**Supplemental Figure S1.** *Related to Figure 1*. **The Fucci cell cycle reporter system identifies cell cycle phases and can be used to quantify the percentage of cardiomyocytes in each phase (G1 *vs.* S *vs.* G2/M) in neonatal mice (P1).** We isolated cardiomyocytes from P1 mice positive for both Fucci transgenes (Double, i.e., mKO2-Cdt1 and AG-hGeminin) to quantify the percentage of cardiomyocytes in the different phases of the cell cycle (G1 vs S vs G2/M) at birth (P1). (**A**) Immunofluorescence microscopy shows that neonatal (P1) cardiomyocytes express AG-Geminin. (**B**) Cells were analyzed by FACS. To increase the purity of the cardiomyocyte population, gates for size and granularity were applied and dead cells (by 7-AAD staining) and doublets were excluded. (**C**) The percentages of cells expressing mKO2 (indicating G1-phase), mKO2 + mAG (indicating S-phase), or mAG (indicating G2/M-phase) were calculated. The majority (45.7%) of cycling cardiomyocytes expressed mKO2, indicating cells in G1-phase; 15.3% of cardiomyocytes expressed both mKO2 and mAG, indicating S phase. Only 2.7% of cardiomyocytes expressed mAG only, indicating G2/M. (**D**) In addition, cardiomyocytes were isolated from pups positive for only the mKO2-hCdt1 (Red only) or mAG-hGem (Green only) transgene to evaluate the consistency of Fucci expression percentages at P1. It was found that 64.6% of cardiomyocytes isolated from Red only pups were expressing mKO2, indicating both G1 and S phase. This correlates with 45.7% (G1) + 15.3% (S) = 61% of cardiomyocytes expressing mKO2 from the Double isolation. As expected, only 3.1% of cardiomyocytes isolated from Green only pups were expressing mAG, indicating S phase and G2/M. As negative control, cardiomyocytes were isolated from P1 wild type