

**Table 1: Loci with COACD score smaller than -5**

chrom	Coordinate	score	#CpG in win (human or chimp)	#div CpGs	Nearby feature(s)	type
<b>developmental TFs (HOX etal)</b>						
1	119336976	-6.88477	458	36	TBX15	dev_tf
1	168905488	-6.04653	233	26	PRRX1	dev_tf
1	75365327	-5.78384	326	39	LHX8	dev_tf
1	162803238	-5.33431	177	26	PBX1	dev_tf
1	87571591	-5.17346	278	32	LMO4	dev_tf
2	171387611	-6.73039	360	40	Sp5 - GAD5	dev_tf
2	176657942	-6.61059	561	53	HOXD13	dev_tf
2	66517403	-6.4513	444	61	MEIS1 5'	dev_tf
2	66658031	-6.43498	340	28	MEIS1 3'	dev_tf
2	222876607	-6.18034	454	45	PAX3	dev_tf
2	176729384	-6.16437	398	44	HOXD3,HOXD4	dev_tf
2	161987141	-6.07144	352	32	TBR1	dev_tf
2	172667906	-5.81917	375	29	DLX1,DLX2	dev_tf
2	63139558	-5.78659	314	17	OTX1	dev_tf
2	45017261	-5.66729	594	70	SIX3	dev_tf
2	8742806	-5.5551	234	24	ID2	dev_tf
2	182248754	-5.49989	242	29	NEUROD1	dev_tf
2	119324960	-5.36754	472	48	EN1	dev_tf
2	236744600	-5.01638	603	58	GBX2	dev_tf
3	182906256	-8.35481	316	22	SOX2	dev_tf
3	138971006	-7.91837	430	43	SOX14	dev_tf
3	27738831	-6.95061	431	54	TBR2	dev_tf
3	159303138	-6.27636	348	40	SHOX2	dev_tf
3	148617275	-6.13715	313	27	ZIC4/ZIC1	dev_tf
3	71716293	-6.03882	261	23	FOXP1	dev_tf
4	13150067	-6.45208	438	26	BAPX1	dev_tf
4	111762039	-6.40696	508	26	PITX2 I	dev_tf
4	174682921	-5.99611	479	38	HAND2	dev_tf
4	113657178	-5.41874	406	25	NEUROG2	dev_tf
5	2803643	-7.3091	551	49	IRX2	dev_tf
5	3653709	-5.93672	721	70	IRX1	dev_tf
5	50712659	-5.81992	291	19	ISL1	dev_tf
5	172596333	-5.49233	502	47	NKX2-5	dev_tf
5	88212189	-5.36978	240	21	MEF2C	dev_tf
5	76968010	-5.19655	503	36	OTP1	dev_tf
6	101017517	-6.71015	599	43	SIM1	dev_tf
6	10489082	-5.87776	333	33	TFAP2A	dev_tf
6	50892922	-5.84412	181	9	TFAP2D	dev_tf
6	10518599	-5.20202	448	27	TFAP2A 5'	dev_tf
7	19122309	-7.8817	379	32	TWIST1	dev_tf
7	20797725	-7.24523	330	19	Sp8	dev_tf
7	15685394	-6.19151	190	34	MEOX2	dev_tf
7	96473907	-5.71374	438	27	DLX5,6	dev_tf

