Table S1: Transcripts > 2-fold up- (red) or down-regulated (green) in ES cells lacking Dppa4, as assessed by Affymetrix micro-array analysis

ID	Symbol	Name	P.Value	adj.P.Val	logFC	CI #84.2 (WT/flox) Prep.1		CI #84.2 (WT/flox) Prep.2		CI #84.2 (WT/flox) Prep.3		CI #243.12 (KO/KO) Prep.1		CI #243.12 (KO/KO) Prep.2		CI #243.12 (KO/KO) Prep.3		Chr	Entrez	Ensembl
1443961_at	AU017962	expressed sequence AU017962	2,07E-08	0,0002275	-6,5240563	1601,69474	P	1494,19136	P	2780,44136	P	17,9204359	A	19,8153575	A	24,0402682	A	NA	103341	---
1457033_at	BQ559217	expresssed sequence BQ559217	3,61E-08	0,00024859	-5,8627653	498,524689	P	449,574562	P	878,362896	P	9,94893695	A	10,1558851	A	9,88697138	A	7 A1	434555	ENSMUSG00000054272 /// ENSMUSG00000070828
1425220_x_a	AF067061	cDNA sequence AF067061	7,62E-08	0,00027941	-4,5668197	494,183895	P	454,654659	P	726,863284	P	19,2846915	A	22,9395995	A	27,7316243	A	NA	236546	---
1425427_at	LOC639910	hypothetical protein LOC639910	2,02E-07	0,00040387	-4,2825756	126,325431	P	143,50175	P	234,472974	P	8,65001257	A	8,76174523	A	7,6082062	A	NA	639910	---
1428685_at	Syce1	synaptonemal complex central elemen	1,44E-09	3,17E-05	-3,6343171	132,191355	P	127,858022	P	126,689263	P	9,38576475	A	10,2146405	A	11,664408	A	7 F5	74075	ENSMUSG00000025480
1436837_at	Mael	maelstrom homolog (Drosophila)	6,02E-08	0,00026482	-3,4396452	94,4953343	P	114,749025	P	124,196895	P	8,88556153	A	12,2058975	M	9,72089715	A	1 H2.3	98558	ENSMUSG00000040629
1420773_at	Dub1	deubiquitinating enzyme 1	1,95E-07	0,00040387	-3,0873733	58,4114204	P	61,5706955	P	85,62208	P	8,89632825	A	7,76078545	A	7,26382156	A	7 E37 51.5 cM	13531	---
1444529_at	EG266459	predicted gene, EG266459	1,83E-06	0,00168062	-2,8067178	43,9699669	P	35,9643752	P	62,3581414	P	6,09166427	A	7,5009758	A	6,30012741	A	12 D3	266459	---
1427479_at	Eif1a	eukaryotic translation initiation factor 1	3,35E-06	0,00272923	-2,7751572	295,221892	P	223,326298	P	390,251522	P	48,2283755	A	46,8433016	A	35,5030948	P	18 C	13664	ENSMUSG00000071217
1437786_at	Ard1b	ARD1 homolog B (S. cerevisiae)	2,30E-07	0,00042135	-2,5761494	40,8824065	P	50,3756472	P	51,8294736	P	6,86127605	A	9,09642936	A	8,06423844	A	5 E3	97243	ENSMUSG00000046000
1448949_at	Car4	carbonic anhydrase 4	0,00010255	0,02374187	-2,5242934	65,6787977	P	80,1280128	P	34,1758246	P	7,71374086	A	9,74019449	A	12,5727944	A	11 C	12351	ENSMUSG00000000805
1429817_at	Sohlh2	spermatogenesis and oogenesis spec	8,12E-06	0,0052509	-2,3874899	143,433918	P	134,535214	P	123,602521	P	36,3355049	A	20,2551628	A	22,6219495	A	3 C	74434	ENSMUSG00000027794
1448022_at	NA	NA	0,00020787	0,03461526	-2,2039173	53,7237489	P	31,9227076	P	23,2085399	P	9,63982912	P	5,76346525	A	7,32529649	P	NA	NA	---
1451129_at	Calb2	calbindin 2	3,04E-05	0,01101715	-2,1442892	191,770774	P	203,613699	P	138,508251	P	34,4827236	A	32,9592131	A	55,0808433	A	8 E1	12308	ENSMUSG00000003657
1419542_at	Dazl	deleted in azoospermia-like	3,19E-07	0,00054046	-2,1308532	39,8619966	P	48,6850603	P	39,8619966	P	10,7883249	A	8,66266507	A	9,85271954	A	17 B117 25.6	13164	---
1416242_at	Klhl13	kelch-like 13 (Drosophila)	4,52E-08	0,00024859	-2,1306878	256,859194	P	288,524689	P	263,575622	P	67,6913797	P	59,1959256	P	58,0437282	P	X A2	67455	ENSMUSG00000036782
