

**S1. Overall distribution of genes differentially expressed in all time courses into main functional categories according to Funcassociate Tool**

Rank	N	X	P-value	GO Attribute	Functional category
1	205	229	4.7E-13	16491	oxidoreductase activity/redox activity
2	136	145	6.2E-13	5830	cytosolic ribosome (sensu Eukaryota)/80S ribosome
3	71	72	1.7E-10	16614	oxidoreductase activity, acting on CH-OH group of donors
4	64	65	2.0E-09	16616	oxidoreductase activity, acting on the CH-OH group of donors, NAD or NADP as acceptor
5	244	289	3.9E-09	19752	carboxylic acid metabolism
6	244	289	3.9E-09	6082	organic acid metabolism
7	72	75	1.1E-08	5842	cytosolic large ribosomal subunit (sensu Eukaryota)/60S ribosomal subunit/cytosolic large ribosomal subunit
8	129	148	5.1E-07	6066	alcohol metabolism
9	155	184	4.0E-06	5975	carbohydrate metabolism
10	53	56	4.6E-06	5843	cytosolic small ribosomal subunit (sensu Eukaryota)/40S ribosomal subunit/cytosolic small ribosomal subunit
11	53	56	4.6E-06	16283	eukaryotic 48S initiation complex
12	61	66	8.0E-06	16282	eukaryotic 43S preinitiation complex/eukaryotic 43S pre-initiation complex
13	187	227	8.7E-06	6807	nitrogen compound metabolism
14	604	791	8.8E-06	43228	non-membrane-bound organelle
15	604	791	8.8E-06	43232	intracellular non-membrane-bound organelle
16	278	348	9.9E-06	5829	cytosol
17	173	209	1.1E-05	9308	amine metabolism
18	173	209	1.1E-05	6091	generation of precursor metabolites and energy/energy pathways
19	148	177	1.6E-05	6520	amino acid metabolism
20	141	168	1.7E-05	44262	cellular carbohydrate metabolism
21	83	94	2.0E-05	9277	cell wall (sensu Fungi)
22	83	94	2.0E-05	5618	cell wall
23	83	94	2.0E-05	30312	external encapsulating structure
24	78	88	2.5E-05	5996	monosaccharide metabolism
25	74	83	2.5E-05	9117	nucleotide metabolism
26	158	191	2.8E-05	6519	amino acid and derivative metabolism
27	619	816	2.9E-05	9058	biosynthesis/anabolism
28	91	105	4.3E-05	8324	cation transporter activity
29	34	35	5.6E-05	46164	alcohol catabolism
30	150	182	6.5E-05	15980	energy derivation by oxidation of organic compounds/chemoorganotrophy
31	106	125	7.8E-05	15075	ion transporter activity

Rank position in the attribute list ranked by significance of association with your query

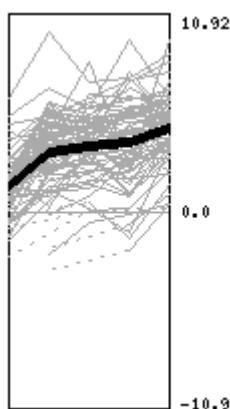
N number of genes in your query with this attribute;

X number of genes overall with this attribute;

**P** single hypothesis one-sided P-value of the association between attribute and query (based on Fisher's Exact Test);

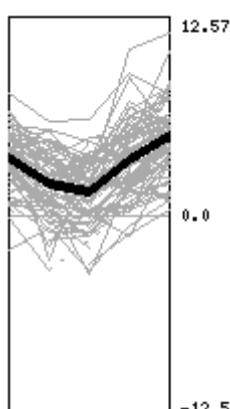
**S 3 - Gene list for each cluster presented in Figure 3.**

**CLUSTER 1**



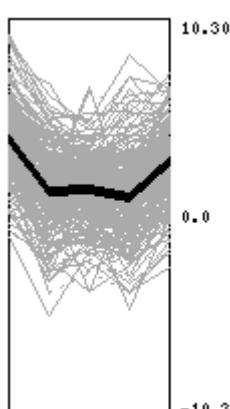
ARF3, BMS1, BUD21, BUD22, BUD31, CBF5, CSE4, DBP10, DMC1, EBP1, FBP1, FYV15, GPX1, HDA1, ICL2, KRR1, LOS1, MAK16, MPC54, NKP1, NOP14, NOP58, PCK1, POP4, PXR1, REX4, RFM1, RKI1, RPA34, RPL11A, RPL23B, RPP1B, RPP2B, RPS14A, RPS6B, RPS7B, RRP14, RRS1, RSA3, RSM28, SAS10, SGD1, SIK1, SMA1, SPB1, SPG1, SSF1, TRS31, YBL053W, YBR271W, YCR016W, YDL071C, YDL218W, YDR412W, YEL053W-A, YFL040W, YGL052W, YGL235W, YGR081C, YIR041W, YJL027C, YJL113W, YJL202C, YJL215C, YJR071W, YLR363W-A, YML047W-A, YMR290W-A, YNL174W, YNR021W, YNR025C, YOL164W, YOR004W, YOR082C, YOR365C, YVH1

**CLUSTER 2**



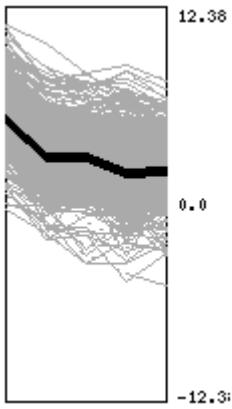
AUA1, BCD1, BUD16, CHS3, DIN7, DTD1, ECM23, FIG1, HOF1, LPP1, MAL33, MCM21, MDM10, MEI4, MER1, YGL089C, NEJ1, NOP10, NTO1, NUP116, NUP188, PAU3, PCL2, PDR18, POP7, PPT2, PTC7, RAD53, RAI1, RIC1, RNP1, SHO1, SPO19, SPO74, SPR3, SRI1, TFC3, THI11, THP2, VMA22, VPS25, VPS69, YBL071C, YBL073W, YBR064W, YBR293W, YDL068W, YDL114W, YDR015C, YDR112W, YDR274C, YDR401W, YEL048C, YER185W, YFL051C, YGL085W, YGR146C, YGR269W, YHL005C, YIL086C, YJL072C, YJR097W, YKL161C, YLR001C, YLR456W, YLR458W, YMR317W, YMR320W, YNL092W, YNL162W-A, YNL198C, YNL324W, YOR296W, YOR364W, YPL099C, YPL205C, YPR012W, YPR099C, YPR170C, ZIP2

