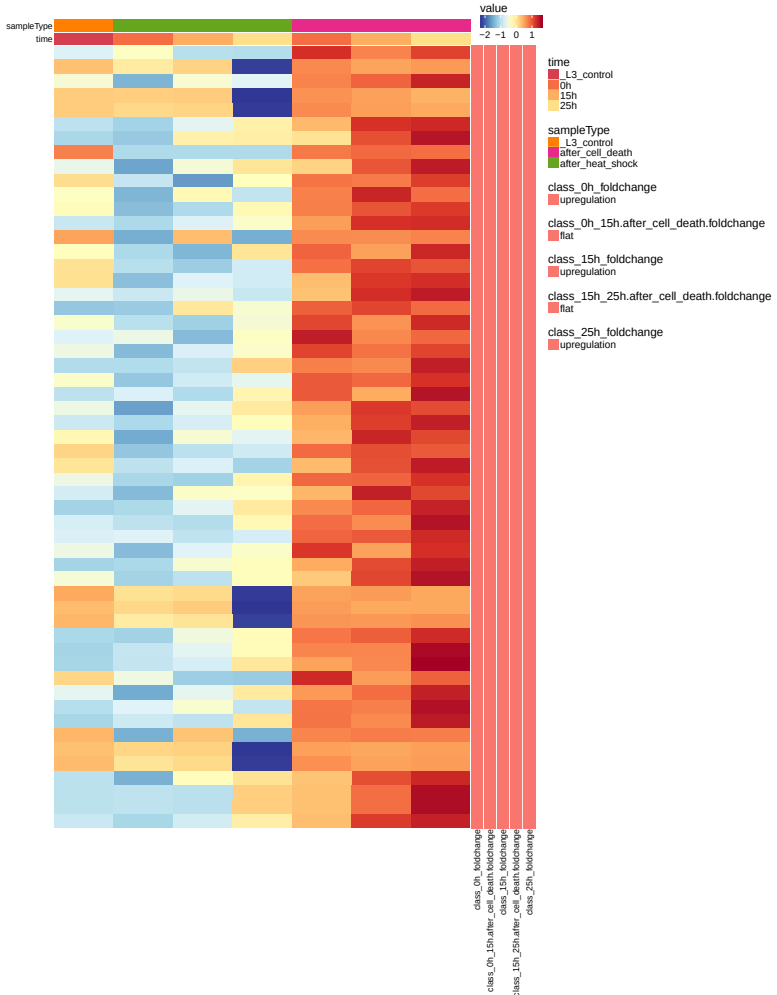
NPReg, upregulation 0h - class1



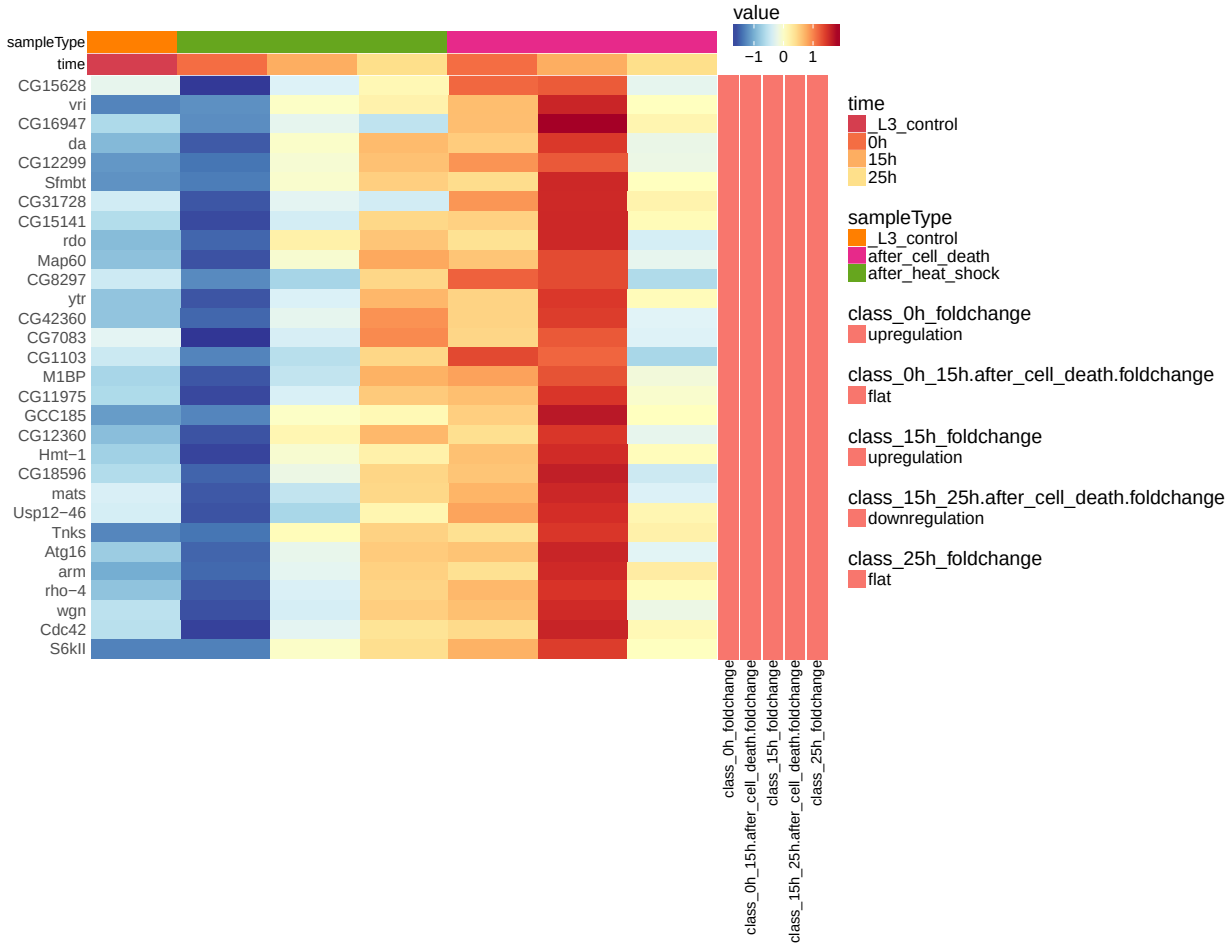
NPReg, upregulation 0h - class2



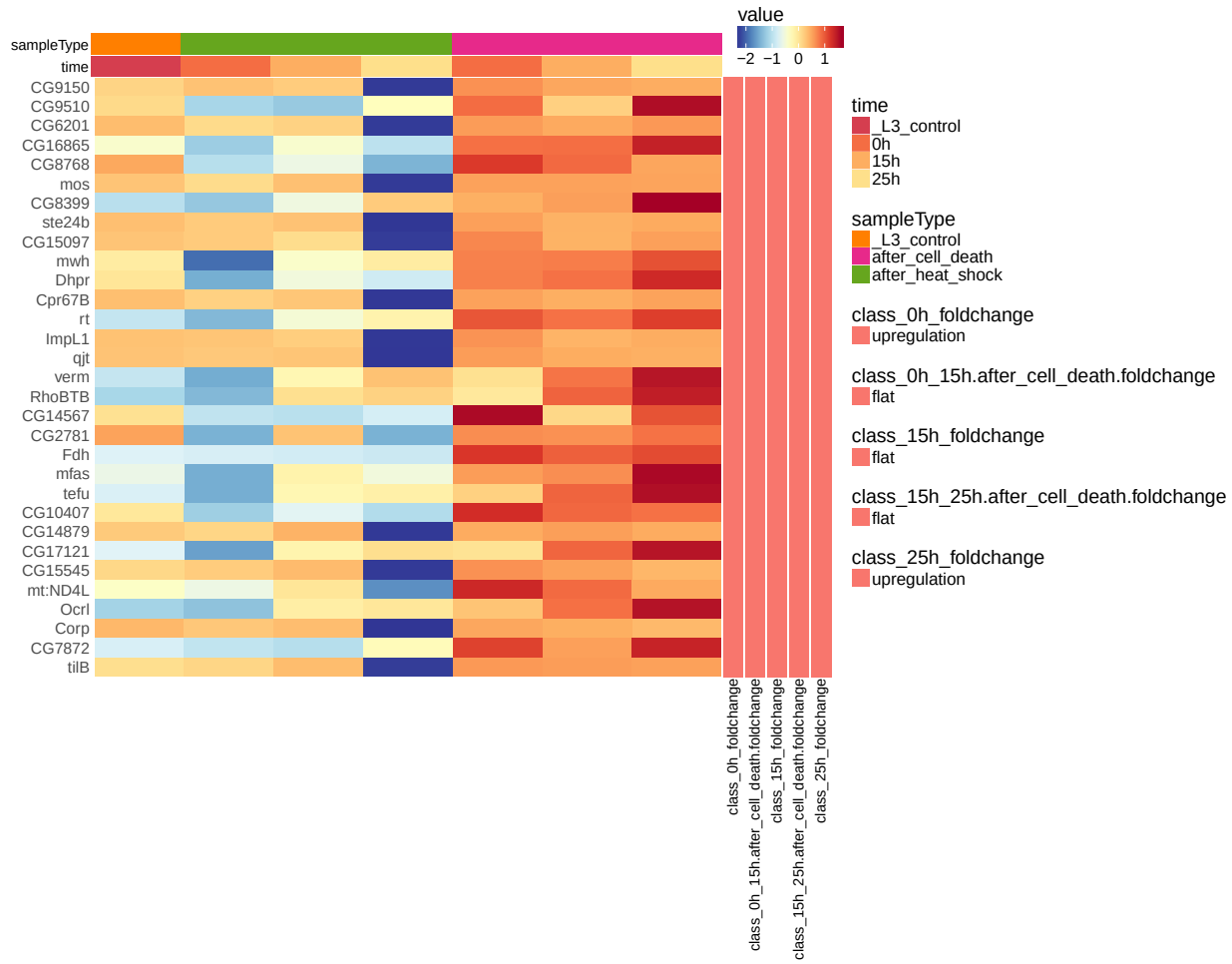
NPReg, upregulation 0h - class3



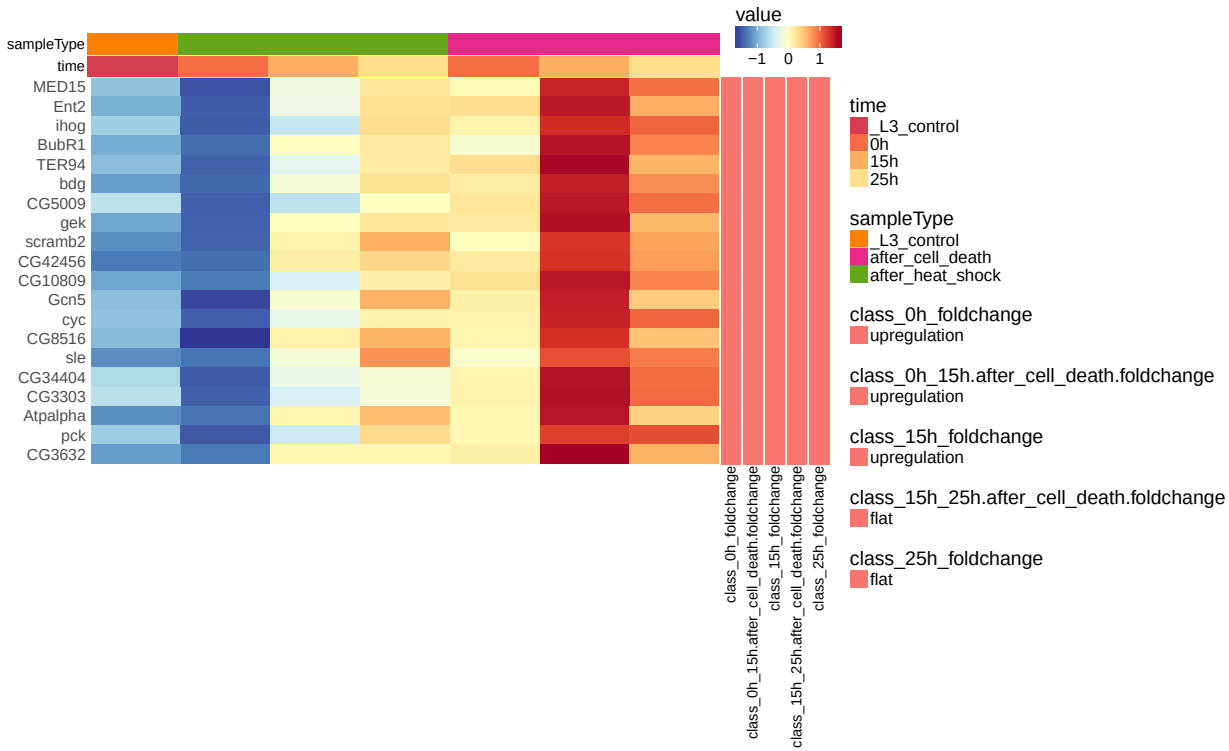
NPReg, upregulation 0h - class4



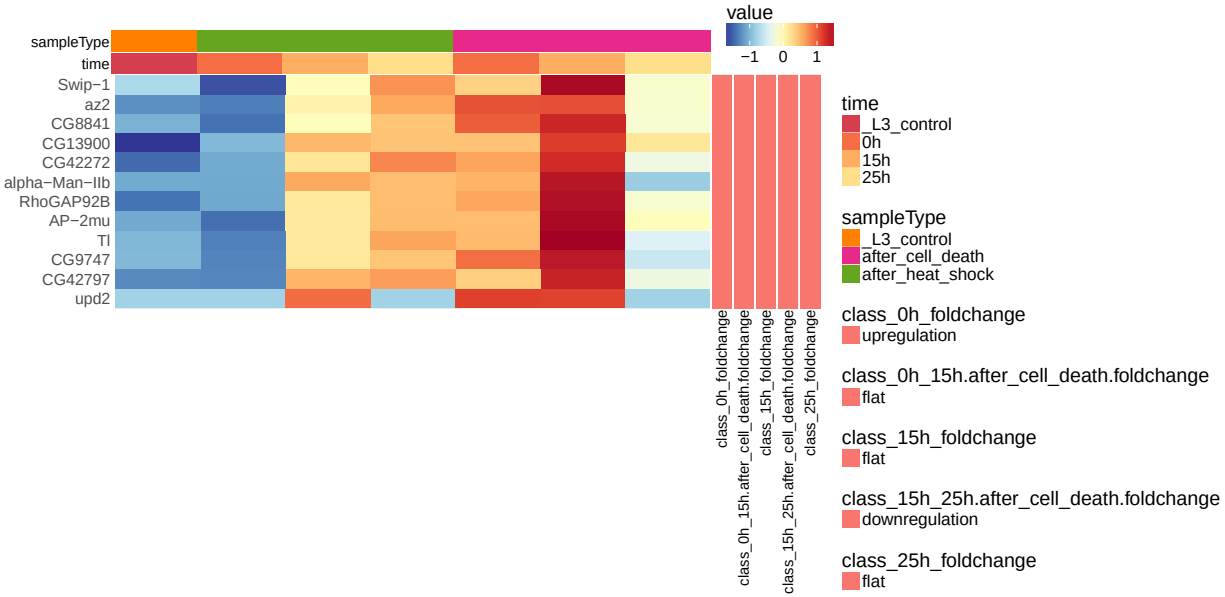