1448269_a_a	Klhl13	kelch-like 13 (Drosophila)	9,64E-06	0,00536097	-2,0638328	835,865201	P	768,704516	P	744,632359	P	248,678118	P	144,184609	P	182,580488	P	X A2	67455	ENSMUSG00000036782
1419759_at	Abcb1a	ATP-binding cassette, sub-family B (M	1,60E-07	0,00040387	-2,0215001	195,467032	P	203,638915	P	201,092796	P	53,7702598	P	52,2049204	P	42,6069779	P	5 A15 1.0 cM	18671	---
1420366_at	Spesp1	sperm equatorial segment protein 1	1,34E-05	0,0071915	-1,924433	41,8875503	P	61,9911456	P	69,7764099	P	14,5690392	A	15,925929	A	14,2774749	A	9 B	66712	ENSMUSG00000046846
1449276_at	1700029P11R	RIKEN cDNA 1700029P11 gene	1,07E-06	0,00123736	-1,8492218	50,9761841	P	51,0171962	P	41,7724241	P	14,1898211	A	14,2068294	A	11,520883	A	15 E1	66346	ENSMUSG00000061633
1419758_at	Abcb1a	ATP-binding cassette, sub-family B (M	2,16E-06	0,00189951	-1,7928418	75,7333126	P	93,0246887	P	108,270837	P	26,0273591	P	25,6556728	P	27,4590589	P	5 A15 1.0 cM	18671	ENSMUSG00000040584
1455735_at	Ap1s3	adaptor-related protein complex AP-1,	1,51E-06	0,00151931	-1,718138	46,2622852	P	52,5267196	P	55,8625028	P	18,1412912	P	14,3425753	A	14,6487035	P	1 C4	252903	---
1441269_at	Hydin	hydrocephalus inducing	1,52E-06	0,00151931	-1,700139	43,0194967	P	41,0299764	P	35,8595692	P	10,5910551	A	12,9302746	P	13,4724366	A	8 E1	244653	---
1427242_at	Ddx4	DEAD (Asp-Glu-Ala-Asp) box polypep	8,23E-05	0,02068655	-1,6553565	32,1926908	P	28,3236062	P	28,9816756	P	13,4283432	P	7,6261546	P	8,2559182	P	13 D2.213 67	13206	ENSMUSG00000021758
1424847_at	Nefh	neurofilament, heavy polypeptide	6,70E-07	0,00098166	-1,6389733	215,343409	P	171,343603	P	206,426964	P	61,1438557	P	65,9503839	P	62,5252471	M	11 A1-A5	380684	---
1429597_at	Dppa4	developmental pluripotency associated	1,42E-07	0,00040387	-1,6314437	1261,04476	P	1302,53765	P	1396,94275	P	410,459952	P	459,321834	P	409,233355	P	16 B5	73693	ENSMUSG00000058550
1423429_at	Rhox5	reproductive homeobox 5	9,75E-06	0,00536097	-1,6178389	378,719777	P	309,276599	P	270,866806	P	107,738743	P	114,05047	P	89,3095223	P	X A2X 12.7 cM	18617	---
1445849_at	BC061212	cDNA sequence BC061212	5,44E-05	0,01692992	-1,5937423	18,8229398	P	20,1032988	P	30,5484961	P	6,80853514	A	8,29170496	A	7,44653794	A	5 E3	381724	ENSMUSG00000072822 /// ENSMUSG00000072815
1428171_at	Prpf39	PRP39 pre-mRNA processing factor 3	8,89E-06	0,00536097	-1,5794943	109,847977	P	81,8423839	P	100,024956	P	37,1104142	P	32,065593	P	28,308585	P	12 C1	328110	ENSMUSG00000035597
1442334_at	OTTMUSG00	predicted gene, OTTMUSG000000102	0,00034294	0,0448947	-1,5738232	19,5055739	P	26,8712605	P	37,4623432	P	7,79974861	A	11,2652106	A	8,47067141	A	4 E1	545693	ENSMUSG00000073726
1418788_at	Tek	endothelial-specific receptor tyrosine k	2,26E-05	0,010159	-1,5563435	72,4120834	P	60,3582644	P	57,3585386	P	26,4378712	P	21,0104073	P	17,7405339	A	4 C54 43.6 cM	21687	ENSMUSG00000006386
1418215_at	Mep1b	meprin 1 beta	2,79E-05	0,01078394	-1,5172887	86,9900105	P	69,8459935	P	54,7005921	P	23,1361355	A	25,343119	A	24,1659479	A	18 A218 8.0 c	17288	ENSMUSG00000024313
1441836_x_a	1700006H03R	RIKEN cDNA 1700006H03 gene	0,00015305	0,02979356	-1,4986901	27,6507131	P	38,6085525	P	50,9866092	P	14,3249601	P	12,6047908	A	13,358722	A	15 F3	74174	---