**CLUSTER 3**



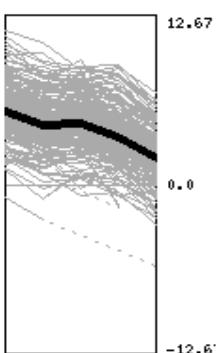
AAD15, AAD16, ADH5, ALK1, APC11, APE2, APS2, ARP1, ASG7, ATX1, BET2, BNA4, BNA6, BOP2, BUD4, BUL2, CBS1, CDA2, CDC10, CHO2, CIK1, CKB2, COX16, COX4, CRD1, CSE1, CWH43, DAD3, DAL1, DAL2, DAL3, DCG1, DLD2, DOG1, DOT5, DSE1, DSE2, DSE3, DSE4, DUT1, EHT1, ERD2, ERS1, FAT2, FMN1, FMO, FRQ1, FSP2, GAS3, GEA1, GIC1, GPI11, GRD19, GRX3, GSH2, HIS1, HMF1, HMG2, HST3, HTA2, HTL1, HUA2, HUG1, HXT10, ICY2, IMP1, ISN1, KIP2, LOT6, MAL12, MBB1, MBF1, MCH2, MCM16, MED11, MEI5, MFalpha1, MMS22, MNS1, MPD1, MRF1, MRPL37, MSF1, MSH1, MST1, MST28, MTD1, NDT80, ODC2, ORM1, OST6, PAD1, PET191, PEX5, PHM6, PIP2, PNP1, POL5, POP5, PPS1, PRM10, PRM9, PRO3, PYC2, RAD27, RBL2, RDS3, REC102, REC104, REM50, RFA3, ROD1, RSR1, RVB2, SAP4, SAR1, SEC53, SEC66, SEN15, SGA1, SHR3, SHU2, SHY1, SIP3, SIR3, SOR1, SPC3, SPC34, SPL2, SPO69, SPT16, SRP14, SSU72, STE18, STU2, SWD1, SWI5, TAD3, TEN1, TIR1, TOM6, TOS2, TOS3, TPS3, TRP3, TRS20, TSM1, UBA3, UBC12, UFD4, VGR4, VMA21, VPS29, VPS38, VTC3, YAL047W-A, YAL028W, YBL094C, YBL100C, YBR004C, YBR096W, YBR159W, YBR262C, YCL021W-A, YCL022C, YCL033C, YCR023C, YCR025C, YCR045C, YCR099C, YCR101C, YCR102W-A, YDL032W, YDL085C-A, YDL094C, YDL196W, YDR008C, YDR013W, YDR094W, YDR111C, YDR187C, YDR250C, YDR278C, YDR535C, YDR537C, YEL057C, YER076C, YER186C, YER187W, YER188W, YFR042W, YFR056C, YGL024W, YGL211W, YGL242C, YGL250W, YGR151C, YGR219W, YGR242W, YHL018W, YHM1, YHR067W, YHR133C, YHR209W, YIL166C, YIM2, YIP1, YIR020C, YIR030W-A, YJL091C, YJL120W, YJL160C, YJL178C, YJR029W, YJR039W, YJR054W, YJR128W, YJR160C, YKL066W, YKL069W, YKL102C, YLR021W, YLR049C, YLR252W, YLR279W, YLR283W, YLR301W, YLR416C, YLR428C, YML012C-A, YML040W, YMR003W, YMR069W, YMR119W-A, YNL043C, YNL170W, YNL184C, YNR040W, YNR074C, YOL008W, YOL024W, YOL106W, YOP1, YOR088W, YOR111W, YOR135C, YOR199W, YOR228C, YOR238W, YOR291W, YOR314W, YOR318C, YOX1, YPC1, YPL098C, YPL102C, YPL113C, YPL208W, YPL257W, YPL267W, YPR1, YPR195C, YTH1