NPReg, upregulation 0h - class5



NPReg, upregulation 0h - class6

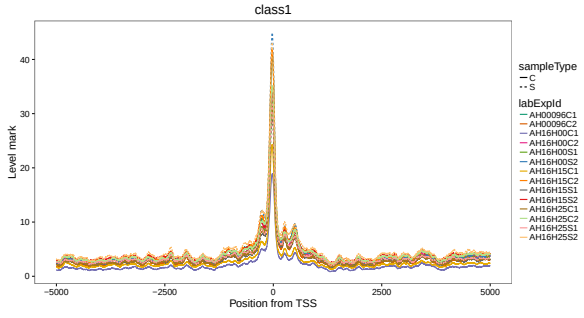


NPReg, upregulation 0h - class7

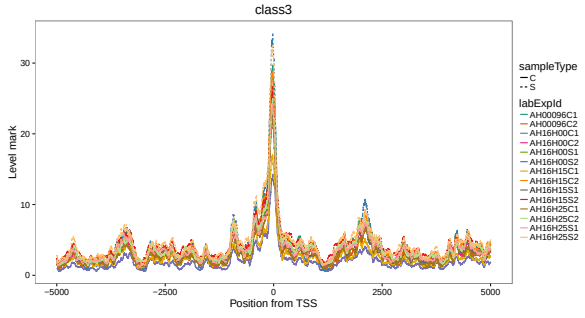


NPReg, upregulation 0h

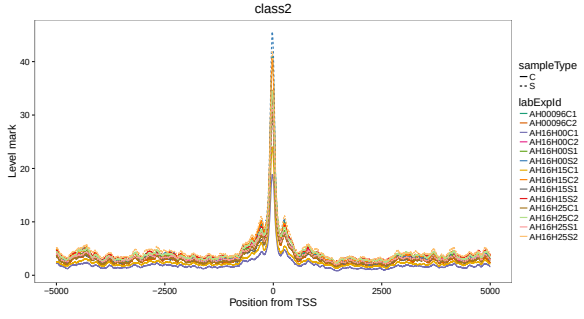
class1



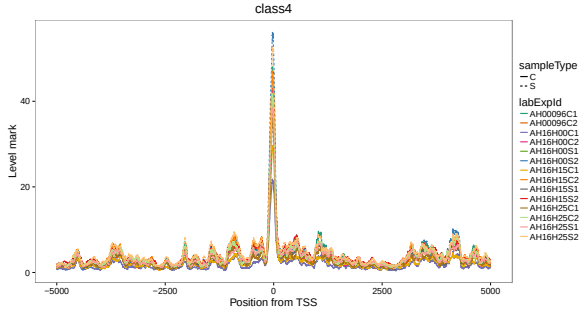
class3



class2

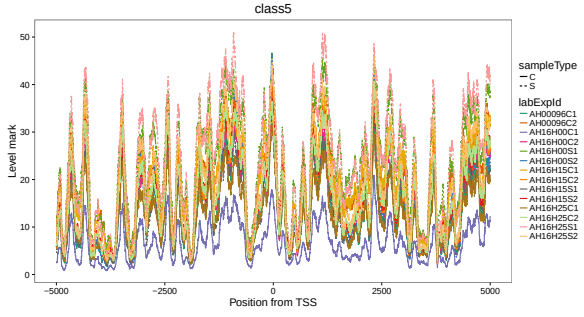