1458895_at	Ard1b	ARD1 homolog B (S. cerevisiae)	6,37E-05	0,01844294	-1,4745569	44,6879559	P	30,9560092	P	31,065634	P	13,4191392	A	10,5177998	A	14,1875877	A	5 E3	97243	ENSMUSG00000046000
1427284_a_a	Ttpa	tocopherol (alpha) transfer protein	1,79E-07	0,00040387	-1,4332669	160,191355	P	159,795234	P	171,85359	P	64,1297166	P	59,9975664	P	58,0496453	P	4 A34 22.7 cM	50500	ENSMUSG00000073988
1450292_a_a	Hormad1	HORMA domain containing 1	0,00090743	0,07453194	-1,4245648	32,5592446	P	44,9531187	P	49,1354425	P	15,317884	P	21,9326804	P	11,0669592	P	3 F2	67981	ENSMUSG00000044358 /// ENSMUSG00000028109
1434529_x_a	Chfr	checkpoint with forkhead and ring fing	1,78E-05	0,00891914	-1,4178682	46,6091827	P	47,1041559	P	52,194547	P	22,1334366	P	15,0996106	P	17,9754032	P	5 F	231600	ENSMUSG00000014668
1454138_a_a	Stk31	serine threonine kinase 31	1,94E-05	0,00949704	-1,4172284	23,5466462	P	21,3060837	P	16,6496923	P	8,5255968	P	7,19184244	A	7,15136848	M	6 B2.3	77485	ENSMUSG00000023403
1420357_s_a	Xlr3a	X-linked lymphocyte-regulated 3A	7,99E-06	0,0052509	-1,4151026	61,7259087	P	65,4901783	P	48,1819345	P	22,8352742	A	20,3890073	P	22,0577176	P	X A7.3X 29.1	22445	ENSMUSG00000057836 /// ENSMUSG00000073125 ///
1449502_at	Dazl	deleted in azoospermia-like	2,42E-06	0,0020456	-1,4054741	31,1301735	P	28,3236062	P	36,4474139	P	11,4528965	A	12,4360824	A	12,1374744	A	17 B117 25.6	13164	ENSMUSG00000010592
1418094_s_a	Car4	carbonic anhydrase 4	0,00100745	0,07884965	-1,4030334	38,5163787	P	47,6891138	P	21,9228255	P	13,5399067	P	12,0951066	A	13,294451	A	11 C	12351	ENSMUSG00000000805
1433550_at	Chfr	checkpoint with forkhead and ring fing	9,28E-06	0,00536097	-1,3860236	169,408032	P	149,381052	P	193,709222	P	69,2311238	P	56,9490028	P	69,6447253	P	5 F	231600	ENSMUSG00000014668
1444496_at	Rbm25	RNA binding motif protein 25	0,0003796	0,04706316	-1,3805105	27,253087	P	25,7867036	P	47,1726231	P	12,1094179	A	12,7985053	A	12,1197545	A	12 D1	67039	---
1428016_a_a	Rasip1	Ras interacting protein 1	6,59E-06	0,00467496	-1,3698277	29,602277	P	35,6012227	P	37,0151897	P	13,823949	A	14,0690345	A	11,6197258	A	7 B2	69903	ENSMUSG00000044562
1443844_at	1700123J19R	RIKEN cDNA 1700123J19 gene	1,69E-05	0,00866495	-1,36353	43,1444106	P	41,3738768	P	35,025373	M	17,1984913	A	16,5170565	A	12,9187431	A	X A3.3	73614	ENSMUSG00000050197
1453133_at	Slc25a31	solute carrier family 25 (mitochondrial	5,48E-06	0,00415743	-1,3453588	13,6913247	P	16,6297158	P	17,5265747	P	6,77146309	A	6,13906999	A	5,8514329	A	3 B	73333	ENSMUSG00000069041
1417482_at	Tex19	testis expressed gene 19	0,00033853	0,0448518	-1,3057472	365,521582	P	397,202404	P	511,505618	P	141,706276	P	227,58516	P	152,417561	P	11 E2	73679	ENSMUSG00000039329
1434528_at	Aard	alanine and arginine rich domain conta	4,78E-07	0,0007506	-1,2933737	110,615447	P	106,447197	P	104,009926	P	42,3327959	P	47,0964381	P	41,7183288	P	15 C	239435	ENSMUSG00000068522
1449364_at	Aurkc	aurora kinase C	0,00039539	0,04804366	-1,2834009	25,5567353	P	31,3743858	P	38,6191517	P	13,3202343	M	10,062797	A	16,0186636	A	7 A2-A37 7.0	20871	---
1416561_at	Gad1	glutamic acid decarboxylase 1	9,95E-07	0,00123736	-1,2793978	19,1290421	P	20,6366579	P	17,5517336	P	7,88196817	P	8,17610682	P	7,51726862	A	2 D2 43.0 cM	14415	ENSMUSG00000070880