7	27141576	-5.57447	388	29	HOXA3,4,5,6,7	dev_tf
7	27170651	-5.39596	446	22	HOXA7,9,10,11	dev_tf
7	26203761	-5.25428	260	29	CBX3	dev_tf
8	10627507	-5.98331	368	27	SOX7	dev_tf
8	55537041	-5.65415	481	40	SOX17	dev_tf
8	11581193	-5.65121	355	40	GATA4	dev_tf
8	100029302	-5.61792	489	42	OSR2	dev_tf
9	970893	-5.93555	372	60	DMRT1/DMRT3	dev_tf
9	126567224	-5.10167	247	18	NR6A1	dev_tf
9	16856432	-5.09866	204	16	BNC2	dev_tf
10	8119356	-5.73821	397	39	GATA3	dev_tf
10	22661746	-5.73744	495	32	PCGF4	dev_tf
10	63331070	-5.60221	263	18	ARID5B	dev_tf
10	3811051	-5.03631	277	30	KLF6	dev_tf
10	119291328	-5.03343	656	46	EMX2	dev_tf
11	31803099	-5.57663	551	47	PAX6	dev_tf
11	128059192	-5.53507	405	35	FLI1	dev_tf
12	113324205	-7.40644	567	57	TBX5	dev_tf
12	84192887	-5.82405	273	26	CART1	dev_tf
12	113611675	-5.56024	487	42	TBX3 5'	dev_tf
12	112394740	-5.50134	506	34	LHX5 5'	dev_tf
12	52639987	-5.24136	542	31	HOXC cluster	dev_tf
13	99430683	-7.38988	572	24	ZIC2,ZIC5 5'	dev_tf
13	27441801	-6.03146	493	40	CDX2 5'	dev_tf
13	78067006	-5.63706	405	34	POU4F1 3'	dev_tf
14	28303240	-7.69853	364	15	FOXP1B 5'	dev_tf
14	60179673	-6.58143	453	20	SIX1 3'	dev_tf
14	56343846	-6.50448	493	31	OTX2 5'	dev_tf
14	37133640	-6.21743	488	22	FOXA1 5'	dev_tf
14	36053474	-6.1007	427	30	TITF1	dev_tf
14	60046806	-5.49087	253	15	SIX6 5'	dev_tf
14	94305377	-5.47519	397	43	GSC 5'	dev_tf
15	35181268	-7.09827	440	32	MEIS2 5'	dev_tf
15	50876017	-6.96123	623	42	ONECUT1 5'	dev_tf
15	65911359	-6.66676	669	44	LBXCOR1	dev_tf
15	34964433	-5.81324	366	26	MEIS2 3'	dev_tf
15	58082706	-5.42268	511	37	FOXB1 5'	dev_tf
16	85094795	-6.70845	803	77	FOXF1 5'	dev_tf
16	52881412	-6.34919	483	26	IRX3 5'	dev_tf
16	53522241	-5.20665	642	41	IRX5 5'	dev_tf
17	75385102	-5.91136	720	42	CBX2,CBX6	dev_tf
17	44042839	-5.53167	481	35	HOXB cluster	dev_tf
17	44017359	-5.33281	445	32	HOXB cluster	dev_tf
18	74844906	-6.38472	375	37	SALL3	dev_tf
18	53250307	-5.78064	671	44	ONECUT2 5'	dev_tf
20	21443473	-6.16427	955	60	NKX2-2 5'	dev_tf
20	21637585	-6.13538	387	36	PAX1 5'	dev_tf
20	38745424	-5.2927	294	23	MAFB	dev_tf
21	36995715	-5.70847	896	86	SIM2 5'	dev_tf
<b>Development</b>						
1	50663388	-7.72729	467	25	FAF1 3' (apoptosis), ELAVL4	dev
1	51208200	-5.58166	215	19	FAF1 5', CDKN2C	dev

1	61324572	-5.42575	224	29	NFIA	dev
1	234618844	-5.17094	98	3	EDARADD	dev
3	41220381	-5.53443	150	16	CTNNB1 5'	dev
3	106562095	-5.48372	198	17	ALCAM 5'	dev
3	55496448	-5.35596	324	25	WNT5A 5'	dev
4	109312487	-5.17707	402	16	LEF1	dev
5	98131694	-5.76908	319	29	RGMB 5'	dev
6	5950051	-6.24962	503	54	NRN1	dev
6	28892053	-6.06239	256	27	RFP	dev
7	8440970	-6.25795	434	54	NXPH1 5'	dev
7	23475395	-6.05691	360	14	IGF2BP3 5'	dev
8	6388419	-5.23495	222	49	MCPH1 5'	dev
9	23822043	-7.56706	290	26	ELAVL2 5'	dev
10	114876270	-5.23886	296	37	TCF7L2 I	dev
11	20143486	-6.41473	360	22	NAV2 3'	dev
13	34951508	-5.56228	237	20	MAB21L1	dev
20	10364772	-5.19744	152	16	MKKS 5'	dev
<b>immune system</b>						
4	54788502	-5.8792	558	46	PDGFRA 5'	immun
6	27314250	-5.32107	165	19	PRSS16 5'+3'	immun
10	15039098	-5.91678	189	20	DCLRE1C	immun
<b>mir</b>						
5	88012699	-8.15804	535	29	mir-9-2	mir
8	65455366	-6.39692	459	40	mir-124a-2	mir
8	9802911	-5.0862	238	31	mir-124a-1	mir
11	43561147	-5.44124	406	35	mir-129-2	mir
<b>TF (not directly developmental)</b>						
5	180576377	-5.30892	255	27	TRIM41/TRIM7 5'	tf
10	131565284	-5.24988	377	40	EBF3 I-5'	tf
13	72522890	-6.12934	131	8	KLF5 5'	tf
14	57829239	-5.60871	196	19	ARID4A 5'	tf
19	12989465	-6.79308	537	22	NFIX 5'+I	Tf
<b>cancer</b>						
2	111600887	-5.71556	421	35	BCL2L11 5'	Canc
2	60645270	-5.23771	219	29	BCL11A 5'	Canc
3	188945650	-6.68775	313	37	BCL6 5'	Canc
10	21852373	-6.51432	320	16	MLLT10 5'	Canc
22	26519184	-5.0313	364	33	MN1 5'	Canc
<b>others</b>						
6	75970064	-5.96105	336	39	COL12A1 5'	O
6	26341307	-5.26864	184	27	Histone cluster	O
11	95171729	-5.04718	204	20	CEP57 5'	O
12	55363075	-5.11613	159	10	PTGES3 5'	O
13	99964303	-5.17624	322	57	PCCA 3'	O
19	752362	-5.57254	576	49	PTBP1 5'+I	O
<b>uncharacterized region or ORF/protein - some may be coding sequences missed by current annotation</b>						
1	159694731	-7.12734	880	75	Large CGI	U
1	215383135	-5.18593	265	27	Maybe ESRRG (far), CGI	U
2	104841937	-7.07759	495	42	CGI	U
2	174906646	-6.49717	385	27	FLJ46347 (CGI)	U
2	179145552	-6.03803	247	20	Conserved	U

