

1 Table S2. Genes lacking Tcf-1 and HEB motifs that are enriched in functional pathways
 2 depicted in Figure 6C.

Pathway	Genes	\log_{10} p-value
Transcriptional regulation	Akt2, Bard1, Bmi1, Bnip3l, Casp2, Ctnnb1, Cfb, Ccna2, Ccne1, Ccnk, Cdk5, Cdk5r1, Cdk7, Csnk2a2, Ctsk, E2f5, Phc1, Eed, Elf1, Epc1, Brd2, Glc, H3f3a, Hdac2, Hist2h2aa1, Hus1, Kras, Psmb9, Smad4, Smad7, Magoh, Mapkapk5, Mdm4, Mnat1, Psmd7, Mre11a, Notch1, Npm1, Pip4k2a, Cnot7, Pou2f1, Ppp2cb, Prkab1, Prkag1, Mapk11, Psmb6, Psmc1, Psmc2, Psme1, Ptprn11, Rabggtb, Rad17, Rad50, Rbbp4, Rbl1, Rbpj, Polr2j, Srsf2, Srsf5, Skil, Smarc1, Ncor2, Snrpb, Zfp143, Taf6, Tbp, Tcea1, Skp1a, Tcf3, Prdx2, Tgfb1, Tgif1, Ppp1r13b, Nr2c2, Trp53, Ube2i, Nr1h2, Usp9x, Ywhag, Ywhaq, Rngtt, Taf10, Psma4, Psmb2, Brd7, Eloa, Prmt5, Skp2, Nelfe, Med10, Mga, Zfp385a, Chek2, H2afz, Ppp2r1a, Srrm1, Ccnc, Suz12, E2f7, Cnot11, Banp, Cnot4, Ddx39b, Cpsf4, Phc2, Cpsf3, Rybp, Phax, Psmd8, Smarce1, Psmd14, Med7, Ing5, Polr2e, Taf12, Chtop, Psmd12, Psmc6, Smarca2, Cstf1, Med4, Elob, Eloc, Smarcc2, Gtf2e2, Lamtor5, Med27, Ssu72, Cdk12, Srsf11, Hist1h4h, Med6, Ints14, Psmd1, Ints2, Rprd1b, Atad2, Med26, Ints10, Ints12, Poldip3, Rptor, Rmi1, Eaf1, Pcf11, Kmt2b, Kdm5b, Trp53rkb, Arid2, Ints7, Ehmt1, Rictor, Brpf1, Wwox, Cstf2t, Gtf2a1, Arid1a, Rnf111, Med15, Clp1, Prmt6, Ints4, Snapc2, E2f4, Rfc4, Kctd1, Srsf9, Cstf2, Prkag2, Ints5, Dek, Ehmt2, Srsf1, Pip4k2c, Sesn1, Wdr5, Casc3, Eif4a3, Taf3, Trp53bp2, Tfdp2, Rbbp5, Kmt2a, Cdc73, 4930486L24Rik, Ube2d1, Ice1, Ttc5, Srsf7, Thoc1, Rprd1a, Tgif2, Gtf2b, Cnot6l, Rpap2, Rad9b, U2af114, Cnot1, Med17, Gtf2a2, Topbp1, Kat6a, Attr, Slc38a9, Hist1h4c, Hist1h4d, Hist1h4n, Hist1h2ah, Hist2h2ac, Hist1h2be, Hist4h4, Ep300, Maml3, Hist1h2ao	-42.65
Metabolism	Prdx6, Axin2, Runx3, Cirbp, Celf1, Ddit3, Ddx5, Dyrk1a, E2f1, Srsf10, Frg1, Fxr1, Hnrnpk, Hnrnpl, Hspa8, Elavl4, Eif3e, Magoh, Mapkapk2, Npm1, Pabpc1, Papola, Cnot7, Raly, Khdrbs1, Sart1, Srsf2, Srsf3, Srsf5, Tra2b, Smn1, Eftud2, Snrpb, Snrpd1, Srpk1, Ssb, Snu13, Tbrg4, Tob1, Trp53, Usp4, Vim, Sf1, Zfp36, Zfp64, Pcbp1, Rngtt, Prmt5, Nelfe, Prpf19, Lsm4, Exosc9, Srrm1, Hnrnpu, Angel2, Trmt10c, Pnrc2, Plrg1, Hnrnpa2b1, Clasrp, Nono, Cnot4, Ddx39b, Zranb2, Cpsf4, Cpsf3, Tfip11, Alyref2, Gtpbp2, Rbm38, Acin1, Mettl3, Spen, Syncrip, Mbni1, Hnrnph1, Cwc15, Pop4, Virma, Aggf1, Rbm4b, Rbm22, Ncbp3, Rsr1, Luc7l, Rbm25, Zcrb1, Rnpc3, Prpf18, Srek1ip1, Cstf1, Luc7l3, Rbm28, Aar2, Syf2, Snrpa1, Ssu72, Cdk12, Dhx16, Scnm1, Gemin7, Tut1, Ppil3, Cactin, Ecd, Sfpq, Dhx34, Skiv2l2, Brf1, Exosc6, Smg8, Cmtr1, Hnrnpr, Pcf11, Sf3a3, Zc3h14, Dcp1a, Srrm2, Snrnp35, Rbm17, Pym1, Lsm6, Ern1, Pum1, Pum2, Sf3b1, Cstf2t, Clp1, Dhx32, Usb1, Pan2, Zc3h10, Scaf8, Sf3b4, Srsf9, Cstf2, Pnrc1, Exosc4, Srsf1, Rbm39, Casc3, Eif4a3, Flna, Gpkow, Papd7, Ddx46, Ythdf2, Tnrc6b, Cdc73, Dhx8, Scaf4, Safb2, Safb, Srsf7, Thoc1, Smg7, Trub2, Ythdf3, Hnrnpa3, Smg5, Csde1, Ptbp3, Thrap3, Ythdc1, Cnot6l, Sfswap, U2af114, Smg1, Pcid2, Cnot1, Txnl4b, Ago1, Alkbh5, Sf3b2, Dcp1b, Upf2, Trmt61a, Supv311, Fastkd5, Zhx2, Cpsf6, Anp32a, Cdk7, Ddx6, Eif4a1, Eif4a2, Emg1, Rpsa, Psmb9, Mnat1, Psmd7, Psmb6, Psmc1, Psmc2, Psme1, Ranbp2, Rpl10a, Rpl29, Rpl30, Rpl6, Polr2j, Rps12, Rps15, Rps16, Rps17, Rps3a1, Rps7, Psma4, Psmb2, Rpl3, Cherp, Pdcd7, Ppp2r1a, Krr1, Cnot11, Nxf1, Nxt1, Phax, Psmd8, C1d, Wdr12, Nup160, Psmd14, Pes1, Utpp3, Polr2e, Chtop, Tmem223, Psmd12, Psmc6, Rps10, Rpl37, Ppil4, Cwc25, Rps27l, Mphosph10, Nol11, Srsf11, Nup43, Psmd1, Nup205, Nup1, Ddx42, Seh11, Wdr43, Poldip3, Nol9, Rps9, Senp3, Xpo1, Tpr, Pwp2, Utp14b, Bms1, Diexf, Aaas, Wdr36, Nup214, Zcchc11, Nup133, Rps15a, Tex10, Rpl5, Akt2, Polr2a, Mapkbp1, Rtcb, Ahnak, Fastk, Nwd1	-36.61
Cell cycle	Akt2, Birc5, Bard1, Ccna2, Ccne1, Cdc25a, Cdc42, Cdk7, Cdkn2c, Cdkn2d, Csnk2a2, Dctn1, Dyrk1a, E2f1, E2f3, E2f5, Lpin1, H3f3a, Hist2h2aa1, Hsp90aa1, Hus1, Jak2, Lmnbp1, Psmb9, Mcm7, Mdm4, Rab8a, Mnat1, Psmd7, Mre11a, Npm1, Pafah1b1, Ppp2cb, Prim2, Prkar2b, Psmb6, Psmc1, Psmc2, Psme1, Rab1a, Kif20a, Rad17, Rad21, Rad50, Ranbp2, Rbbp4, Rbl1, Rbl2, Rfc1, Uimc1, Stag1, Skp1a, Tmpo, Trp53, Tuba1a, Tuba1b, Tubb5, Vrk1, Ywhag, Ywhaq, Mapk1, Psma4, Psmb2, Zw10, Skp2, Cep63, Zfp385a, Gtse1, Orc3, Chek2, H2afz, Ppp2r1a, Clip1, Psmd8, Rnf8, Pole3, Pias4, Nup160, Rab2a, Psmd14, Arpp19, Anapc11, Pole4, Psmd12, Psmc6, Mastl, Fbxo5, Cdt1, Nde1, Itgb3bp, Pold3, Dynll2, Gins1, Hist1h4h, Nup43, Smc4, Gorasp2, Psmd1, Abraxas1, Nup205, Ankle2, Nup1, Cenpu, Mzt2, Seh11, Lin9, Kif2c, Cep57, Rmi1, Fgfr1op, Clasp2, Clasp1, Esco1, Gins3, Ube2n, Pds5b, Ccp110, Numa1, Xpo1, E2f4, Rfc4, Rcc2, Tpr, Gins4, Tfdp2, Cdk5rap2, Ncaph, Ube2d1, Mis18bp1, Aaas, Cep76, Tubb4b, Nup214, Cdc14a, Haus6, Haus3, Lin54, Rad9b, Nup133, Topbp1, Dync1li1, Mdc1, Attr, Hist1h4c, Hist1h4d, Hist1h4j, Hist1h4n, Hist1h2ah, Hist2h2ac, Hist1h2be, Hist4h4, Lemd3, Hjurp, Nsl1, Hist1h2ao, Arhgdib, Calm1, Calm2, Calm3, Ctnnb1, Arhgap31, Dvl3, Evl, Itsn1, Klc1, Arhgef1, Myl6, Ncf1, Pfn1, Rac1, Ralbp1, Tiam1, Fmnl3, Fgd3, Arhgef7, Rhog, Net1, Arpc5, Myl12b, Arpc4, Arap1, Wasl, Arhgap15,	-27.56