1447377_at	Gm428	gene model 428, (NCBI)	0,00078199	0,06962911	-1,2764023	65,0247431	P	52,5267196	P	95,0246887	P	25,2598866	A	25,8554183	A	34,9628045	P	4 C3	242502	ENSMUSG00000066136 /// ENSMUSG00000073819 ///
1419540_at	Fthl17	ferritin, heavy polypeptide-like 17	2,33E-05	0,01020495	-1,2657748	16,5698419	P	17,3630385	P	22,648761	P	7,33166213	A	8,43945418	A	7,57466103	A	X A1.1	83457	ENSMUSG00000071815 /// ENSMUSG00000060685 ///
1415938_at	Spink3	serine peptidase inhibitor, Kazal type 3	0,00124059	0,08607003	-1,2600507	319,847336	P	230,216068	P	232,691355	P	152,687159	P	79,9126191	P	102,21193	P	18 B3	20730	ENSMUSG00000024503
1424058_at	Prrc1	proline-rich coiled-coil 1	1,74E-06	0,00166775	-1,2553693	389,263921	P	415,968176	P	440,588257	P	157,966213	P	181,792252	P	182,593859	P	18 D3	73137	ENSMUSG00000024594
1425317_x_a	Stk31	serine threonine kinase 31	1,17E-06	0,00128243	-1,2484737	18,5127583	P	20,2072034	P	18,7879474	P	8,72558582	P	7,46518952	M	8,04520643	A	6 B2.3	77485	ENSMUSG00000023403
1453544_at	Dmrtc1c	DMRT-like family C1c	0,00031758	0,04392722	-1,2392793	33,7316082	M	36,4744438	P	33,7850495	P	10,9009757	A	15,0506146	A	19,2552867	A	X D	71083	ENSMUSG00000067562
1429203_at	2410076I21R	RIKEN cDNA 2410076I21 gene	0,00068162	0,0638901	-1,2365056	68,9096976	P	65,982405	P	74,0796145	P	22,4700864	M	42,3251727	P	27,072471	P	9 C	73673	ENSMUSG00000074269
1448296_x_a	Tuba3a	tubulin, alpha 3A	0,00013249	0,02723138	-1,2091159	404,718425	P	450,29723	P	436,442597	P	142,808375	P	222,428697	P	202,625634	P	6 F3	22144	ENSMUSG00000067702
1426413_at	Neurod1	neurogenic differentiation 1	0,00109613	0,08228665	-1,1851299	202,024689	P	124,693613	P	107,219156	P	66,2851037	P	62,9883976	P	55,0257003	P	2 C32 46.0 cM	18012	ENSMUSG00000034701
1450752_at	Cyct	cytochrome c, testis	0,00012409	0,02608172	-1,1827558	19,7581079	P	18,4431335	P	26,8480449	P	8,89419994	A	10,7676137	A	8,73235603	A	2 C32 47.0 cM	13067	ENSMUSG00000056436
1438018_at	Hook1	hook homolog 1 (Drosophila)	1,03E-06	0,00123736	-1,1817675	549,393294	P	509,888588	P	500,44058	P	228,606601	P	215,965788	P	243,217642	P	4 C54 45.5 cM	77963	---
1444797_at	8030474K03R	RIKEN cDNA 8030474K03 gene	0,00016219	0,03042108	-1,1686819	21,3283232	M	26,7712443	P	22,2972829	P	8,25087888	A	12,314422	A	11,0290481	A	X D	382231	---
1449279_at	Gpx2	glutathione peroxidase 2	0,00031487	0,04382821	-1,1513807	124,375215	P	119,246028	P	81,4024986	P	46,5928072	M	42,9468169	A	55,0510101	M	12 C312 36.0	14776	---
1451823_at	Clca4	chloride channel calcium activated 4	0,00223105	0,11443296	-1,1509483	17,7407013	P	24,0528967	P	20,0408268	P	10,1123619	A	6,2531594	A	12,3507075	A	3 H2-H3	229927	ENSMUSG00000037033
1452688_at	Prpf39	PRP39 pre-mRNA processing factor 3	4,59E-05	0,01505244	-1,1470452	28,740593	P	21,2504457	P	29,1136701	P	12,4764557	P	11,4179237	A	11,492046	A	12 C1	328110	ENSMUSG00000035597
1419018_at	Rhox6	reproductive homeobox 6	0,00463957	0,1572405	-1,1457171	121,796682	P	79,4534971	P	64,9610743	P	53,9960235	P	35,5826349	A	30,2075949	M	X A3.3	19202	ENSMUSG00000006200