C57BL6 pups, with 100% expressing no fluorophore. In conclusion, although the percentage of cardiomyocytes in G2/M at any given time is relatively low in neonatal mice, the mAG-Geminin reporter readily identifies it. (**E**) Time-lapse images of isolated cardiomyocytes from mKO2-hCdt1; mAG-hGem pup at P1. The cardiomyocytes are further validated by immunofluorescent staining with α-actinin. Scale bar 30 μm.
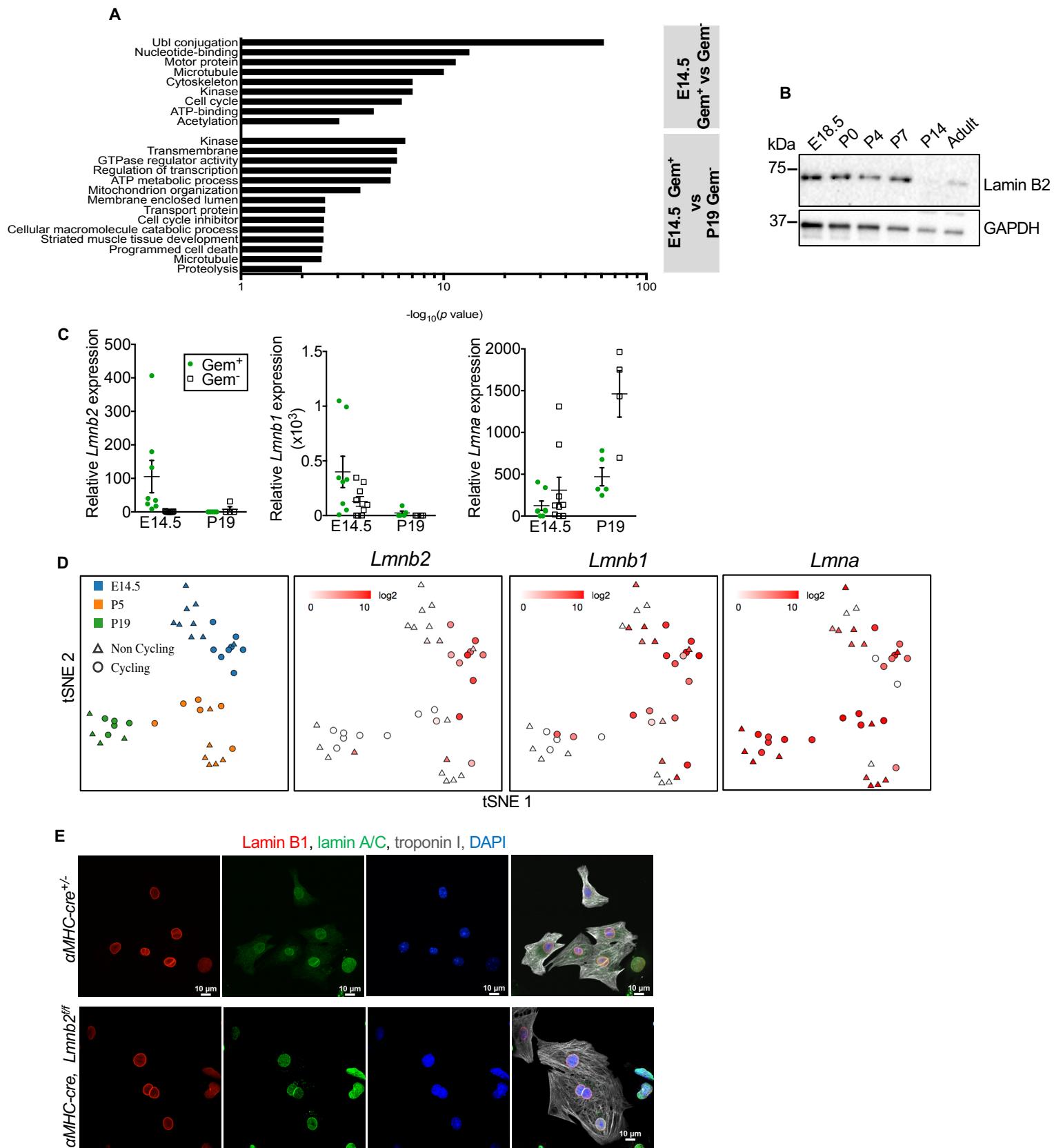
Supplementary Figure S2. **Genome-wide transcriptional profiling reveals unique expression profile of *Lmnb2, and Lmnb2* gene inactivation does not alter the nuclear lamina filament Lamin B1 and Lamin A/C in cardiomyocytes.** (**a-d**) *Related to **Figure 1 and 2***. (**A**) Gene ontology (GO) analysis of differentially expressed genes between embryonic geminin positive and negative group, and between embryonic geminin positive and adult negative group shows regulation of different cellular processes. (**B**) Western blot of lysate (15 μg) from isolated cardiomyocytes shows decrease of Lamin B2 protein after birth. GAPDH was used as a loading control. (**C-D**) Dot plot (**C**) and tSNE profile (**D**) show high expression of *Lmnb2* in cycling embryonic cardiomyocytes, whereas *Lmnb1* and *Lmna* expression was not confined to dividing cardiomyocytes and *Lmna* was also expressed in adult cardiomyocytes. Left panel corresponds to **Figure 1B** and serves as reference to indicate cardiomyocytes at different developmental ages. The intensity of red color indicates expression level according to the provided scales. (**E**) Immunofluorescence microscopy of P2 cardiomyocytes showed that *aMHC-cre*-induced *Lmnb2* KO does not affect Lamin B1 and Lamin A/C localization. Scale bars: 10 μm. Error bars represent mean ± SEM.