3	62332228	-5.75609	413	43	ZNF312	U
4	186183163	-6.64943	401	33	CGI	U
4	41572350	-6.30095	532	23	CGIs	U
4	81331913	-5.61527	431	28	PRDM8 (TF-like)	U
4	30326786	-5.206	209	18	PCDH7	U
4	7046999	-5.05616	257	26	TBC1D14	U
5	43077038	-6.40143	222	15		U
5	42985894	-5.24548	179	20	AK128204	U
5	50294784	-5.10193	295	38		U
5	3242847	-5.04118	339	72	conserved (small CGI)	U
6	26429366	-6.74388	180	21	conserved	U
6	85529731	-6.28428	432	33	conserved CGI	U
6	27753761	-6.02609	197	17	AF338194	U
6	27624603	-6.0084	169	14	ZNF184	U
6	28813948	-5.9828	192	28		U
6	27372058	-5.61695	108	12	POM121L2	U
6	41447153	-5.19831	354	18	CGIs	U
6	29026138	-5.16386	183	28	ZNF311/RFP	U
7	35257686	-6.76834	401	25	CGI	U
7	25869114	-6.71694	376	55	CGIs	U
7	1239809	-5.46049	541	43	conserved CGI	U
7	4719641	-5.19989	294	44	KIAA0415	U
8	86746803	-6.18657	230	24	REXO1L1 CGI	U
8	65653959	-6.1276	297	29	BHLHB5	U
8	7626956	-5.97521	476	92	CGI	U
8	25956147	-5.81139	688	41	CGI or AK130123)	U
8	77752823	-5.67878	297	15	AK131408	U
8	4837627	-5.5021	407	62	CGI	U
8	238898	-5.0736	268	54	CGI	U
9	78819662	-6.02215	509	32	LOC442425	U
10	130220474	-5.26163	289	47		U
10	130713891	-5.18872	299	60	desert	U
10	451381	-5.05377	310	54	DIP2C	U
11	59075164	-5.89087	201	15	OSBP	U
11	16585830	-5.11717	502	29	conserved CGI	U
12	25427063	-5.1337	199	17	CGI	U
13	49595864	-5.12471	584	31	conserved CGI	U
14	20161547	-7.47726	275	31		U
14	85072478	-6.94814	355	28	FLRT2	U
14	96827162	-5.26596	168	24	conserved uncharach	U
15	94704664	-7.15825	725	70	NR2F2	U
15	94677772	-6.33399	364	21	NR2F2 3'	U
16	3170344	-6.48124	398	39	ZNF cluster + OR	U
16	3147966	-6.19422	314	30	in ZNF cluster	U
16	84198383	-5.63491	514	49	KIAA0182	U
16	6479873	-5.32476	212	30	A2BP1 uncharach CGI)	U
16	84783569	-5.29913	332	69		U
16	85656397	-5.18912	337	53		U
17	76984262	-5.38682	749	61		U
18	72329222	-5.83289	296	31	conserved	U
19	35410845	-5.50012	348	29	conserved	U
19	60972506	-5.13381	85	12	NALP11	U

20	21035669	-5.20467	410	29	C20orf19 5' (uncharach)	U
20	9435555	-5.06799	276	34	C20orf103 5' uncharac	U
22	44837696	-5.3486	423	44	Uncharach	U