1451594_s_a	Serpinb6c	serine (or cysteine) peptidase inhibitor	0,00010873	0,02440043	-1,1408708	96,0949225	P	96,8792068	P	76,083151	P	35,9923273	P	48,9540563	P	37,4896961	P	13 A3.313 13	97848	ENSMUSG00000052180
1428172_at	Prpf39	PRP39 pre-mRNA processing factor 3	0,00046521	0,05141419	-1,1358436	41,5032727	P	42,6037969	P	33,5025236	P	23,6144928	P	15,1626379	P	15,591426	P	12 C1	328110	ENSMUSG00000035597
1429524_at	Myo1f	myosin IF	0,00057218	0,0579901	-1,1276916	14,4446327	P	15,1547912	P	23,0465817	P	6,98510862	A	9,07757674	P	7,62628302	A	17 B-C17 17.	17916	---
1449455_at	Hck	hemopoietic cell kinase	8,40E-06	0,00527663	-1,1199945	143,990359	P	135,628363	P	170,265672	P	72,1848366	P	67,0247136	P	66,9382377	P	2 H12 86.0 cM	15162	ENSMUSG00000003283
1425708_at	Rnf17	ring finger protein 17	6,82E-05	0,01923974	-1,1198469	97,6266342	P	77,5922507	P	107,045863	P	44,81051	P	46,0728191	P	38,2656721	P	14 C3	30054	ENSMUSG00000000365
1435363_at	Plekhg1	pleckstrin homology domain containing	0,00012452	0,02608172	-1,1196268	296,092883	P	250,792442	P	202,931848	P	127,643549	P	103,810146	P	110,848601	P	10 A1	213783	ENSMUSG00000040624
1439958_at	NA	NA	0,00302666	0,13077664	-1,1065492	17,8726321	P	16,4782398	P	30,1868903	P	7,58100242	A	11,0905474	A	10,5906974	A	NA	546257	---
1438223_at	Acad9	acyl-Coenzyme A dehydrogenase fam	0,00018366	0,03231303	-1,1056545	97,9884465	P	73,5632782	P	67,3707813	P	32,4201271	P	41,199212	P	36,4836574	P	3 B	229211	---
1457094_at	She	src homology 2 domain-containing tra	7,54E-05	0,02023008	-1,1051643	37,2888891	P	33,2585759	P	32,4644693	P	17,0776496	P	12,9938376	A	18,2248137	P	3 F1	214547	ENSMUSG00000046280
1438820_at	Rnf17	ring finger protein 17	9,51E-05	0,02323373	-1,1020438	207,613958	P	196,915183	P	223,974286	P	88,1913553	P	121,551556	P	86,358022	P	14 C3	30054	ENSMUSG00000000365
1432503_a_a	Pdcl2	phosducin-like 2	0,00032357	0,04392722	-1,0916844	47,0867088	P	58,3384485	P	37,9019747	P	20,4299897	P	25,62184	P	20,5469475	P	5 C3.3	79455	ENSMUSG00000029235
1416688_at	Snap91	synaptosomal-associated protein 91	7,83E-05	0,02049546	-1,0890955	36,66007	P	28,8388083	P	31,571854	P	13,4060126	P	14,4682944	A	17,8732083	A	NA	20616	---
1449058_at	Gli1	GLI-Kruppel family member GLI1	7,81E-07	0,00107361	-1,062663	85,6941027	P	90,0723061	P	83,9845663	P	40,6948857	P	40,7514027	P	42,8922646	P	10 D310 69.0	14632	ENSMUSG00000025407
1458564_at	NA	NA	2,79E-05	0,01078394	-1,03812	36,226652	P	33,9313263	P	34,7367249	P	14,6764487	A	17,2203157	A	19,5092275	A	NA	NA	---
1433596_at	Dnajc6	DnaJ (Hsp40) homolog, subfamily C, r	0,00013125	0,02723138	-1,0378243	134,463288	P	119,687981	P	102,070878	P	48,6779311	P	63,1506278	P	61,7444065	P	4 C6	72685	ENSMUSG00000028528
1427820_at	NA	NA	0,00070029	0,06498471	-1,0268608	425,79207	P	344,152524	P	300,130545	P	140,717786	P	212,324367	P	174,005183	P	NA	NA	---
1432556_a_a	3100002J23R	RIKEN cDNA 3100002J23 gene	6,35E-05	0,01844294	-1,0258395	38,4574938	P	45,4039163	P	36,0513208	P	17,1720109	A	19,8153575	A	21,9152804	A	11 B1.3	75429	ENSMUSG00000049154
1436204_at	1110059G02R	RIKEN cDNA 1110059G02 gene	9,14E-06	0,00536097	-1,0043944	25,5572149	P	22,6045623	P	24,5047147	P	11,2734663	P	11,6930853	A	13,3019161	A	NA	68786	---
