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Undifferentiated Embryonic Cell Transcription Factor 1 Regulates ESC Chromatin Organization and Gene Expression

Kooistra, Susanne M.; van den Boom, Vincent; Thummer, Rajkumar P.; Johannes, Frank; Wardenaar, Rene; Tesson, Bruno M.; Veenhoff, Liesbeth M.; Fusetti, Fabrizia; O'Neill, Laura P.; Turner, Bryan M.

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chromosome	gene name	NCBI gene ID	Log2 expression levels						RankProd_PFP
			wt ES cells		UTF1 KD ES cells #1		UTF1 KD ES cells #2		
			A	B	A	B	A	B	
16	1110046J11Rik	NA	9.201006004	9.571885717	8.7184027	8.510116767	8.467155641	8.720835865	0.010282051
5	1500011B03Rik	66236	8.404257853	8.61189123	8.026826445	7.853809546	7.876586886	7.960707544	0.04172
9	2410004A20Rik	66991	10.00247982	9.891635595	9.11744016	9.148396526	9.22681598	9.207845487	0.010055556
11	2410006H16Rik	69221	10.95657987	11.08210807	10.31187348	10.35251481	10.38888587	10.52587827	0.027288889
1	2410088K16Rik	78650	8.226626867	8.313890459	7.319916142	7.372595295	7.296106757	7.197343191	0.0024
4	2610036A22Rik	70190	8.8449613	9.060961254	8.124109331	8.357044084	8.497644144	8.363166116	0.034168317
12	2700031B12Rik	NA	9.612916261	9.820046964	9.079224734	9.138928339	9.006271869	9.062751816	0.024620253
13	3110004L20Rik	73102	8.786024664	8.925652855	8.265136562	8.220734991	8.292111106	8.270388267	0.036261682
8	4933407C03Rik	NA	9.443320285	9.149844767	8.603505149	8.741061828	8.671053987	8.664346532	0.027582418
11	5430406J06Rik	73848	9.710697382	9.682887686	9.329736177	9.271985277	8.6551663	8.845218303	0.025674419
12	5730410I19Rik	66622	9.380641815	9.268511912	8.650900895	8.726916496	8.790120608	8.747727676	0.035495238
8	5830471E12Rik	77208	9.110311708	9.145381951	8.591267629	8.515201935	8.494357483	8.589909455	0.038758929
11	6720460F02Rik	109212	10.12677449	9.941684314	9.439974904	9.628741166	9.417759183	9.259901702	0.035076923
8	9530006C21Rik	77393	9.21894671	9.220793372	8.700348626	8.664858356	8.532242719	8.43834896	0.024567901
8	A130010C12Rik	320211	9.769816223	9.503955492	9.161801819	9.119352174	8.875199605	8.89061993	0.030086022
19	A230083H22Rik	353211	8.935852854	9.291452942	8.423804357	8.308397449	8.498291989	8.44880942	0.018348485
6	Aass	30956	7.981524426	8.050537605	7.023744006	6.956604843	7.144915274	7.031201769	0.002555556
17	Abcg1	11307	9.426737154	9.525182748	8.607665257	8.728301379	8.757652006	8.782161523	0.010325581
19	Acsf5	433256	9.317360338	9.560647868	8.859217469	8.848035447	8.619117601	8.680833923	0.0161875
19	Acta2	11475	11.3613489	11.35760327	10.16265223	10.24295628	10.03043686	9.932436435	0.000272727
11	Adam19	11492	9.477370195	9.572114758	8.85481819	9.022991801	8.956158378	8.917579684	0.03890991
7	AK083340.1	NA	8.386007513	8.566882487	8.00390961	7.844428763	7.698709625	7.71821094	0.023057143
4	Akp2	11647	9.0259034	8.785475468	7.998114821	8.102671859	8.324090545	8.291947816	0.013655738
5	Alox5ap	11690	8.452598526	8.313045524	7.809029985	7.786263229	7.802984469	7.590704364	0.025626506
7	AU020206	101757	9.109135346	9.304909267	8.630404519	8.432097087	8.379324939	8.403417006	0.010727273
4	Aurkc	20871	10.07527324	9.79698727	8.479821892	8.336422936	8.607665257	8.58484568	0.000333333
15	BC004728	207818	10.34506911	10.36021393	9.583477536	9.59873555	9.678398017	9.513862444	0.01027027