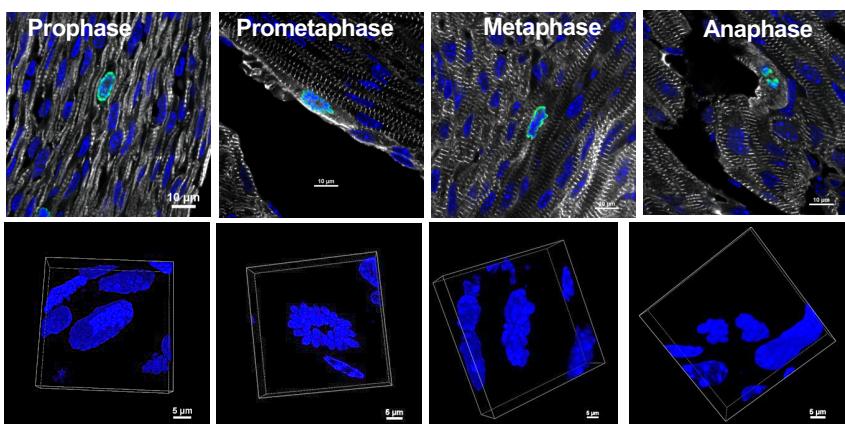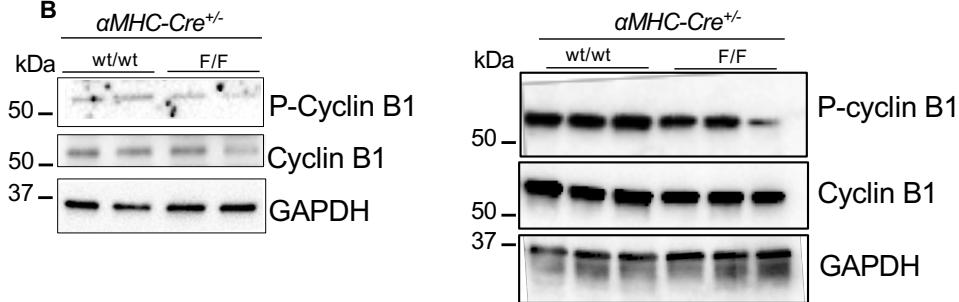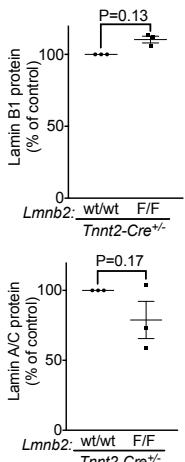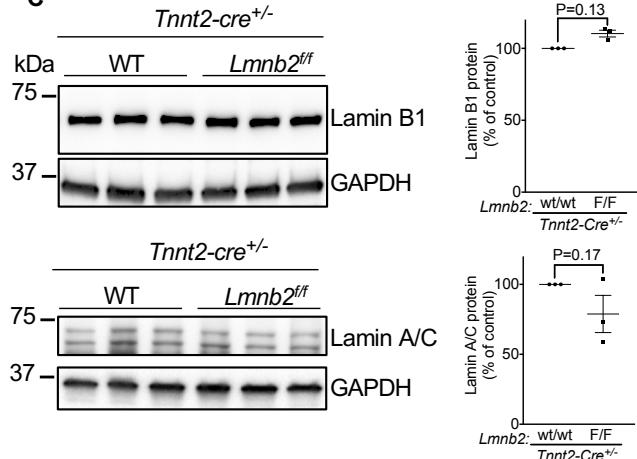
Supplementary Figure S3. *Related to Figure 2 and 5.* **Lmnb2 gene inactivation inhibits prometaphase-to-metaphase transition.** (**A**) Example photomicrographs (top) and three-dimensional nuclear volume view (bottom) of mitotic sub-phases *in-vivo* in P2 *Lmnb2* KO heart sections. Scale bar, 10 μm (top) 5 μm (bottom). (**B**) Additional Western blot results of cyclin B1 and cyclin B1 phosphorylation in *Lmnb2* KO cardiomyocytes. (**C**) Western blot shows that Tnnt2-Cre-induced *Lmnb2* KO does not alter the protein amount of Lamin B1 and Lamin A/C at P0. Fifteen μg lysate loaded per lane and normalized against GAPDH. One heart per lane. Statistical significance was tested with two-tailed Student's *t*-test (**C**). Lamin B1: P=0.13; Lamin A/C; P=0.17.