## CLUSTER 4



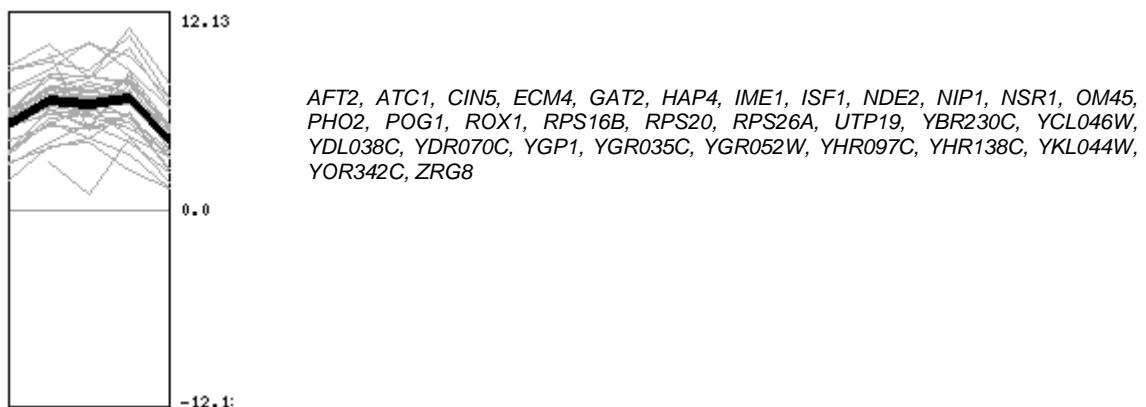
ARG5,6, AAT2, ABF2, ABP1, ABZ1, ACE2, ACF2, AC01, ACS2, ACT1, ADE1, ADE13, ADE2, ADE3, ADE8, ADH4, ADK2, AGA1, ALD6, AMN1, APL5, APM4, ARA1, ARC15, ARC40, ARE2, ARG1, ARG4, ARG8, ARN1, ARO10, ARO8, ARO9, ARP2, ASC1, ASH1, ASP3, ATF1, ATF2, ATP1, ATP5, AUT10, AUT4, AVT1, AVT6, BAT2, BDH1, BEM3, BGL2, BIO4, BMH1, BNA3, BNA5, BSC3, BUB1, BUD26, BUD7, BUD9, BUL1, CAC2, CAP2, CAR1, CAR2, CBR1, CCW12, CDC13, CDC21, CDC36, CDC42, CDC5, CHS2, CIS3, CIT3, CLB1, CLB2, CLN2, CMP2, COF1, COG6, COQ2, COX15, COX9, CPA1, CPD1, CPS1, CRH1, CRN1, CSG2, CTS1, CUP5, CWP1, CYB5, CYC1, CYS3, DAL4, DAL7, DBF2, DCC1, DFG5, DIC1, DIT1, DNF2, DOG2, DPP1, DRS2, DUR1,2, DUR3, ECM40, ECM8, EGT2, ELO1, EMP24, ENA5, ENO1, ENO2, EPT1, ERG1, ERG11, ERG12, ERG13, ERG2, ERG26, ERG27, ERG28, ERG4, ERG6, ERG7, ERG8, ERG9, ERP1, ERP2, ERP5, EST3, EXG1, FAU1, FBA1, FCY22, FET3, FET4, FIT3, FMC1, FPR1, FRE5, FSH1, FTR1, GAL3, GAP1, GAS1, GCV1, GCV2, GCV3, GDH1, GDH2, GFA1, GGA2, GLE2, GLK1, GND1, GOS1, GOT1, GPD1, GRE3, GSY1, GTS1, GTT3, GUP1, HAM1, HEM15, HHT2, HIS2, HIS3, HIS4, HIS5, HIT1, HMG1, HNM1, HOG1, HOM6, HOR7, HPA3, HRT2, HTB1, HTB2, HUR1, HXK2, ICT1, IDP1, ILV3, IPP1, ISA2, ISC1, ISR1, ISY1, KHA1, KIN3, KIP3, KRE11, KSS1, LAP4, LEU2, LSB5, LSC1, LSC2, LSM5, LTP1, LYS1, LYS12, LYS4, MAK32, MCK1, MET10, MET13, MET3, MET6, MHR1, MMF1, MNN11, MOB1, MRPS28, MRS5, MSB2, MSG5, MSH2, MSH4, MSW1, MTM1, MVD1, NCE101, NCP1, NHX1, NIF3, NIT1, NTC20, NTF2, OPI3, ORT1, OSH6, OST1, PAC10, PAC11, PAN5, PCL9, PCM1, PDA1, PDB1, PDC5, PDI1, PDR5, PDX3, PEP4, PER1, PEX14, PFK1, PFS2, PGK1, PGM1, PGM2, PH013, PH03, PH08, PH085, PIR1, PLB1, PMA1, PMI40, PMT2, PMT3, PMT6, PMU1, POL12, POL30, PPA1, PRC1, PRD1, PRE3, PRE5, PRM6, PRP42, PRY2, PRY3, PSD1, PSK2, PST2, PUT2, PYK2, QCR10, QCR2, QNS1, QUT1, RAD14, RAD51, RAM2, RAX1, RET2, RET3, RFA1, RHK1, RIB3, RIB4, RIM15, RMS1, RNR1, RNR4, RPB11, RPL31B, RPN6, RSM7, RTG1, SAC6, SAH1, SAM1, SAM2, SCM4, SCW10, SCW11, SDH4, SDL1, SEC11, SEC22, SEC23, SEC24, SEC28, SEC4, SEH1, SER3, SER33, SFB2, SFB3, SGE1, SHM1, SHM2, SIM1, SKP1, SMF2, SNC1, SNF4, SOL2, SPC110, SPC24, SPC25, SPC97, SPS1, SPT4, SRB2, SRL1, SRL3, SRM1, SRP1, SRY1, SSN3, SSU1, STB4, STT3, STV1, SUR7, SVS1, TAL1, TAO3, TDH1, TDH2, TDH3, TEF2, TEM1, TES1, TFG2, TFP1, TFS1, THR1, TIM11, TIM13, TKL1, TOM71, TOS1, TOS7, TPN1, TPO4, TRP4, TRP5, TRR1, TRX1, TSA1, TSC10, TTR1, TUB1, TUB2, TUB3, TUB4, TYR1, UBC11, UGA1, UGA3, VAC17, VEL1, VMA13, VMA2, VMA5, VMA7, VPH1 VTC1, WBP1, WTM1, WWM1, YAL049C, YAR062W, YAR064W, YAR068W, YBL006C, YBL012C, YBL083C, YBR012C, YBR052C, YBR053C, YBR089W, YBR137W, YBR139W, YCL026C-B, YCL075W, YCR043C, YCR050C, YCR079W, YCR082W, YCR097W-A, YDL023C, YDL072C, YDL086W, YDL186W, YDL233W, YDL238C, YDR031W, YDR034W-B, YDR089W, YDR107C, YDR115W, YDR210W, YDR287W, YDR327W, YDR391C, YDR476C, YDR539W, YEL001C, YEL010W, YEL033W, YEL034C-A, YEL067C, YEL068C, YEN1, YER010C, YER039C-A, YER048W-A, YER053C, YER067W, YER071C, YER076W-A, YER093C-A, YER152C, YER181C, YFL015W-A, YFL019C, YFR007W, YFR018C, YFR020W, YFR022W, YFR024C, YFR026C, YFR044C, YGL007W, YGL034C, YGL047W, YGL068W, YGL069C, YGL101W, YGL157W, YGL165C, YGL196W, YGL199C, YGL230C, YGL245W, YGR069W, YGR106C, YGR127W, YGR137W, YGR149W, YGR153W, YGR257C, YGR293C, YHB1, YHL021C, YHP1, YHR029C, YHR083W, YHR100C, YHR113W, YHR145C, YHR162W, YHR173C, YHR182C-A, YHR214W, YIH1, YIL060W, YIL087C, YIL108W, YIL137C, YIL158W, YIL165C, YIL169C, YIP3, YIP4, YIP5, YIR007W, YJL028W, YJL037W, YJL051W, YJL068C, YJL097W, YJL118W, YJL184W, YJL200C, YJR015W, YJR028W, YJR037W, YJR038C, YJR114W, YJR120W, YKL031W, YKL036C, YKL084W, YKL086W, YKL097C, YKL115C, YKR041W, YLL012W, YLL058W, YLR012C, YLR050C, YLR089C, YLR122C, YLR156W, YLR162W, YLR179C, YLR184W, YLR217W, YLR230W, YLR236C, YLR296W, YLR302C, YLR356W, YLR413W, YLR426W, YLR437C, YMC1, YML009W-B, YML116W-A, YMR002W, YMR009W, YMR074C, YMR085W, YMR088C, YMR099C, YMR184W, YMR209C, YMR210W, YMR221C, YMR237W, YMR244W, YMR262W, YMR315W, YMR318C, YNL022C, YNL045W, YNL046W, YNL057W, YNL058C, YNL109W, YNL152W, YNL168C, YNL253W, YNL274C, YNL285W, YNL300W, YNL311C, YNL320W, YNR009W, YNR029C, YNR042W, YNR061C, YOL047C, YOL131W, YOL155C, YOR012W, YOR152C, YOR203W, YOR248W, YOR251C, YOR268C, YOR325W, YOR379C, YOR387C, YPK1, YPL112C, YPR059C, YPR090W, YPR118W, YPR123C, YPR147C, YPR196W, YPS1, YPT7, YRA2, YSA1, YSC84, YSP3, ZRT1, ZRT3