8	Bst2	69550	12.13434858	12.17866406	11.72452625	11.65626279	11.511112751	11.50040492	0.045413043
4	C430020H24Rik	NA	9.2350238	9.193959813	8.604405464	8.414401399	8.386007513	8.500607861	0.010723404
8	Ccdc102a	234582	9.649958885	9.632311023	8.981074565	8.689298231	8.819844298	8.862084912	0.008
7	Cdkn1c	12577	10.46513209	10.52011461	8.033498988	7.989519369	8.181051374	8.1207576	0
16	Cldn5	12741	8.222839315	8.30614534	7.796569179	7.651494282	7.653682125	7.652617677	0.040697479
11	Col1a1	12842	7.493946926	7.392677962	6.751449697	6.804325123	6.802241951	6.919851657	0.027314607

7	Cox7a1	12865	9.895318708	9.74235431	9.307925514	9.30093817	9.24490272	9.148396526	0.041755906
5	Crmp1	12933	8.749502457	8.480175239	7.818691275	7.878092613	7.917536641	7.749478281	0.010609756
6	Cxcl12	20315	8.07615372	8.297124016	7.013831144	7.143125167	7.175666391	7.349153366	0.002235294
5	Cyp51	13121	10.16166544	10.28935213	9.642797221	9.585502228	9.251701313	9.476701972	0.011431373
18	D0H4S114	27528	8.838474761	8.977076007	8.258490114	8.380203227	8.295948141	8.450008873	0.047589928
16	D16Bwg1494e	224019	8.321288629	8.556300739	7.891107566	7.810661006	7.726917176	7.710963454	0.023328767
6	D330026F23Rik	NA	8.471404571	8.500407395	7.869662671	7.848703467	7.630853886	7.598529982	0.010571429
4	D4Wsu114e	28010	8.570297566	8.281360139	7.762288172	8.013428248	7.869901182	7.750020402	0.04240625
7	Dhcr7	13360	8.459278727	8.338974641	7.888168088	7.988106901	7.766536056	7.701354799	0.044089552
12	Dlk1	13386	7.992985714	8.013428248	7.378935041	7.319373986	7.484169258	7.497167701	0.038780702
2	E130013N09Rik	NA	9.359444202	9.707407279	9.068916148	9.044910801	8.684872753	8.643031412	0.025712644
10	Eef2	13629	11.12416527	11.14635692	10.47482461	10.62888457	10.45588559	10.50309272	0.027826087
Y	Eif2s3y	26908	7.763441094	7.838391174	6.426097816	6.499335314	6.419807906	6.543635696	0.00025
13	Elmo1	140580	8.661101492	8.876485133	8.190674583	8.15599416	8.383149541	8.044956606	0.043844444
10	Enpp3	209558	7.745340263	7.853722569	7.301513432	7.197033976	7.153381309	7.267851565	0.041650407
4	Epha8	13842	7.971453968	7.870498042	7.233572832	7.449624156	7.380742648	7.359983102	0.043590909
N/A	Erdr1	170942	9.752050277	10.02390286	7.095543905	6.928786728	7.490493546	7.445677807	0
16	Etv5	104156	10.68589219	10.68851935	9.769522501	9.843848256	9.734025386	9.819346307	0.0036
15	Fbln1	14114	9.054221934	9.065208975	8.388609586	8.285886008	8.211015519	8.27829039	0.009457143
2	Fbxw5	30839	8.484055353	9.011306192	8.944974788	6.760018358	6.834518384	6.828385951	0.006642857
7	Fgfr2	14183	9.00909398	9.251701313	8.312148784	8.258974733	8.040883916	8.285297679	0.003541667
6	Foxp1	108655	8.832326418	8.481665654	7.960353294	8.030970029	8.173349633	8.019059693	0.034902913
1	Gbx2	14472	11.42284385	11.55929264	10.49612554	10.50491127	10.79903387	10.83425161	0.007870968
8	Gins2	272551	10.16678177	10.13335012	9.522261796	9.601888028	9.448102274	9.620415444	0.032173469
8	Glg1	20340	10.33958206	10.53654663	9.863765693	9.853632297	9.80432925	9.941684314	0.043161538
9	Gnai2	14678	10.78711122	10.6418616	10.05782848	10.07410823	10.07854008	10.12883891	0.025821429
8	Got1l1	76615	9.72401682	9.793309366	9.109135346	9.462747452	8.999507074	8.954370415	0.030652632
11	Grb10	14783	10.06430889	10.05067004	8.243475268	8.288951986	8.367672765	8.506932226	0
12	Gtl2	17263	9.823668403	9.981014164	9.232599909	9.341248416	8.997833504	9.169963011	0.013534483