class4

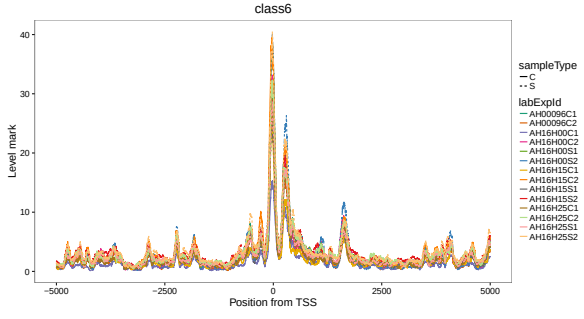


NPReg, upregulation 0h

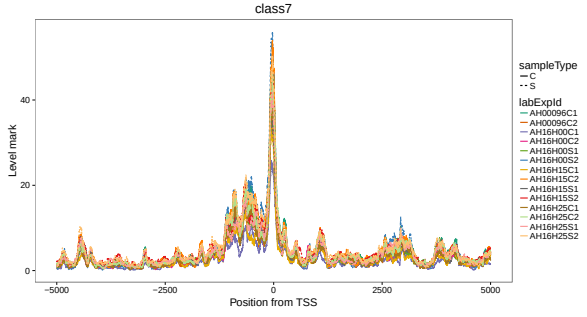
class5



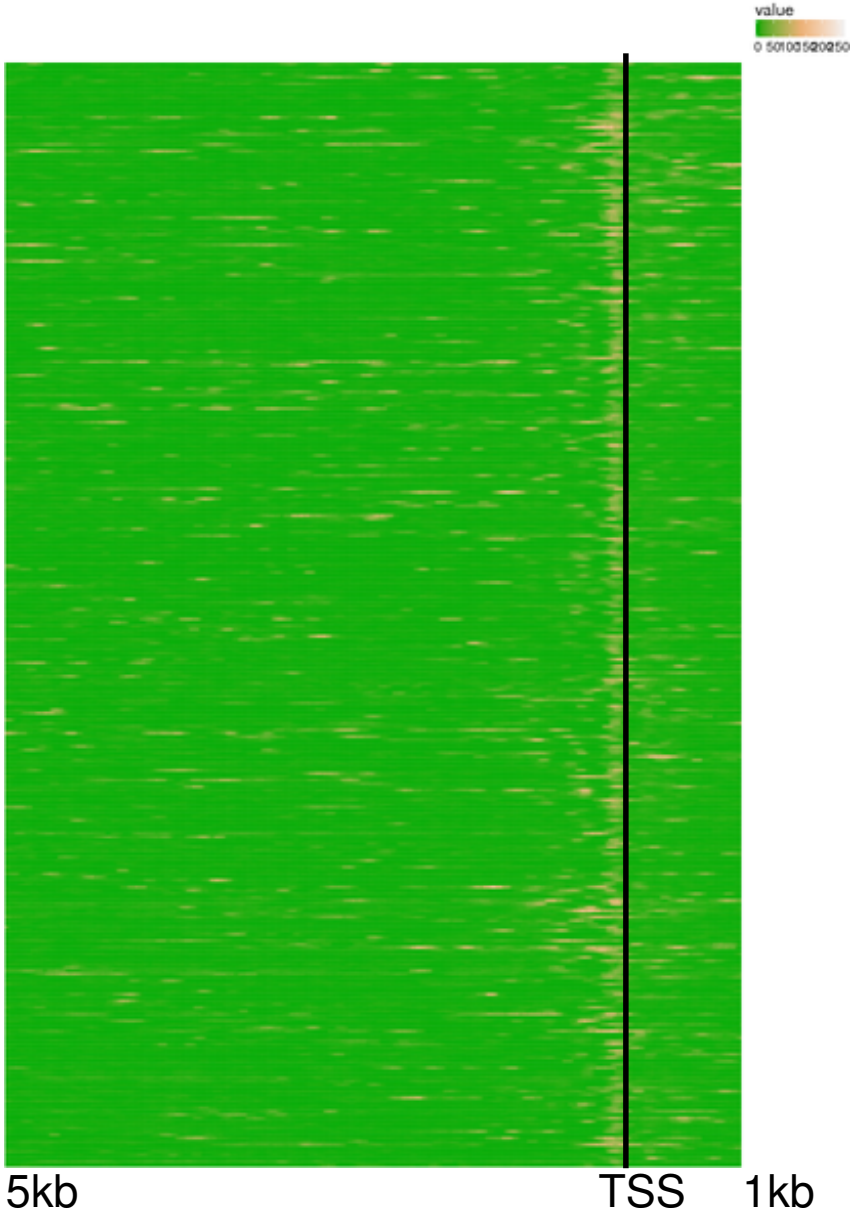
class6



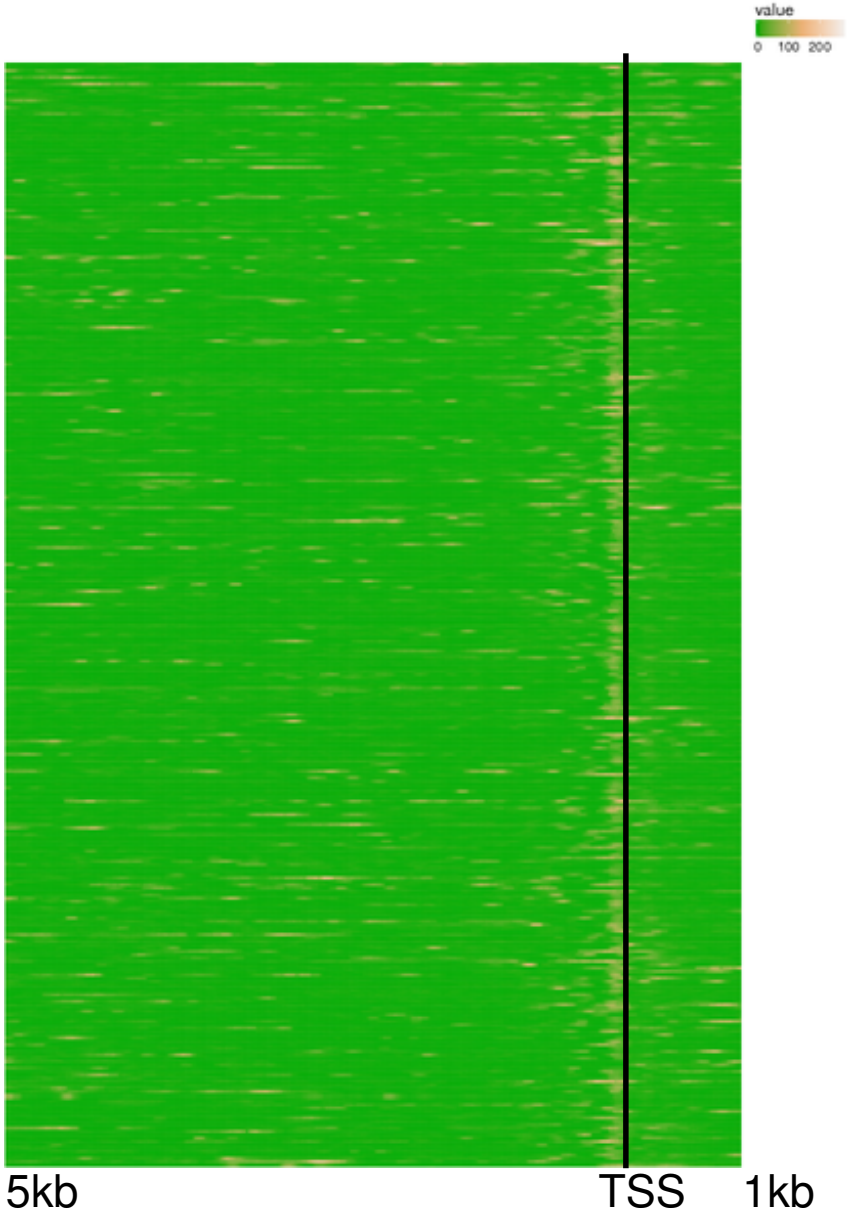
class7



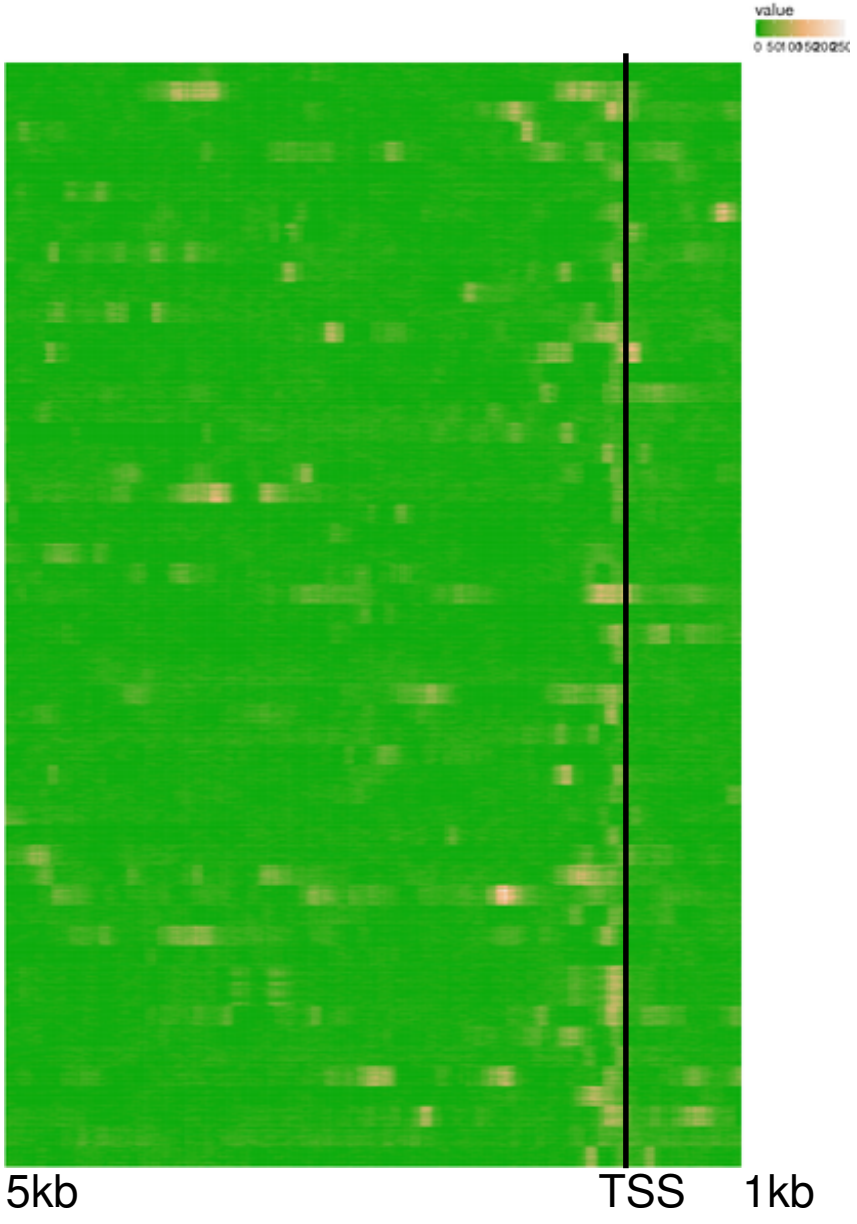
NPReg, upregulation 0h - class1



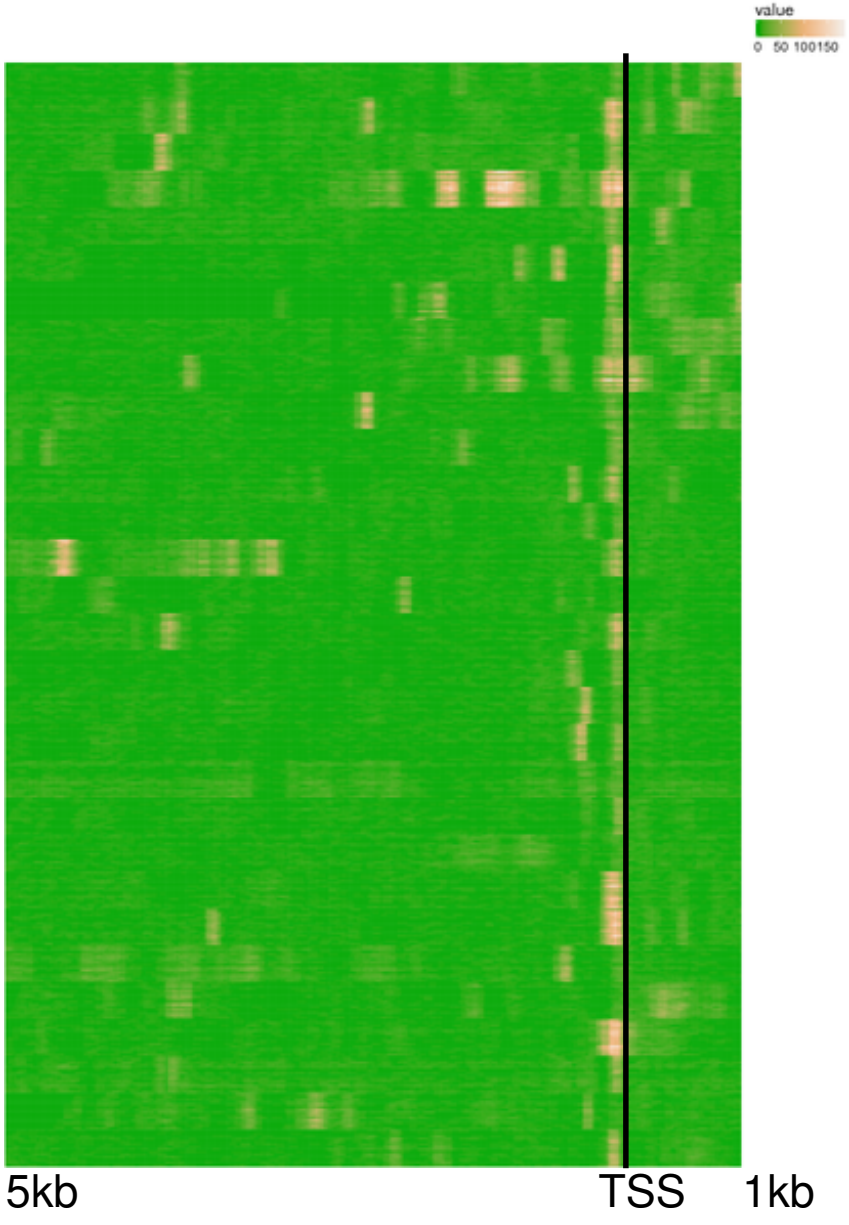