## CLUSTER 5

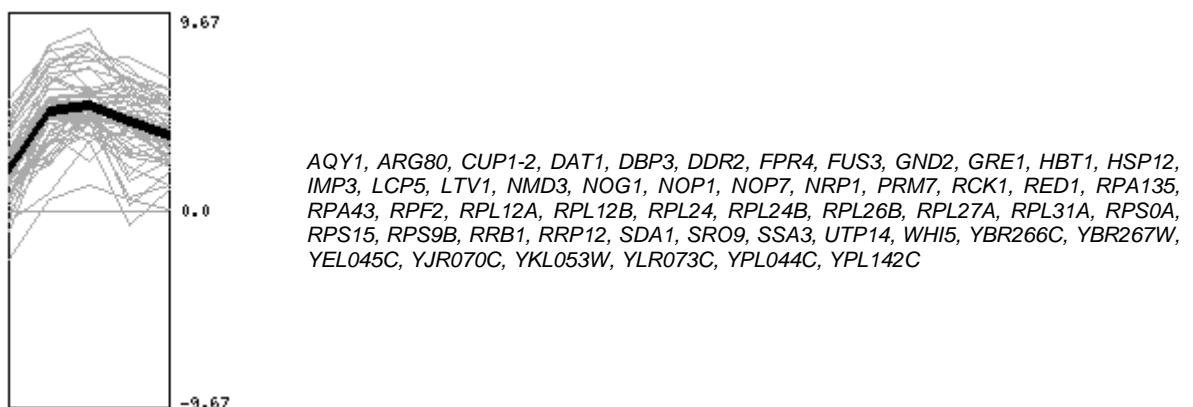


ABM1, ACP1, ADE16, AHP1, ALD4, ALO1, ALR1, AMD2, APE3, ARO4, ARP10, ATP14, ATP2, ATP3, AVT3, BCY1, BIO3, BNI5, BRE4, CAN1, CCP1, CCR4, CCW14, CDC19, CDC26, CDC47, CDC55, CKI1, CLN3, CLP1, CMD1, COR1, CPR4, CSL4, CTH1, CTR2, CTT1, CUE4, CWP2, DDR48, DIP5, DLD1, DPM1, DUN1, EDC2, EFT1, EFT2, EGD1, ERG25, ERG3, ERG5, ESS1, FCY21, FEN2, FOX2, GAR1, GAS5, GDI1, GEA2, GLO3, GSF2, HAC1, HHT1, HOC1, HSL7, HSP150, HXK1, HXT2, IDH2, IES6, ILV5, ILV6, IMG1, INH1, IPT1, JSN1, LAS17, LAT1, LST4, MAP2, MEP1, MET17, MGA1, MNM2, MRP1, MSY1, NAR1, NCE103, NHP6B, NPL3, NPL4, OAR1, OLE1, OPT2, OSH2, PDC1, PEP1, PFK2, PKR1, PLB2, PMP3, PNC1, PPE1, PRE1, PSA1, PST1, PUS2, PUT4, QCR6, RIM101, RPS29A, RSP5, RTG3, SAM4, SCH9, SCS2, SCW4, SDS24, SET4, SIP1, SIS2, SML1, SNA3, SNF8, SOY1, SPI1, SPR28, SSN2, STB3, STE13, STE24, SUC2, SUI2, SUM1, SUR1, SWF1, TAT1, TOR2, TPS1, TPS2, TRS120, TY2A, UBP5, UGP1, UTH1, WHI3, WSC2, YAL044W-A, YAL045C, YAL046C, YAL053W, YAL061W, YAP1802, YBR016W, YBR071W, YBR184W, YBR235W, YCL020W, YDL025C, YDL027C, YDL109C, YDL241W, YDR133C, YDR134C, YDR459C, YER004W, YFR032C, YGL079W, YGL082W, YGL088W, YGL185C, YGL231C, YGR001C, YGR011W, YGR021W, YGR022C, YGR206W, YHR149C, YHR182W, YHR202W, YIL042C, YIL059C, YIL088C, YIL105C, YJL018W, YJR027W, YJR115W, YKL100C, YKR047W, YKR077W, YLF2, YLR149C, YLR194C, YLR294C, YLR379W, YML045W, YML057C-A, YMR122C, YMR141C, YMR157C, YMR226C, YNL028W, YNL040W, YNL190W, YNL208W, YOL036W, YOR008C-A, YPL144W, YPL159C, YPL183W-A, YPL277C, YPR140W, YRA1

## CLUSTER 6

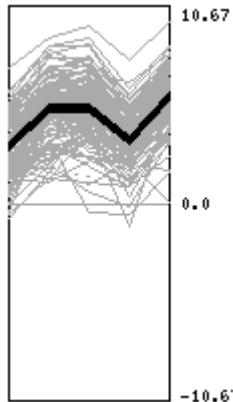


## CLUSTER 7



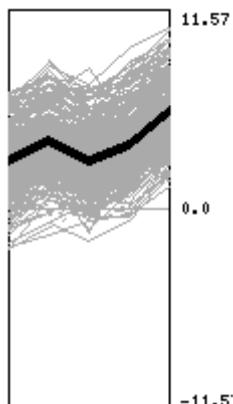
## S4 - Gene list for each cluster presented in Figure 6.

### CLUSTER 1



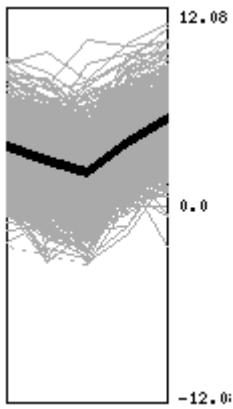
BRX1 BUD19 BUD31 CBF5 CNM67 CSE4 DBP3 EMG1 ESC2 FKH1 FUR1 FYV15 HAS1 ICS2 KRR MNN4 MPC54 NOP58 NOP7 POP4 RFM1 RHC18 RHR2 RKI1 RP18B RPA135 RPA34 RPA43 RPL10 RPL12A RPL12B RPL13B RPL14B RPL16A RPL16B RPL17A RPL20B RPL21B RPL22A RPL23B RPL24A RPL24B RPL26B RPL27A RPL27B RPL28 RPL2A RPL2B RPL30 RPL31A RPL32 RPL33A RPL33B RPL34A RPL34B RPL36A RPL37A RPL40A RPL40B RPL42B RPL43A RPL5 RPL6A RPL6B RPL8A RPL8B RPP0 RPP1B RPP2B RPS0A RPS0B RPS10A RPS11A RPS11B RPS14A RPS15 RPS16B RPS17A RPS17B RPS18A RPS18B RPS1A RPS1B RPS21A RPS21B RPS24A RPS24B RPS26A RPS26B RPS27B RPS28B RPS4A RPS5 RPS6B RPS7A RPS8A RPS8B RPS9A RPS9B RRP12 RSA3 SAS10 SFC1 SIK1 SLK19 SR09 TOP2 TRI1 UTP13 YBL053W YCL046W YCR016W YDR199W YDR275W YDR412W YDR417C YER084W YGL165C YGL262W YGR160W YGR251W YJL049W YJL202C YJR070C YLL044W YLR076C YLR287C YLR363W-A YLR431C YMR290W-A YOR342C YOR365C YPL009C YPL073C YPL142C YPR027C YPR044C