A TNT-Cre WT
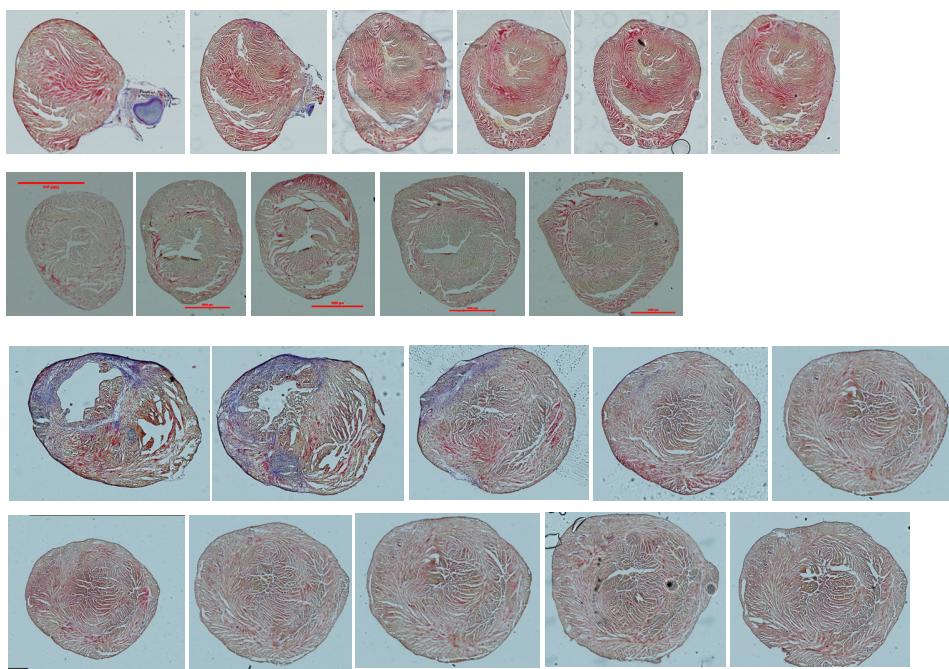
B TNT-Cre Lmnb2 KO hearts
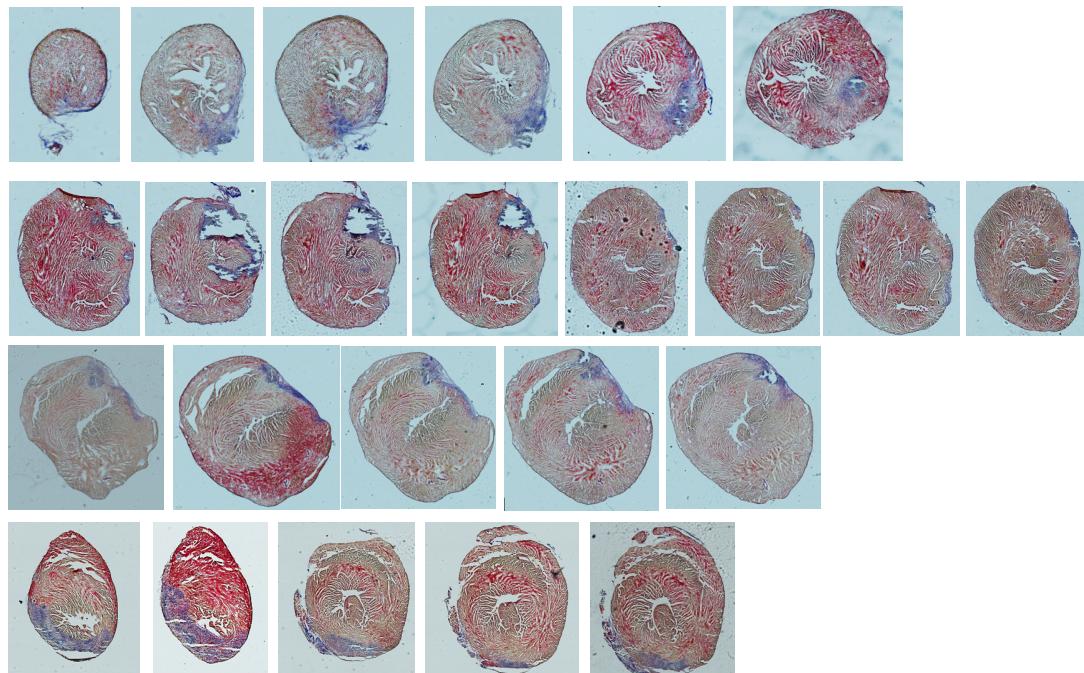
Supplementary Figure. S4. *Relate to Figure 6.