NPReg, upregulation 0h - class2



NPReg, upregulation 0h - class3

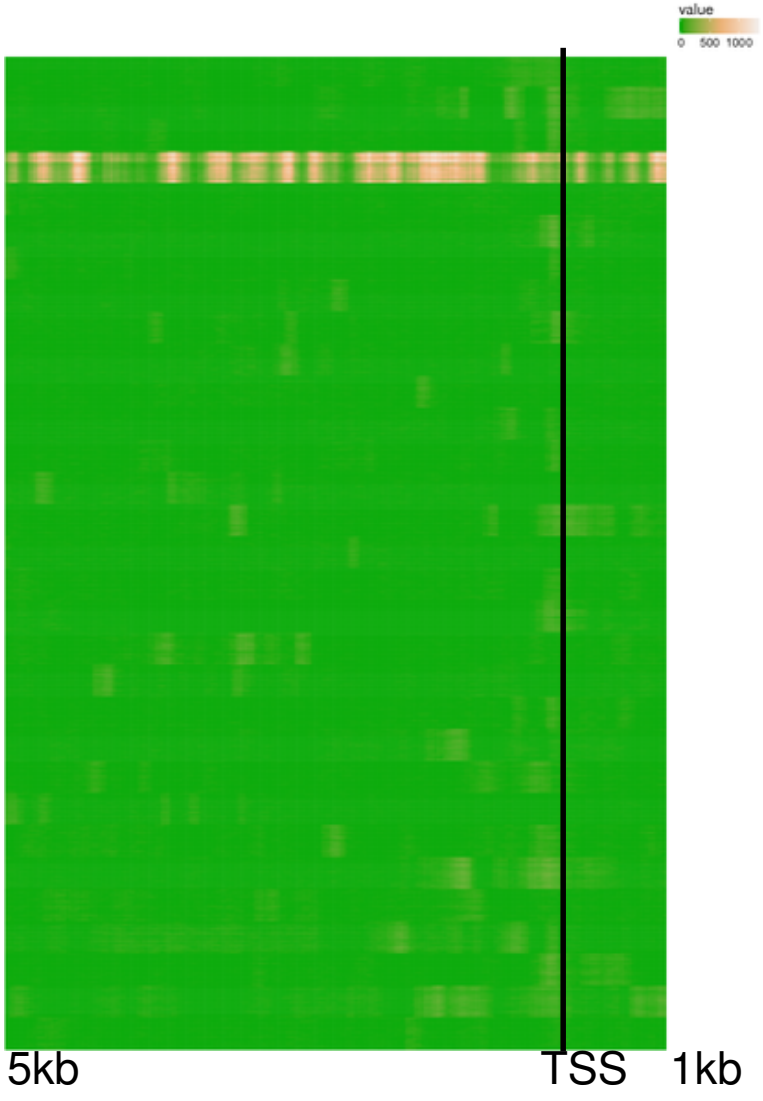


NPReg, upregulation 0h - class4



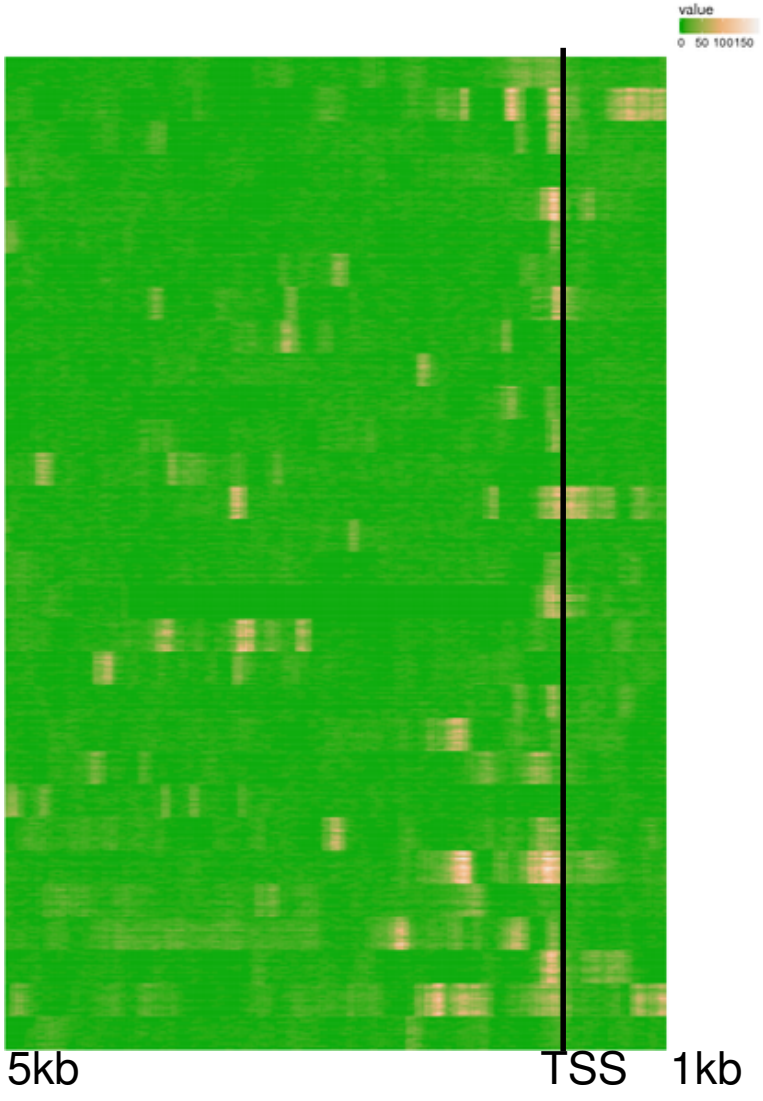
NPReg, upregulation 0h - class5

FBgn0013683 mt:ND4L mitochondrial NADH-ubiquinone oxidoreductase chain 4L

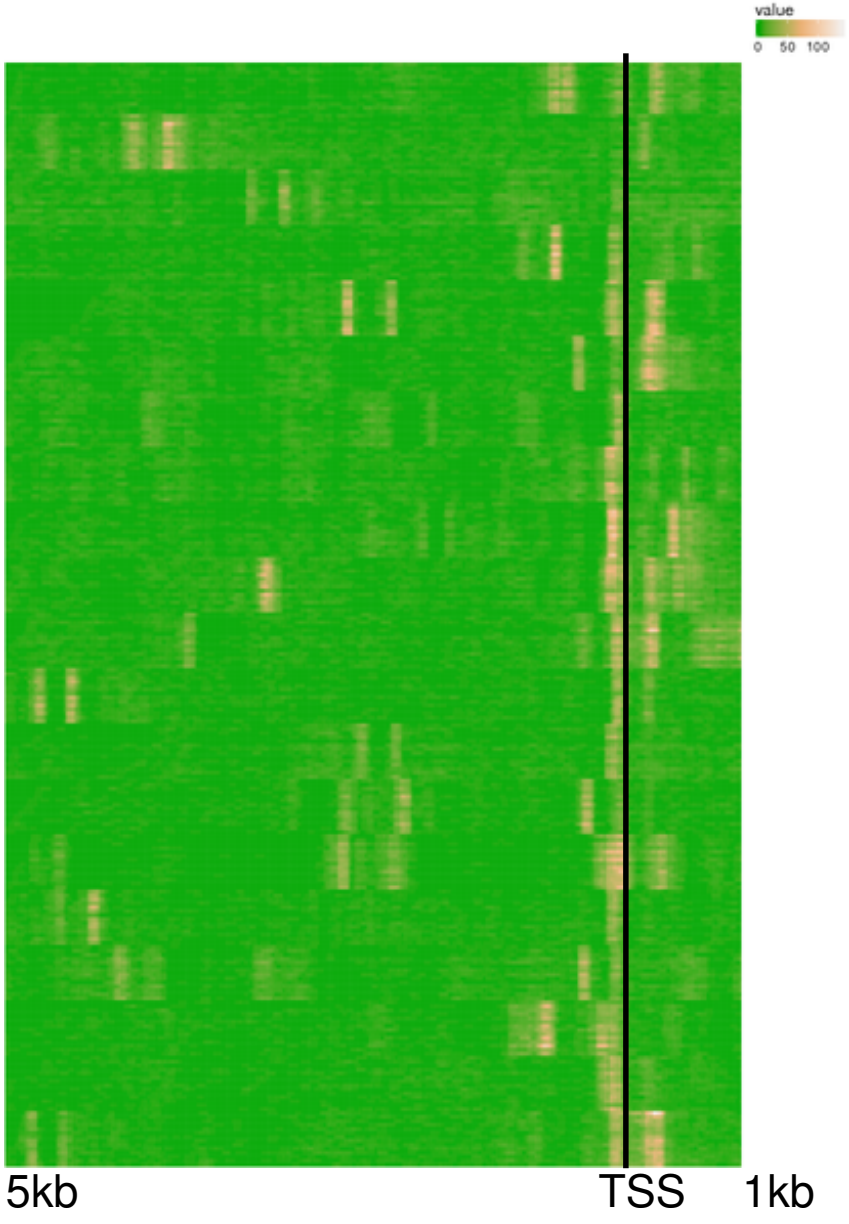