### CLUSTER 2



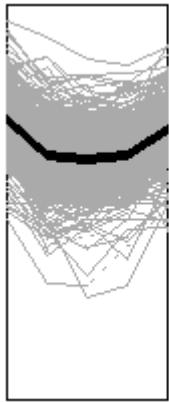
AAC1 AAH1 AFT2 AIR1 AQY1 AT03 BAS1 BCD1 BCK1 BDF2 BDP1 BMS1 BO12 BOS1 BSC1 BUD20 BUD21 BUD22 BUD23 BUD27 BUR2 CAF130 CBK1 CEF1 CIC1 CLF1 CSR2 CTK1 CUP1-1 CUP1-2 CUS2 CVT9 DAL80 DAT1 DBP10 DBP2 DBP8 DBP9 DDC1 DDR2 DEF1 DIM1 DIP2 DOS2 DST1 DUS3 DUS4 EBP2 ECM16 ECM4 ELA1 ENP2 ERB1 ERO1 FKH2 FPR3 FPR4 FUN11 FUS3 FYV2?1 GAC1 GAT2 GCD10 GCD2 GCY1 GDS1 GIP2 GIR1 GIR2 GND2 GPR1 GRE1 GSC2 HBT1 HEF3 HOR2 HSP12 HSP82 HXT11 ICL2 IES1 IES2 IMH1 IMP3 IRE1 KAP123 KEL3 KIN4 KRE29 KRI1 KTI11 LCP5 LEU3 LGE1 LRP1 LSG1 LTV1 MAK16 MAK5 MBP1 MBR1 MDH2 MDJ1 MET31 MET4 MFT1 MIG1 MLP2 MMS21 MOT3 MRPS17 MSC1 NAN1 NCA3 NCE101 NGL3 NMD3 NOB1 NOG1 NOG2 NOP1 NOP14 NOP15 NOP4 NOP6 NOP8 NOP11 NSA1 NSR1 NUP1 OGG1 ORC1 OYE2 OYE3 PAU7 PBP4 PCD1 PDR1 PFK27 PHO12 PHO2 PIN3 PLO2 PMA2 POG1 PPM2 PRE6 PRM7 PRP3 PWP1 PXR1 RAD26?2 RCK1 RDH54 RED1 REX4 RGS2 RGT1 RH05 RIA1 RIO1 RLF2 RLP7 RNA15 RNP1 RNT1 ROX1 RPC31 RPF1 RPF2 RPI1 RPL24 RRB1 RRP14 RRP3 RRS1 RTN2 RTS2 RTS3 RVB1 SDA1 SEC16 SEC8 SFL1 SGD1 SHQ1 SHR5 SIP18 SIR4 SMA1 SMM1 SMY2 SOF1 SPB1 SPS19 SSF1 SSF2 STE20 ST11 STM1 SUE1 SUT1 SWC1 TAF1 TAF67 TEA1 TGS1 THI20 THI7 TIF35 TOP1 TRF5 TRM7 TYE7 UBP1 UTP14 UTP19 UTP30 UTP5 UTP7 UTR5 VTS1 XBP1 XYL2 YAP7 YAR1 YBL004W YBR141C YBR230C YBR266C YBR267W YBR271W YCS4 YDL071C YDL114W YDL173W YDL218W YDL222C YDR010C YDR049W YDR163W YDR291W YDR324C YER158C YFL012W YGL149W YGL177W YGP1 YGR043C YGR066C YGR079W YGR102C YGR201C YHL005C YHR097C YHR138C YIL019W YIL055C YIL091C YIL096C YIL127C YIL130W YJL122W YJL150W YJL206C-A YJR146W YKL107W YKL131W YKL202W YKR096W YKR100C YLL033W YLR051C YLR057W YLR063W YLR073C YLR077W YLR271W YLR312C YLR387C YLR407W YML025C YML047W-A YML082W YMR030W YMR093W YMR107W YMR191W YMR193C-A YMR245W YMR310C YNL035C YNL144C YNL165W YNL174W YNL176C YNL227C YNR021W YNR024W YNR025C YNR054C YNR073C YOL037C YOL093W YOL099C YOL124C YOL134C YOR004W YOR053W YOR071C YOR091W YOR215C YOR318C YOR343C YOR391C YOR394W YPL044C YPL146C YPL230W YPL280W YPR143W YRB2 YR02 YT1 YVH1 ZPR1