1440815_x_a	LOC624112	hypothetical protein LOC624112	0,00015393	0,02979356	-0,9985267	20,7983435	P	18,1701769	P	22,5601829	P	10,7217217	P	11,6958791	A	8,52459254	P	14 B	624112	---
1435017_at	Mel13	melanoma nuclear protein 13	2,39E-05	0,01020495	0,82851925	0,09301853	P	0,07884121	P	-0,17186165	P	0,8171854	P	1,003067	P	0,8619585	P	11 D	217149	---
1449065_at	Acot1	acyl-CoA thioesterase 1	2,50E-05	0,01036791	0,9360885	44,8854758	P	47,0024417	P	40,338776	P	89,5016737	P	75,5342978	P	88,17506	P	12 D1	26897	ENSMUSG00000072949
1460467_at	Iqcg	IQ motif containing G	2,41E-05	0,01020495	1,05956043	46,4086678	P	44,6631112	P	40,1144943	P	85,8214998	P	105,022623	P	83,531224	P	16 B3	69707	ENSMUSG00000035578
1447997_s_a	Timm8a2	translocase of inner mitochondrial mer	4,08E-05	0,01380397	1,16337975	30,3038053	P	35,6175916	P	24,8954306	P	66,4378316	P	70,1869518	P	64,7509475	P	14 E5	223262	ENSMUSG00000071229

Table S2: Transcripts down-regulated greater than 2-fold in Dppa4-deficient ES cells with established or proposed functions in gametogenesis.

Gene Symbol	Annotation	Ref.
Syce1	„Synaptonemal central element 1“: structural component of meiotic synaptonemal complex	(4)
Mael	„Maelstrom“: component of *nuage* (germ-cell-specific organelle); essential for spermatogenesis	(20)
Sohlh2	„Spermatogenesis-and-oogenesis-helix-loop-helix-2“: germ-cell-specific transcription factor; essential for male and female gametogenesis	(3, 7, 23)
Dazl	„Deleted in azoospermia-like“: RNA-binding protein; essential for gametogenesis in males and females	(12, 19, 25)
Spesp1	„Sperm equatorial segment protein 1“: specific component of the sperm acrosome involved in sperm/egg binding	(24)
Ddx4 = Mvh	„Dead box polypeptide 4“ = „Mouse vasa homolog“: ATP-dependent RNA helicase; spermatogenesis is blocked in homozygous mutant mice, resulting in male infertility. Female mutant mice are fertile	(22)
Rhox5/Pem	„Reproductive hox 5“: imprinted gene encoding putative transcription factor; thought to be involved in regulation of gametogenesis; targeted deletion causes male subfertility associated with increased germ-cell apoptosis and decreased sperm count and motility	(6, 10, 14)
Hormad1	„HORMA domain 1“: strongly expressed in testis; contains putative chromatin-binding doimain; homologous to Hop1, a yeast meiosis-specific protein, as well as to asy1, a meiotic synaptic protein in *Arabidopsis thaliana*	(2)
Stk31	„Serine threonine kinase 31“: poorly characterized; has been associated with female meiosis/germ cell development and spermatogenesis	(17)
Tex19	„Testis expressed gene 19“: expression restricted to germ cells and pluripotent cells; Tex19 knockout males exhibit impaired spermatogenesis	(11, 18)
Aard	„Alanine and arginine rich domain containing“: reported to show sexually dimorphic expression in fetal mouse gonads; specifically upregulated in Sertoli cells during	(21)

	mouse testis differentiation	
Aurkc	„Aurora kinase c“: single nucleotide deletion causes male infertility in humans owing to the production of abnormal sperm; knockout mice exhibit compromised fertility due to abnormal sperm	(5, 9)
Fthl17	„Ferritin heavy polypeptide-like 17“: X-linked, spermatogonially-expressed, germ-cell-specific gene; located near chromosomal breakpoints in 2 azoospermic patients	(13)