NPReg, upregulation 0h - class5

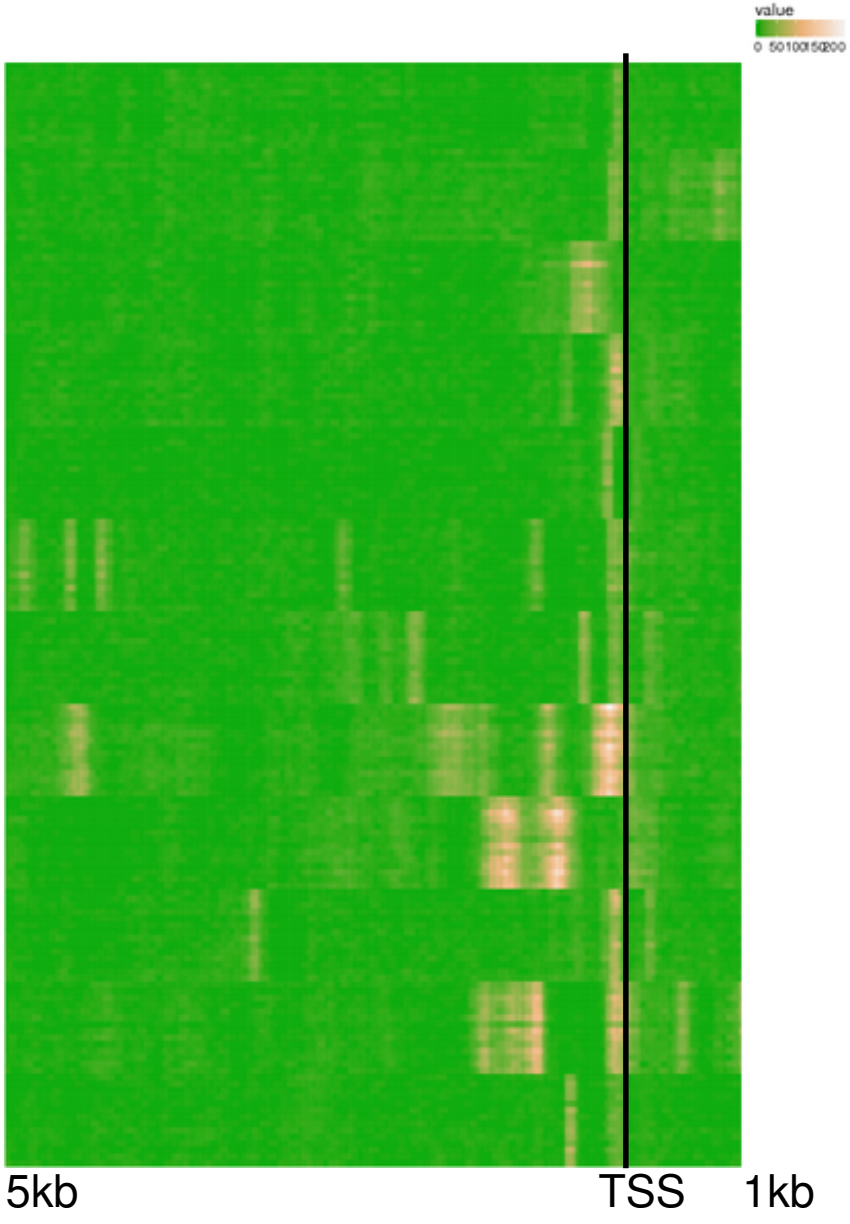
without FBgn0013683 mt:ND4L mitochondrial NADH-ubiquinone oxidoreductase chain 4L



NPReg, upregulation 0h - class6



NPReg, upregulation 0h - class7



Peaks found after cell death but not after heashock in 5kb TSS

class1	AH16H00S1-minus-AH16H00C1	104
class1	AH16H15S1-minus-AH16H15C1	26
class1	AH16H25S1-minus-AH16H25C1	84
class2	AH16H00S1-minus-AH16H00C1	95
class2	AH16H15S1-minus-AH16H15C1	38
class2	AH16H25S1-minus-AH16H25C1	98
class3	AH16H00S1-minus-AH16H00C1	17
class3	AH16H15S1-minus-AH16H15C1	4
class3	AH16H25S1-minus-AH16H25C1	30
class4	AH16H00S1-minus-AH16H00C1	10
class4	AH16H15S1-minus-AH16H15C1	0
class4	AH16H25S1-minus-AH16H25C1	7
class5	AH16H00S1-minus-AH16H00C1	0
class5	AH16H15S1-minus-AH16H15C1	0
class5	AH16H25S1-minus-AH16H25C1	11
class6	AH16H00S1-minus-AH16H00C1	8
class6	AH16H15S1-minus-AH16H15C1	0
class6	AH16H25S1-minus-AH16H25C1	0
class7	AH16H00S1-minus-AH16H00C1	0
class7	AH16H15S1-minus-AH16H15C1	0
class7	AH16H25S1-minus-AH16H25C1	0