### CLUSTER 3



STF1 SEM1 YIR020W-B MDM35 YBR255W YCR051W TSA2 SOL2 MPM1 RAD14 CRR1  
 YIL007C RRN5 AUA1 ESS1 DOT6 YNL024C YGL146C YJR024C SSA4 YLR374C YML083C  
 MAS6 NAB6 SDS23 YNR018W OLE1 OPI3 YFR022W YLR437C THI4 RSM7 CUP2 GLC8  
 ROX3 YAL065C YKL195W YJR115W YML030W YPL107W YPL158C ARG80 SEN15 YPL052W  
 COX19 ARL3 UGX2 SPT10 DAL82 YDL196W YBR235W MFAAlpha2 FAT2 UTH1 NTH1 TKL2  
 YNL203C BUD5 TAF10 MHLALPHA2 ALD3 TAP42 INO1 YNL134C RPT3 LYP1 GBP2 YPS3  
 FOX2 HUB1 SNX4 YNL063W YEL009C-A PWP2 SIS1 ZRG17 ZDS1 SOL4 SOD2 NTA1 WH15  
 TFC7 YEL030C-A YGR110W YNR062C YML009W-B ICY2 YOR292C YMR318C CLB3 SNF3  
 MEC1 POT1 ARP8 GTT2 YKR041W YGR283C STB5 YPR093C IES6 YPL014W MRD1 UGA2  
 HOP1 DPH2 SIT4 ZRT3 EBS1 YJL162C TRM9 SGF29 PRM2 MST27 YDR466W KEL2  
 YLR004C YPR1 YDR370C SF1 VPS13 RPC53 MPH2 YEL053W-A DEP1 SHP1 RRD1 PHO23  
 YAR069C YLR323C TRK2 AQR1 YMR124W YCR095C MEI4 RRN7 HSP104 ADH7 YFR046C  
 TIS11 YOR006C YFL015W-A PCL10 YJR072C RAS1 TAT2 YNR071C KAP95 YMR031W-A  
 YHR069C-A HXT5 YPL225W YIL064W THI12 ECM37 PHO90 RAX1 SNF6 MPE1 DBP1  
 YEL059W YHR033W SSP1 YMR306C-A TRR2 HEX3 YIL067C YMR069W SIP4 PST1 ZIP1  
 UBR1 SMP1 YNL187W YBR273C YKL171W YCR006C YLR023C NPL3 PGK1 YLR326W  
 YBL046W YLR297W YCR079W TAFA1 YKR079C SKI6 BOP3 YCR049C AAD3 YKL018C-A AST2  
 RIM4 SIP2 RPC34 HMS1 SLA2 UTR1 ATR1 DNL4 UFD1 ISA1 FIT2 ENT4 PAU3 PEX28 TIP1  
 COT1 YNR046W YPL039W PAU2 MDM31 PLB2 MOH2 YMR325W AR080 HMT1 YIL056W  
 CCH1 PCK1 HUL4 NUP42 YJL062W-A YCL069W TOR2 CVT17 FUN19 GDH3 YMR320W  
 SWM1 RVS167 YKL088W YIL023C GAS4 YKT9 TIR4 YNL115C IFH1 YNL011C EM15 STR3  
 RTG1 YOR223W WTM2 HSP60 YFL044C FUM1 FKS3 YNR042W RPD3 FLO1 YKL224C  
 SEC26 YMR041C YPL095C YOR389W INP53 MUP1 YPL108W SSU1 YPR084W YDL129W  
 KIN1 DRT1 YLL064C RRP1 CCC2 YKR070W IVY1 NFS1 MRPL19 GLO2 DAN2 URA8  
 YNL184C YEL070W OM45 LEM3 PRP45 CPT1 PEX1 BYE1 APT2 VTH2 YNL120C APJ1 PAU5  
 PTR2 HIR3 AGP3 GL04 LIT1 DAK2 YLR255C HRB1 RSC8 YOR145C UBR2 YGR111W MNT2  
 VHS3 YML059C APG2 UTR4 PEX5 PAU6 YCR087W PIR1 AGX1 VPS62 BUB2 RPN11 PEX8  
 FCY1 PDC6 YML122C DIG1 YPR085C SPO69 YER163C YPR125W GAD1 YDL177C DNF2  
 ETR1 TAT1 YLL030C VTH1 YLL025W NOP13 GLY1 GFD2 YLL056C YNL179C SDH4  
 YDR287W RAD23 YLR041W YLR007W YDL233W YDL109C APG9 PHO11 URA7 YKL177W  
 PIR3 HXT9 MDJ2 NCB2 YEL023C SPC1 YEL0204W MFL3 YER064C YKR105C YDR491C QR15  
 MMP1 MAG1 YNL026W YAL004W FTR1 YFL042C STP3 SHY1 YLR173W SPP2 DC11 FRE7  
 HAP1 YLR311C SNZ3 YLR346C THI5 YOR138C ESC1 SMC5 YER004W OPI1 MRH4 CDC2  
 YKL151C YJL216C PUT4 COG8 UBP16 GPA1 YML108W YPL080C YPL183C PHO4 YPR150W  
 YPR152C YHR159W YPR157W YMR122C YPL025C ENA2 YBR042C YKR022C YER034W  
 YBR063C YKR047W ADE12 UBC5 RGA2 YCL048W TAH11 PIB1 MEU1 PTK1 SNP1 YDR425W  
 YDR248C YDR396W TRS31 GNP1 LSM5 HXT8 BCY1 ICL1 PTC2 ESBP6 SCC4 TPO1  
 YNL105W YAR028W FET5 YNL046W DMC1 CAF120 IME4 DDP1 YSA1 RCK2 YNL013C  
 YFL052W YNR036C YPL277C SCW4 SSK2 DAK1 ISU1 YPL114W YFR018C MYO2 YML089C  
 YMR206W YFR024C PRE2 PDR10 YPL056C BAT1 ULA1 LCB1 EDC2 YKR073C YJL083W  
 BSC4 MXR1 YBR241C GCR2 YDR223W COX17 CDC40 BLM3 SPR6 MRPL33 HRT3  
 YNL119W BUR6 PCH2 ATP1 ACS1 COX20 CTA1 AHP1 YGL010W YDR476C GRE2 LOC1  
 SHC1 FAA2 YLR279W YFR003C YOL131W CDC26 RME1 PTR3 YMR034C YNR040W  
 YGL261C VAC7 UFO1 HSP26 SOR2 HSH49 YGL231C YGR277C YOR378W FET3 YPL041C  
 GPX1 MRPS18 PCA1 GIF1 SSA3 YKL132C YNL228W YBR239C YNL200C STN1 YBR197C  
 YJL161W CCZ1 DON1 ZRT2 SNO4 DPB3 PET112 BFR2 PET18 YLR112W SNN1 PHM8 PRB1  
 MEC3 POR1 API2 FZF1 GLN3 NKP2 FIT1 PLB3 SGT2 YFL054C YOL050C YGL081W  
 YLR402W MSO1 GSP2 SPR3 YMR317W YPS5 BDF1 YGL114W DCR1 CAT2 YNL335W AAD4  
 SSY5 FIT3 YOL087C PIB2 YPR127W YPR126C MEP3 MND1 YNL305C HNT1 YMR084W  
 YKR049C IKS1 YDR109C GAL10 PSR1 YGL052W YNL195C YDR070C YJL160C BSD2  
 YIL121W SSE2 YCR013C SNO2 PIM1 ACH1 YDR330W MATALPHA2 YLR164W FRE4 ECM10  
 YLR218C PAC11 HAC1 YLR235C SSA2 YGL182C FLO10 VAM7 GAT1 CHA4 YFR017C MSB4  
 TOP3 YOL070C YFR054C PAC10 AV02 SFP1 YGR081C YOR146W MKK1 POX1 YPL222W  
 SNZ2 ASF2 FRT2 SSA1 SYF2 MLH3 YPL247C YGL199C GRE3 SPS100 YHR199C YDL072C  
 YIR035C YJL045W SDS24 HYR1 YGL072C PST2 CHK1 MGA2 OAF1 GIP1 YBR284W  
 YAL049C YIL176C IMP2' YGL131C YFL006W PSY2 YLR199C B105 YOL161C PET122 TIR2  
 YBR116C YJR096W VID30 YHL046C PUP1 YFR038W RAD54 CYC3 YIL175W YAL053W  
 YBR224W Aad10 YHL050C ELP3 DBF20 YMR251W YFL043C SFA1 YDR131C PAU1 HSP42  
 SYF1 YLR016C YKL187C NIT2 FET4 YIL024C RPN2 ALP1 YJL144W YAT2 MLS1 TES1 SPG1  
 YBR064W HRT1 REC102 MLH2 RPB11 AHC1 YRR1 MYO3 YLR460C YLR149C MDL1  
 YKL086W YJR114W YMR090W SPO20 SWH1 YJR128W YPL030W MDH1 YMR114C  
 YHR087W YPR038W YBR269C RGM1 THI22 RRP9 CBS1 TSM1 NAP1 YIL087C YDR015C  
 HSP78 YBL100C YIL086C YJL215C HIF1 STP1 VPS72 SPP1 PHO86 FZ01 AVT3 PKH1 IDP2  
 TRX3 SCM3 UGA4 YBL095W YBL012C YKR018C YJL067W SYM1 YLR254C YOL106W  
 YOL032W YLR072W YML131W YJR037W HAP5 YMR118C AAD16 PRX1 YIR016W YOR376W  
 NAB3 CAT8 HSF1 GAR1 YBR277C OAR1 ASK1 CTR1 YKL031W CUE1 DSK2 QRI7 SEC31  
 PEX2 SBA1 HCA4 YIL113W HIR1 YKR007W EXG2 YJL211C YBR108W YDR230W YAP6  
 YDR479C PSP1 ASF1 YLR040C YDR271C PRY1 PEX13 AAD6 IWR1 ECM13 UBP9 SLX8  
 YLL029W YGR226C YMR103C COX16 RPH1 YLR356W YLR114C YOR084W IKI3 YJR116W  
 MSH4 YGR294W IAH1 YJR129C GSY2 YJR085C KIP3 YHL018W MDR1 THI21 NAT2 APG1  
 CPR2 RAD2 YPL180W PEX21 NDE2 PSP2 OSH1 YKL147C YJU3 YPR015C SCJ1 YPR076W  
 SRP54 YKL053W YMR222C URA10 FLO5 YPR195C OSH2 CCW14 NTH2 YKR035C YDL034W  
 MSH6 YAR064W YIR041W YKR045C YCL073C CFT1 RAD16 YIL060W YDR274C STL1 MUC1  
 TDH1 YDR504C YDR533C YFR016C TIR1 TFS1 CPR6 BAP2 FYV5 YAL061W QDR1 SSL2  
 ACN9 TRR1 GIS3 HSP30 YKR089C YDR527W APM2 PPR1 YMR254C YOR042W OSM1 ERC1  
 ODC1 YOR287C DED1 YJR149W ERR1 YKR046C UIP4 ERR2 ALD2 AMD1 PTH1 YEL048C  
 CTF8 YPR123C YEL045C IP12 YER188W KRE1 THI3 YFL061W YDL124W SOK1 GRX1 RIB1  
 REG2 HAP2 YNL274C YBR053C MET30 ZAP1 VID24 YJR061W PRM8 SIZ1 APG14 THI2 IBD2

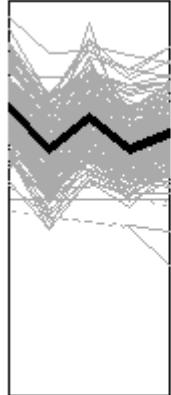
## CLUSTER 4



12.6  
0.0  
-12.