	Arpc2, Kdm4c, Wasf1, Kdm1a, Plekhg2, Trip10, Baiap2, Pkn2, Flna, Arhgdia, Rhot2, Arhgap30, Arhgap1, Arhgap11a, Arhgap35, Prc1, Srgap3, Pkn1, Tagap1	
Chromatin organization	Aebp2, Anp32a, Atg5, Bmi1, Brca2, Ctnnb1, Ccna2, Chd1, Ddb1, Dr1, Phc1, Eed, Elk4, Epc1, Lpin1, Brd2, Usp15, Haspin, H1f0, H3f3a, Hdac2, Hdac5, Hist2h2aa1, Hmgm1, Jak2, Jarid2, Smad4, Mbd1, Mbd2, Mtf2, Ncoa1, Npm1, Rbbp4, Rbl1, Rbl2, Ruvbl2, Uimc1, Smarcc1, Sp100, Taf6, Skp1a, Tcf3, Vps72, Ubtf, Morf4l1, Tgfb1, Trim28, Trp53, Ube2b, Vrk1, Baz1b, Zfp64, Taf10, Parg, Brd7, Prmt5, Kdm2b, Hist1h1c, Hist1h1e, Sirt6, H2afz, Hnrnpu, Suz12, Setd3, Banp, Nap111, Nudt5, Kat6b, Paxip1, Set, Rybp, Smarce1, Rnf8, Pole3, Utp3, Ing5, Taf12, Anp32e, Zmynd11, Pole4, Smarca2, Gatad1, Paxbp1, Anp32b, Itgb3bp, Chd8, Smarcc2, Ino80, Pih1d1, Pink1, Hist1h4h, Pcgf3, Ino80b, Atad2, Abraxas1, Ubr5, Mier1, Rcbtb1, Sfpq, Ing3, Riox1, Suds3, Usp16, Atg7, Naa60, Kmt2b, Ep400, Kdm5b, Kansl1, Kdm4c, Arid2, Ehmt1, Msl2, Brpf1, Hist1h1a, Tbl1xr1, Setdb1, Selenof, Sirt1, Arid1a, Ube2n, Nucks1, Prmt6, Kdm1a, Trrap, Spty2d1, Rrp8, Taf5l, Kdm3a, Bap1, 0610010K14Rik, Ddb2, Ogt, Tpr, Arrb1, Dek, Ehmt2, Chaf1b, Wdr5, Phf21a, Tet3, Rbbp5, Kmt2a, Cdc73, Arid5a, Atxn7l3, Wdhdl1, Ino80c, Kdm2a, Kmt5b, Kansl3, Epc2, Tlk1, Zmynd8, Rsbn1, Tada2b, Tnrc18, Emsy, Nsd3, Nup133, Usp3, Setd2, L3mbtl3, Kat6a, Tox, Shprh, Jade1, Kdm3b, Hist1h4c, Hist1h4d, Hist1h4j, Hist1h4n, Hist1h2ah, Hist2h2ac, Hist1h2be, Hist1h2bj, Hist1h2bn, Hist4h4, Bcorl1, Mysm1, Pkn1, Atad2b, Npm2, Ep300, Supv3l1, Kmt2d, Hjurp, Wdr70, Ctcfl, Hist1h2ao, Apc, Axin2, Cct2, Cct5, Cct7, Cct8, Ercc1, Mapkapk5, Mre11a, Rad21, Rad50, Tacc3, Tcp1, Terf2, Tnks, Xrcc1, Zfp207, Mapk1, Cul3, Zw10, Hnrnpa2b1, Anapc11, Mad2l1bp, Khdc3, Cdt1, Tnks2, Recql4, Numa1, Stn1, Smc5, Smg5, Smg1, Pcid2, Naf1, Dynclli1, Mcph1, Atr, Atp7a, Egr1, Pias2, Por, Ube2i, Pias4, Rwdd3, Ndufab1, Eef2kmt, Senp8, Camkmt, Sirt4, Esco1, Lias, Senp3, Vcpkmt, Senp1, Setd4, Uspl1, Vps33b, Nmt2, Golga7, Naa16, Zdhhc3, Naa30, Zdhhc4, Selenok, Hhat, Naa25, Zdhhc17	-26.79

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