7	H19	14955	9.046696992	9.149521075	8.046514718	8.068557931	7.761940356	7.956580647	0.00125
9	H2afx	15270	10.11930074	10.23411683	9.55511651	9.74597707	9.533308264	9.501754893	0.036
13	H2afy	26914	10.29572609	10.84805144	9.939815615	9.578767338	9.803200448	9.901735893	0.013457627
1	Hes6	55927	11.00871133	11.22712716	10.29396206	10.31659597	10.57604538	10.61618394	0.023428571
7	Igf2	16002	11.14396846	10.972132	10.30177435	10.33119491	10.37794506	10.30301346	0.011365385
11	Igfbp4	16010	8.483272326	8.78729184	7.869261583	7.897684135	7.923172034	7.851293858	0.010934783
1	Igfbp5	16011	7.248428736	7.453843263	6.720786641	6.706107213	6.672873002	6.678191911	0.022811594

11	Irf1	16362	9.901735893	10.08465352	9.454306879	9.539096362	9.387549799	9.245601026	0.04
6	Isg15	53606	7.60609113	7.731905027	6.830142733	6.941019596	6.933407504	7.018890799	0.01112
1	Lbr	98386	8.381223565	8.415249001	7.92107029	7.710758964	7.838391174	7.863958228	0.042705426
6	Ldhb	16832	11.55506355	11.77657452	10.97910358	11.19255035	10.972132	10.85695956	0.022746479
9	Ldlr	16835	11.47190807	11.63471848	11.1382173	10.93504367	10.77874964	10.99365213	0.039128205
1	Lefty1	13590	10.08735489	10.00193736	8.641498936	8.484692738	8.820988534	8.691548807	0.000285714
19	LOC226017	NA	10.10234775	10.31997967	9.521721569	9.599235825	9.347685292	9.488914651	0.012071429
12	LOC236371	NA	7.836741635	8.172277985	7.416476525	7.472532501	7.342187409	7.403209686	0.039068966
16	LOC328703	NA	11.15504947	11.15333115	10.67365117	10.5435027	10.47596398	10.5061077	0.031876289
12	LOC380749	380749	10.01333623	9.999197155	9.627245778	9.394959156	9.214357016	9.468251267	0.041636364
13	LOC380875	NA	8.428113068	8.556843399	7.675518263	7.522404915	7.434913586	7.694026322	0.003695652
X	LOC382215	NA	9.920884824	9.884783298	9.353750435	9.078655488	9.114485355	9.23639981	0.0137
3	LOC383940	383940	8.818105426	8.926269477	8.157793628	7.952556461	8.103929964	8.149268046	0.009588235
4	LOC384082	NA	9.327923481	8.945371106	8.32485821	8.017974301	8.287629759	7.824816911	0.002666667
X	LOC385046	NA	7.944499639	7.77624109	7.108752306	6.945261089	7.033994158	7.024272939	0.006827586
16	LOC386124	NA	11.17158533	10.95894343	10.37676328	10.03422718	10.26111784	10.122955	0.006703704
18	Mbd2	17191	8.417979293	8.54472665	7.930034934	7.916431524	7.86352518	7.868296365	0.038495575
7	Megf8	269878	9.284066788	9.496393303	8.714390122	8.896712836	8.678796086	8.797930438	0.030541667
X	Mid1	17318	8.338580924	8.068954313	7.217326033	7.165880945	7.20942491	7.367707617	0.003227273
11	Mmd	67468	9.409495168	9.300249754	8.573250842	8.705262331	8.599942822	8.638145019	0.011377358
8	Mmp2	17390	9.535216805	9.602199421	8.856690768	8.953613798	8.806454236	8.745390971	0.011061224
11	Msi2	76626	8.61925162	8.571259117	8.186986314	8.050603658	8.021317146	7.856483861	0.043076336
19	Npm3	18150	11.51340838	11.09806411	10.37035021	10.3043882	10.84220132	10.35822342	0.010394737
14	Nt5dc2	70021	12.24825836	12.25447172	11.63471848	11.23573002	11.35385238	11.47702166	0.0072
11	Nxn	18230	11.70887195	11.62465315	11.08345504	11.04887088	11.05455343	11.04785304	0.030308511
9	Olfr887	258415	8.75954852	8.367274601	7.387451731	7.525198024	7.59422124	7.609406673	0.002526316
3	Pdzk1	59020	8.54678194	8.556514665	7.613434202	7.559786849	7.463158704	7.357073927	0.001866667