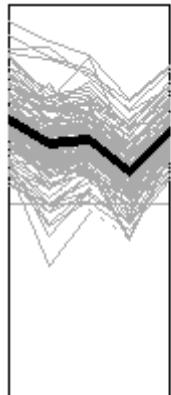
YCR102W-A YDR034W-B FUN26 CDC1 YDR338C ADE8 YGR011W WWM1 RMD7 CDD1 SEC4  
 APS3 YIP5 ACB1 YOL111C YFR006W HAM1 YML005W APM4 HRT2 HNT3 YBR139W AQR2 ATF2  
 VPS29 YHR029C YKL071W YDL199C PYC2 DLD2 YKL115C SRL3 YGL088W YLL059C YNL168C  
 MOB1 CDC13 SUC2 OPT1 YHC3 NAM7 PER1 RNR2 YLR324W CPD1 HSH155 YJR015W FSH1  
 YML012C-A YOL155C YPL112C YOR129C MBF1 YMR194C-A RHK1 CAR1 YCR099C NDT80  
 YHR003C GAL4 YEL068C ECM14 MNL1 SNO3 DAL1 MCK1 TYR1 ALG7 TTR1 CHA1 ERP1 ERG13  
 ARG1 YJR028W RPT5 RRN11 YHR122W YOR228C WTM1 YNR074C MOR1 YCR101C LAP4  
 ARC40 MAP2 ARG81 HPA3 LEE1 YPL150W BIG1 SCH9 YHR214W YPR147C PRC1 YPT11  
 YER039C-A TGL1 RNR3 EHT1 TEM1 ADH5 ARA1 YBR287W MNS1 MAK32 ETF-BETA GTT3  
 YLR126C SFB2 ERG24 COQ2 QNS1 YOR251C SPL2 GGA2 CPA1 HIS6 DAL5 ALA1 ISR1 YMC1  
 YMR221C YEL033W CWH43 ERG9 ARP2 YIR030W-A HSP150 MNN11 PRY3 SPC110 MSI1  
 YMR085W SIR3 FMN1 SRY1 YEL064C SPT23 YER187W TOM22 YHR186C YJR029W HXT10  
 MSG5 IML1 YLL012W ISN1 PET494 YER186C MMS4 SAS2 HIS2 KRE11 CRD1 COQ1 PMU1  
 YKL118W ATX1 YIL169C PMD1 YLR012C PCL7 NMD5 YLR122C ERG27 YBR137W KTR4 GDH2  
 AMD2 PRP28 FRQ1 NPR2 PRM1 YLR257W YAL037W YLR252W NMA2 AUT10 ORT1 BPT1 TMT1  
 PDX3 YLR296W HNM1 PFS2 HSM3 STU1 MDM10 RFA1 FSP2 RVB2 TPO4 PSK2 YHL021C ARP1  
 YHR113W ADK2 FMO YDL086W MCH1 YNL285W APC11 HMF1 AVT1 DPP1 PSD1 YCR045C  
 YNL170W CAN1 STB1 NOP12 SDC25 DSE1 CYB5 YNL045W YPL170W YNL022C VPS68 UFD4  
 KSS1 URK1 SAT2 YLR302C PDA1 EGT2 NHP6B CTS1 TIM18 YLR364W YPL103C ERG1 DUR12  
 DIS3 YER010C VMA13 PPE1 ARG4 CUE4 SKS1 PPX1 YNL253W CDC36 RPA49 YDR198C TFC6  
 YER067W YCR023C PCM1 YDL186W ENT1 VAM6 FIG2 YNL116W PNP1 YER140W YLR283W  
 DRE3 YSP3 PUB1 YOR088W COX5A YER152C SPO1 MST28 YLR426W SRM1 YNR029C TPN1  
 UGA1 DCR2 GRD19 HSD1 TIM11 FCY22 GIM4 YER093C-A KHS1 YFL019C MSY1 COX10 COQ6  
 CMP2 LTP1 SPE3 SCS2 ALD6 YER128W YFR044C YPR196W LSB3 AZR1 NPL4 RTT106 PAN1  
 YER071C ARO10 GEA2 VTC1 YDR187C YDR319C RIM15 PGM1 MRPS28 NHX1 YNL150W AGE1  
 ALO1 GAP1 VPS8 NIT1 MST1 YDR210W PUT1 YDR327W YEL067C RPC17 YNR069C YOL008W  
 RET2 ANB1 ACS2 SCW11 ECM38 TOM6 LSC1 ERG25 BUD9 YGL235W YML011C PRE5 AUT4  
 ADE1 DAL4 YSN1 YMR002W YGL214W ERG11 YKL070W ERG12 HOF1 YGL211W YMR074C  
 DSE2 TIM13 YPR090W ARO9 SEC11 SCO1 VMA2 YDR003W PEX17 YBR071W YLR021W  
 YLR049C YGR206W LSB5 GCV3 YJL118W DIT1 UBC8 AGA1 YJR039W YER053C FCY2 SPS1  
 YFR008W CCA1 SYS1 CAR2 PRE3 YFR042W ISY1 SCM4 MCH4 HIT1 FRE1 MRPL25 YMR051C  
 HHO1 FRE5 DSE4 DIE2 XPT1 YDL238C YIL157C YGL226W YTA6 GIC1 YSC84 TRP5 YPR098C  
 IKI1 NCE4 DCG1 SLD2 AMN1 DAL3 SWD3 CIS1 SHU2 YLR050C YNL156C ATP5 RMS1 PRD1  
 TRX2 YDR278C HPT1 YCR026C HIS1 GRC3 RHO2 YDR537C YER076C YLR446W DFR1 SOD1  
 YNR064C PMT3 YGR127W NDC1 YGL220W SUV3 BEM3 YIM2 ERG8 YGL196W YKR005C MDH3  
 YPC1 RSM10 MRPS5 NGR1 ARP6 FYV9 YPK1 SKP1 MRS5 GPB2 TRP4 PAD1 SRP1 PMP3  
 YJR011C SWI4 ABZ1 YOR152C CYC1 CPR3 SMA2 YGR026W APS2 YGR125W YOR314W CLN2  
 YMR073C AFG2 ADY3 YIR007W POM152 SAR1 PEP4 SSN3 QCR10 ERD2 RAD27 IST3 DAL2  
 YDR008C YAR068W UBC13 SAC3 SSN2 STE14 YNL311C YJL152W SR077 YAL027W PAN6  
 SAM1 YAL044W-A YBR012C YBR124W TOS8 MCM6 YOR135C TSA1 VPH1 NTC20 AC01 TH16  
 YCR082W DID2 FUN31 BUB1 SOR1 SPC105 RIM13 SFB3 KIC1 KRE5 CHO2 CHS2 TCP1  
 YJL220W YDR031W AKR1 MRPL20 YDR428C YLR118C CDC48 SLD1 YJL135W YJR120W  
 "ARG56\*\*\*" GCD7 ROD1 URA4 VTC2 YOR199W YML081W UNG1 ADE3 YIL165C ERG7 YKL066W  
 NAT3 YGR198W YDL068W YDR089W KRE26 FOB1 YDR119W YIR020C YIL137C OTCL1 NKP1  
 MSW1 PHO8 SSM4 MOH1 PRO3 YLR179C PEX11 YJL032W HFM1 SDT1 TOS7 NIF3 YJR038C  
 YLR241W SEC27 YOR068C ERG6 RPR42 TOF1 ERG2 YHR126C PMT6 SGE1 YDR020C GCV1  
 ARC15 YBL083C SPC24 MBB1 MET18 YDR391C ERS1 YJL068C PUT2 ALG9 APD1 DAL7  
 YCR025C PDB1 WBP1 ADY4 AAD15 YHL039W BUL1 AVT6 DUR3 YCL021W-A YGL157W PEX14  
 MVD1 ERG26 YLR030W MHR1 BAT2 YMR315W ASC1 PHO13 BDH1 YIL166C YIL108W YMR226C  
 AXL2 MPD1 SPO16 YPL206C YDL085C-A RNR4 CDC23 YMR155W OSH7 APG7 PHO85 YPR061C  
 YPR118W UBA3 GOT1 SEC17 RPN6 YBR004C SPO22 YGL250W TAO3 LYS7 DUO1 GLG2  
 YDR352W