iCis target

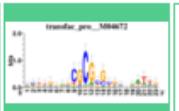
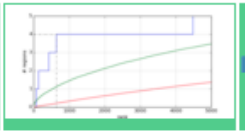
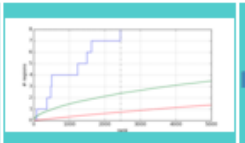
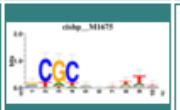
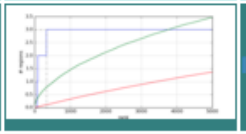
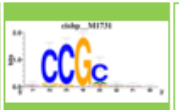
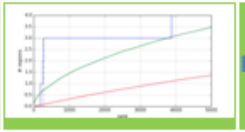
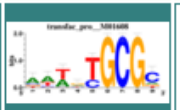
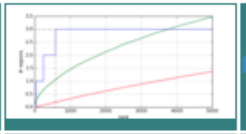
We have a test version up and running from today:
http://gbiomed.kuleuven.be/apps/lcb/i-cisTarget-mcv7/

We still need to test it ourself, but you can already try.

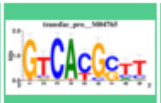
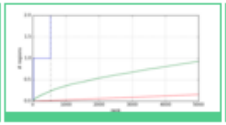
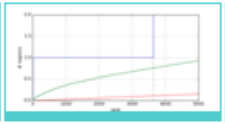
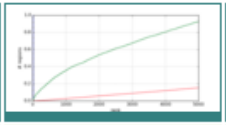
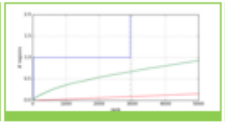
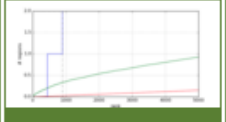
There are no guarantees that this URL will stay available and/or will be working all the time and will give correct results.

Cheers,
Gert

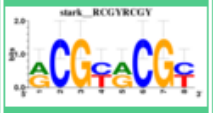
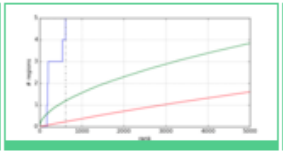
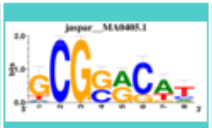
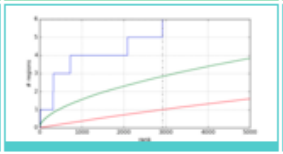
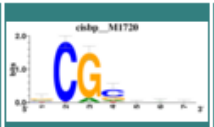
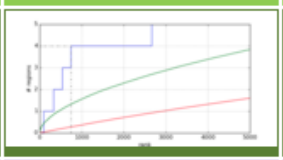
iCis target - class1 0h

#	Feature	NES	Logo	Recovery Curve	Candidate targets	All regions in top 5000	Database
1	transfac_pro__M04672 Description: F$POT1P_02: POT1P secondary motif Possible TFs: Thiolase	*7.49151*			link	link	PWMs
2	cisbp__M4677 Description: kni[gene ID: "FBgn0001320" species: "Drosophila melanogaster" TF status: "direct" TF family: "Nuclear receptor" DBDs: "zf-C4"] Possible TFs: kni	*7.30076*			link	link	PWMs
3	cisbp__M1675 Description: DAL82[gene ID: "YNL314W" species: "Saccharomyces cerevisiae" TF status: "direct" TF family: "Unknown" DBDs: "UNKNOWN"]	*6.42819*			link	link	PWMs
4	cisbp__M1731 Description: M1731	*5.95132*			link	link	PWMs
5	transfac_pro__M01608 Description: F$DAL82_01: Dal82p	*5.64897*			link	link	PWMs

iCis target - class1 15h

#	Feature	NES	Logo	Recovery Curve	Candidate targets	All regions in top 5000	Database
1	transfac_pro__M04765 Description: V$PAX5_07: Pasx-5 Possible TFs: sv	*15.50206*			link	link	PWMs
2	predrem__nrMotif1954 Description: 26_fAdrenal-DS20343.M545	*9.72730*			link	link	PWMs
3	predrem__nrMotif758 Description: 79_fKidney-DS10986.M468	*9.65901*			link	link	PWMs
4	predrem__nrMotif2618 Description: 236_fStomach-DS17659.M625	*9.64383*			link	link	PWMs
5	cisbp__M4768 Description: Blimp-1[gene ID: "FBgn0035625" species: "Drosophila melanogaster" TF status: "direct" TF family: "C2H2 ZF" DBDs: "zf-C2H2"]; Prdm1[gene ID: "ENSMUSG00000038151" species: "Mus musculus" TF status: "inferred" TF family: "C2H2 ZF" DBDs: "zf-C2H2"] Possible TFs: Blimp-1	*9.59830*			link	link	PWMs

iCis target - class1 25h

#	Feature	NES	Logo	Recovery Curve	Candidate targets	All regions in top 5000	Database
1	stark__RCGYRCGY Description: RCGYRCGY	*8.59733*			link	link	PWMs
2	jaspar__MA0405.1 Description: TEA1	*6.72193*			link	link	PWMs
3	cisbp__M1720 Description: M1720	*6.16632*			link	link	PWMs
4	transfac_pro__M03179 Description: P$AT1G51120_01: AT1G51120	*6.11133*			link	link	PWMs
5	elemento__CGCGCTC Description: Conserved regulatory element CGCGCTC between Hs and Mm	*6.10564*			link	link	PWMs

Peaks found after heat shock but not after cell death in 5kb TSS

class1	AH16H00C1-minus-AH16H00S1	30
class1	AH16H15C1-minus-AH16H15S1	84
class1	AH16H25C1-minus-AH16H25S1	25
class2	AH16H00C1-minus-AH16H00S1	25
class2	AH16H15C1-minus-AH16H15S1	76
class2	AH16H25C1-minus-AH16H25S1	18
class3	AH16H00C1-minus-AH16H00S1	0
class3	AH16H15C1-minus-AH16H15S1	9
class3	AH16H25C1-minus-AH16H25S1	9
class4	AH16H00C1-minus-AH16H00S1	0
class4	AH16H15C1-minus-AH16H15S1	2
class4	AH16H25C1-minus-AH16H25S1	9
class5	AH16H00C1-minus-AH16H00S1	0
class5	AH16H15C1-minus-AH16H15S1	13
class5	AH16H25C1-minus-AH16H25S1	16
class6	AH16H00C1-minus-AH16H00S1	0
class6	AH16H15C1-minus-AH16H15S1	13
class6	AH16H25C1-minus-AH16H25S1	9
class7	AH16H00C1-minus-AH16H00S1	0
class7	AH16H15C1-minus-AH16H15S1	0
class7	AH16H25C1-minus-AH16H25S1	0