Cytct	„Cytochrome c testis“: testis-specific isoform of cytochrom c; sperm from Cytct-KO mice is less effective in fertilizing oocytes and contains large numbers of immotile spermatozoa; Cytct-KO mice exhibit early testicular atrophy	(16)
Hook1	Identical with „azh (abnormal spermatozoon head shape)“ gene: autosomal recessive mutation results in highly abnormal morphology of sperm heads and tails with resulting male infertility	(15)
Rhox6	„Reproductive hox 6“: member of the recently identified X-linked homeobox gene cluster, which is composed of genes selectively expressed in reproductive tissues; see also Rhox5/Pem	(8, 14)
Serpinb6c	„Serine protease inhibitor b6c“: member of the serpin family with sexually dimorphic expression in gonads	(1)

REFERENCES FOR TABLE S2

1. **Charron, Y., R. Madani, S. Nef, C. Combepine, J. Govin, S. Khochbin, and J. D. Vassalli.** 2006. Expression of serpinb6 serpins in germ and somatic cells of mouse gonads. Mol Reprod Dev **73:**9-19.
2. **Chen, Y. T., C. A. Venditti, G. Theiler, B. J. Stevenson, C. Iseli, A. O. Gure, C. V. Jongeneel, L. J. Old, and A. J. Simpson.** 2005. Identification of CT46/HORMAD1, an immunogenic cancer/testis antigen encoding a putative meiosis-related protein. Cancer Immun **5:**9.
3. **Choi, Y., D. Yuan, and A. Rajkovic.** 2008. Germ cell-specific transcriptional regulator sohlh2 is essential for early mouse folliculogenesis and oocyte-specific gene expression. Biol Reprod **79:**1176-82.
4. **Costa, Y., R. Speed, R. Ollinger, M. Alsheimer, C. A. Semple, P. Gautier, K. Maratou, I. Novak, C. Hoog, R. Benavente, and H. J. Cooke.** 2005. Two novel proteins recruited by synaptonemal complex protein 1 (SYCP1) are at the centre of meiosis. J Cell Sci **118:**2755-62.
5. **Dieterich, K., R. Soto Rifo, A. K. Faure, S. Hennebicq, B. Ben Amar, M. Zahi, J. Perrin, D. Martinez, B. Sele, P. S. Jouk, T. Ohlmann, S.**

Rousseaux, J. Lunardi, and P. F. Ray. 2007. Homozygous mutation of AURKC yields large-headed polyploid spermatozoa and causes male infertility. Nat Genet **39:**661-5.

6. **Eakin, G. S., and A. K. Hadjantonakis.** 2006. Sex-specific gene expression in preimplantation mouse embryos. Genome Biol **7:**205.
7. **Hao, J., M. Yamamoto, T. E. Richardson, K. M. Chapman, B. S. Denard, R. E. Hammer, G. Q. Zhao, and F. K. Hamra.** 2008. Sohlh2 knockout mice are male-sterile because of degeneration of differentiating type A spermatogonia. Stem Cells **26:**1587-97.
8. **Hogeveen, K. N., and P. Sassone-Corsi.** 2005. Homeobox galore: when reproduction goes RHOX and roll. Cell **120:**287-8.
9. **Kimmins, S., C. Crosio, N. Kotaja, J. Hirayama, L. Monaco, C. Hoog, M. van Duin, J. A. Gossen, and P. Sassone-Corsi.** 2007. Differential functions of the Aurora-B and Aurora-C kinases in mammalian spermatogenesis. Mol Endocrinol **21:**726-39.
10. **Kobayashi, S., A. Isotani, N. Mise, M. Yamamoto, Y. Fujihara, K. Kaseda, T. Nakanishi, M. Ikawa, H. Hamada, K. Abe, and M. Okabe.** 2006. Comparison of gene expression in male and female mouse blastocysts revealed imprinting of the X-linked gene, Rhox5/Pem, at preimplantation stages. Curr Biol **16:**166-72.