## CLUSTER 5



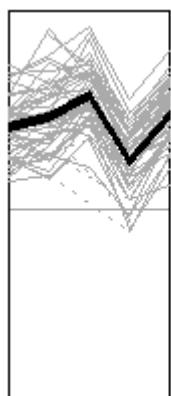
YJL072C TUB4 MET14 VPS38 GSY1 YPL257W YTH1 YNL320W POL12 YGL068W SEC66  
 YGL069C DAD4 SWD1 MET3 YMR119W-A EPT1 SEC53 LYS1 SYP1 BNA3 TOS4 YHR173C  
 GAS3 ENO2 LAC1 AAD14 SWE1 ADE13 OST1 YLR001C VGR4 DAD3 FIL1 YPL047W  
 SPO12 BET2 TSC13 YBR159W LEU2 YLR301W YNL092W YLR162W PHO80 HST3 CLB1  
 KIN3 SIM1 NTF2 YDR107C YNL300W YDL094C LYS12 SEC28 ERP2 ERG4 YPL113C PAN5  
 YMR088C CPS1 GRX3 LOS1 NEJ1 SER3 HMG1 PIN2 ADH4 MET13 IMD1 BNA4 ISA2 HIS5  
 MTD1 LPP1 GCV2 ARO8 YLR089C YBR096W SKM1 MMS22 GDH1 YHB1 YLR428C PPT2  
 MSF1 TOS2 SPC34 PAA1 YNL152W DLD3 SCP160 YPT7 ORM1 YNL010W SNF4 YGR146C  
 YKL069W RD11 YAR062W YBL009W YDR067C YDR111C ROM1 YIL158W GPI11 YEL001C  
 SSU72 EMP70 YUH1 VPS25 YGL245W YOR248W ERV29 MED11 YMR210W EMP24 CLB2  
 ATP7 HDR1 SHM2 YDR084C CIS3 SHR3 SNC1 CDC10 YDR539W YNR009W YML040W  
 CDC8 VEL1 SRL1 CHS1 RBL2 YOR387C YKL161C YPL267W STT3 YGL101W SWI5 ARL1  
 REM50 YJL097W YBL032W POL5 HTB2 QCR7 SAM2 CSE1 CKB2 HOM6 DRS2 TUB1  
 YBR262C ALK1 MTG1 OST5 NOP10 YHR133C YBL077W RPL31B YEN1 CDC42 MDM20  
 YGR242W SPT16 YGL085W MRPL9 YKL084W VTC3 TPM2 ECM40 ZRG8 MET10 BUD4  
 MGE1 YOX1 YMR003W COX6 SVS1 YHR121W YPR170C COF1 MRP21 RFA3 SNL1 HIS4  
 HTA2 RNR1 YGR269W ECM17 YOR111W ADE2 POP7 STE18 YFL051C TRS20 CDC5  
 VAC17 MET16 SKI3 SCW10 ELO1 LEU4 HYS2 SP074 HXT2 ECM33 ATP11 BEM2  
 YCL022C TOS1 SUR7 CTH1

## CLUSTER 6



YNL129W YCR043C GLE2 IMD3 YHR045W ODC2?? ERG5 YJL200C YFR055W  
 YHR149C PRM10?? PRM3 DIP5 OPT2 LIN1 YHR203C YJL193W YGR024C YJL107C  
 YJL091C SEN34 YEF3 MCM16 RGA1 YPL102C IQG1 MHT1 PRP16 TUB2 YOR385W  
 CIN2 PDR5 PIP2 SBH1 YDR489W SDC1 POL1 DBF2 FAU1 ARP10 YCG1 ESP1 DTD1  
 RPB7 PMI40 YNL109W YLR187W YOR114W CDC20 OST6 SPC25 YMR299C TVP38  
 RPS30B MCX1 PHO81 GPI17 YGR151C COX4 KRE6 PHO88 SMC1 GIT1 YLR042C LYS4  
 CDC33 YNR061C CHS3?1 YMR187C YGR153W RET3 HUR1 KAE1 HUG1 LSM2  
 YBR062C NMD4 YBR281C MSB2 FIR1 TPT1 GEA1 YOR345C ERP5 ARO7 YBL010C  
 SPC98 YBR089W URA5 GPX2 YPL159C POL30 YBL094C CIN8 YJL119C MET6 SEC22  
 IME1 VPS55 VAS1 HUA2 PGU1 ABF2 SRB6 YHR100C PLP1 GIC2 YJL120W TEL1 CBR1  
 STB4 SPH1 RFC4 YEA4 SEC59 YGR223C YPL208W YKL077W

## CLUSTER 7



ATC1 BNR1 CLN1 CTR86 CTR9 ECI1 ELG1 HAL9 MAP1 MCM21 MTR4 PCL9 PDR12  
 PET130 RIC1 RPL11A RPL11B RPL19A RPL1A RPL1B RPL21A RPL25 RPL35B RPL42A  
 RPL7A RPL9A RPL9B RPS2 RPS20 RPS22B RPS25A RPS6A RPS7B RSM28 SAP190  
 TOM1 TRS120 UBP12 VAB2 VMA21 YBR100W YBR184W YDR467C YFR041C YGL102C  
 YGL232W YGR035C YHM2 YJL113W YLR339C YML053C