7	Phlda2	22113	10.66575996	10.56725563	9.443320285	9.49025689	9.636240625	9.396261951	0.001285714
9	Plcd1	18799	9.12873863	8.886373702	8.048491824	8.004833947	7.891317676	7.965704278	0.0023125
8	Plcg2	234779	9.942695641	9.78865107	9.293354977	9.417759183	9.408171273	9.127908948	0.049156028
11	Pmp22	18858	8.378374931	8.300985811	7.436068371	7.495793657	7.636338551	7.695518896	0.01005
4	Pou3f1	18991	10.05507288	9.99019586	9.485464176	9.384309476	9.556176405	9.426737154	0.044043796
10	Ppap2c	50784	9.737692001	10.05245141	9.44406635	9.304909267	9.133295224	9.323032305	0.041459016
9	Prtg	235472	7.807834225	7.649025373	6.962503995	7.130175313	7.239846411	7.300658394	0.043293233
17	Psmb8	16913	9.101609826	9.168152913	8.117993807	7.917033549	7.901915331	8.024991574	0.001230769
11	Ramp2	54409	8.670007542	8.71023624	8.028982165	8.025303828	8.149268046	8.02161874	0.025670588

4	Rbm35a	207920	9.027101674	9.093884269	8.594490754	8.539591467	8.462889531	8.437472845	0.049178571
8	Rbpms	19663	11.39706224	11.45972747	10.97042381	10.77323825	10.57777718	10.78293733	0.022986667
17	Rpl36	54217	11.52438438	11.28609186	10.86224888	10.89188743	10.78379318	10.77094822	0.039269565
8	Sc4mol	66234	10.7190763	10.55523446	10.13245401	10.34886419	9.765519969	9.802082451	0.034372549
11	Serpinf1	20317	8.094389202	7.892661651	7.338517687	7.345814503	7.360497485	7.272786307	0.019268657
7	Serpinh1	12406	10.41889701	10.61246245	9.58002165	9.729847508	9.920884824	9.83329074	0.011291667
4	Ski	20481	8.723668639	8.936830124	8.187956369	8.087725977	8.057447088	8.208829891	0.015111111
15	Slc1a3	20512	8.409508367	8.622090301	7.651912709	7.89520648	7.85203954	7.64073567	0.010511111
14	Slc25a30	67554	8.372681523	8.384800199	7.84914622	7.836741635	7.686936322	7.796757884	0.03625
2	Slc27a2	26458	9.050757326	9.059710531	8.258974733	8.34148802	8.402105051	8.585509	0.022944444
2	Slc43a1	72401	7.896672181	7.980461491	7.316006543	7.305169203	7.369122253	7.503179278	0.043735294
9	Smad3	17127	9.189710017	9.195195848	8.644196368	8.668528192	8.630404519	8.554125235	0.041579365
16	Snn	20621	9.469677084	9.697786634	9.12873863	9.026563972	8.904519708	8.926530666	0.040633333
2	Snora65	104367	9.93369751	10.06313325	9.695190056	9.407719824	9.260059192	9.20040811	0.0392
8	Spg7	234847	10.09934375	10.28747866	9.637465908	9.401118328	9.394959156	9.592514077	0.016107692
5	Spp1	20750	9.487474048	9.347685292	8.84284807	8.964414159	8.734670706	8.719500452	0.03245
18	Stard4	170459	10.79812286	10.88348791	10.39754482	10.02000395	10.00568783	10.25589253	0.021808824
17	Tceb2	67673	10.71524233	10.82250193	9.901323402	10.05225355	10.22151949	10.24701032	0.023148649
7	Tead2	21677	11.51112751	11.35934454	10.81716074	10.68589219	10.9929698	10.79812286	0.032121212
9	Tmem158	72309	8.962606701	9.310078837	8.612548104	8.48937124	8.376657738	8.446464849	0.02435
17	Tmem181	77106	9.397945905	9.387549799	8.594657084	8.667239174	8.736868571	8.683826963	0.012236364
19	Tmem2	83921	11.39826921	11.41472977	10.56164352	10.45856607	10.51161914	10.52714042	0.003615385
10	Unc5b	107449	9.922263522	9.989343393	9.23639981	9.186180786	9.014843379	9.20397755	0.00821875
11	Upp1	22271	12.76126951	12.70220809	12.16065668	12.24415499	11.98299362	12.02249449	0.025943182
7	Utf1	22286	10.77874964	10.73189172	8.473263401	8.445985413	8.434517792	8.300985811	0
2	Wt1	22431	7.922245434	7.84980863	7.054169641	7.265164315	7.344876565	7.247624242	0.022723684