11. **Kuntz, S., E. Kieffer, L. Bianchetti, N. Lamoureux, G. Fuhrmann, and S. Viville.** 2008. Tex19, a mammalian-specific protein with a restricted expression in pluripotent stem cells and germ line. Stem Cells **26:**734-44.
12. **Lee, K. H., S. Lee, B. Kim, S. Chang, S. W. Kim, J. S. Paick, and K. Rhee.** 2006. Dazl can bind to dynein motor complex and may play a role in transport of specific mRNAs. Embo J **25:**4263-70.
13. **Lee, S., S. H. Lee, T. G. Chung, H. J. Kim, T. K. Yoon, I. P. Kwak, S. H. Park, W. T. Cha, S. W. Cho, and K. Y. Cha.** 2003. Molecular and cytogenetic characterization of two azoospermic patients with X-autosome translocation. J Assist Reprod Genet **20:**385-9.
14. **Maclean, J. A., 2nd, M. A. Chen, C. M. Wayne, S. R. Bruce, M. Rao, M. L. Meistrich, C. Macleod, and M. F. Wilkinson.** 2005. Rhox: a new homeobox gene cluster. Cell **120:**369-82.
15. **Mendoza-Lujambio, I., P. Burfeind, C. Dixkens, A. Meinhardt, S. Hoyer-Fender, W. Engel, and J. Neesen.** 2002. The Hook1 gene is non-functional in the abnormal spermatozoon head shape (azh) mutant mouse. Hum Mol Genet **11:**1647-58.
16. **Narisawa, S., N. B. Hecht, E. Goldberg, K. M. Boatright, J. C. Reed, and J. L. Millan.** 2002. Testis-specific cytochrome c-null mice produce functional sperm but undergo early testicular atrophy. Mol Cell Biol **22:**5554-62.
17. **Olesen, C., P. Nyeng, M. Kalisz, T. H. Jensen, M. Moller, N. Tommerup, and A. G. Byskov.** 2007. Global gene expression analysis in fetal mouse ovaries with and without meiosis and comparison of selected genes with meiosis in the testis. Cell Tissue Res **328:**207-21.
18. **Ollinger, R., A. J. Childs, H. M. Burgess, R. M. Speed, P. R. Lundegaard, N. Reynolds, N. K. Gray, H. J. Cooke, and I. R. Adams.** 2008. Deletion of the pluripotency-associated Tex19.1 gene causes activation of endogenous retroviruses and defective spermatogenesis in mice. PLoS Genet **4:**e1000199.

19. **Ruggiu, M., R. Speed, M. Taggart, S. J. McKay, F. Kilanowski, P. Saunders, J. Dorin, and H. J. Cooke.** 1997. The mouse Dazla gene encodes a cytoplasmic protein essential for gametogenesis. Nature **389:**73-7.
20. **Soper, S. F., G. W. van der Heijden, T. C. Hardiman, M. Goodheart, S. L. Martin, P. de Boer, and A. Bortvin.** 2008. Mouse maelstrom, a component of nuage, is essential for spermatogenesis and transposon repression in meiosis. Dev Cell **15:**285-97.
21. **Svingen, T., A. Beverdam, P. Verma, D. Wilhelm, and P. Koopman.** 2007. Aard is specifically up-regulated in Sertoli cells during mouse testis differentiation. Int J Dev Biol **51:**255-8.
22. **Tanaka, S. S., Y. Toyooka, R. Akasu, Y. Katoh-Fukui, Y. Nakahara, R. Suzuki, M. Yokoyama, and T. Noce.** 2000. The mouse homolog of Drosophila Vasa is required for the development of male germ cells. Genes Dev **14:**841-53.
23. **Toyoda, S., T. Miyazaki, S. Miyazaki, T. Yoshimura, M. Yamamoto, F. Tashiro, E. Yamato, and J. I. Miyazaki.** 2008. Sohlh2 affects differentiation of KIT positive oocytes and spermatogonia. Dev Biol.
24. **Wolkowicz, M. J., L. Digilio, K. Klotz, J. Shetty, C. J. Flickinger, and J. C. Herr.** 2008. Equatorial segment protein (ESP) is a human alloantigen involved in sperm-egg binding and fusion. J Androl **29:**272-82.
25. **Zeng, M., W. Deng, X. Wang, W. Qiu, Y. Liu, H. Sun, D. Tao, S. Zhang, and Y. Ma.** 2008. DAZL binds to the transcripts of several Tssk genes in germ cells. BMB Rep **41:**300-4.