* (**A-B**) Example of Scar formation visualized by AFOG staining of *Tnnt2-cre* (**A**) *and Tnnt2-cre, Lmnb2fl/fl* mice (**B**) 9 dpi post cryoinjury. Four out of nine hearts from each group were shown. Scale bar 1 mm.
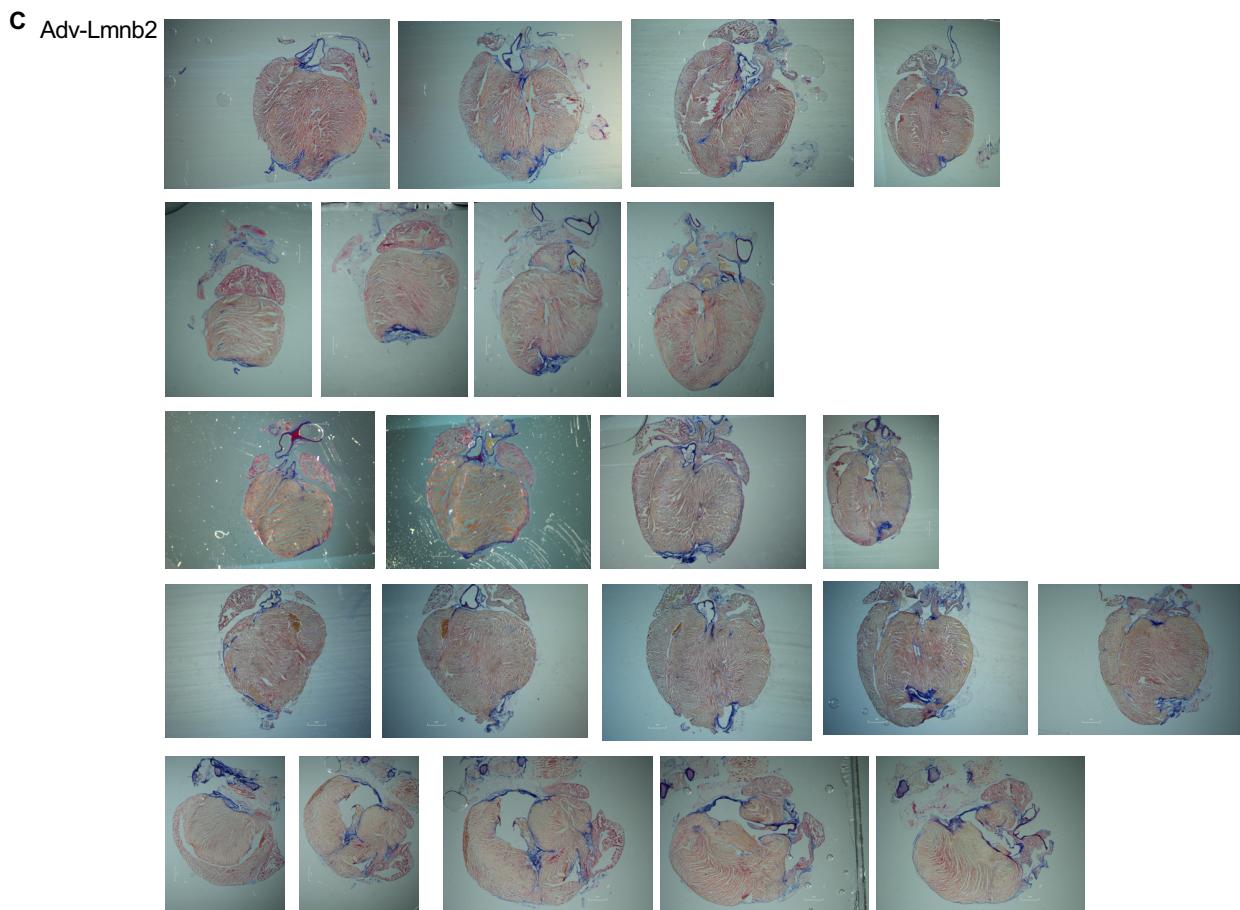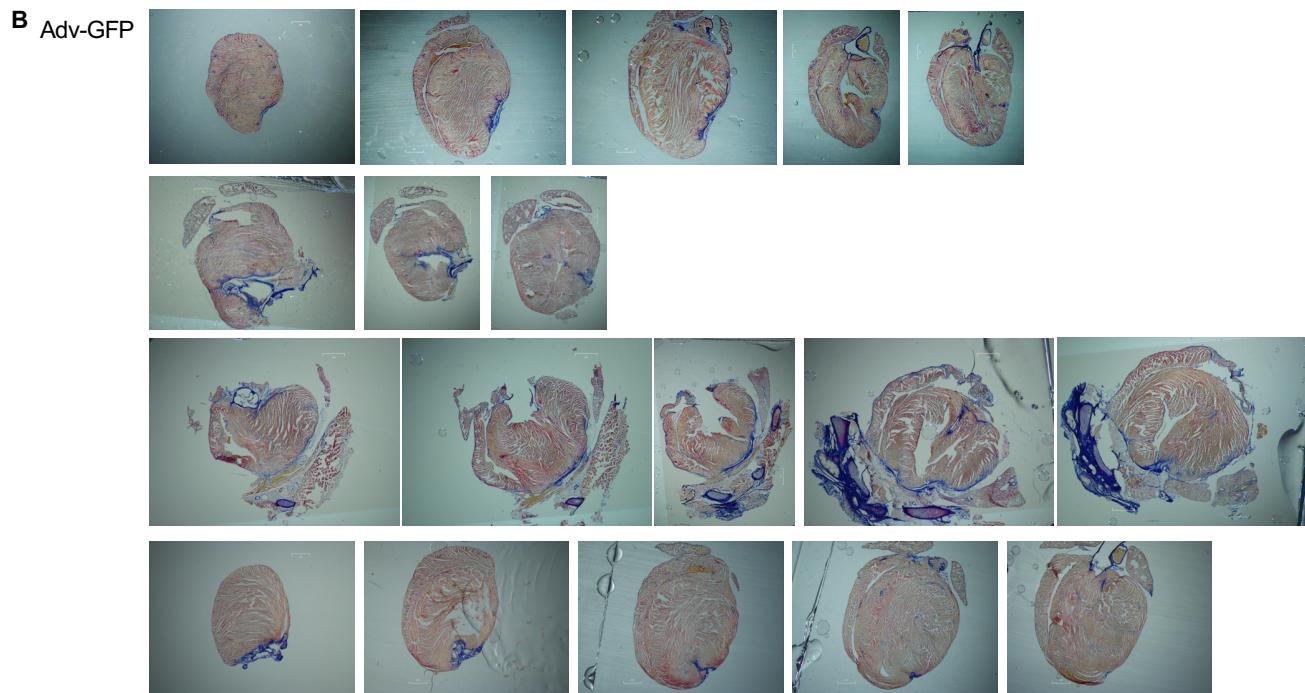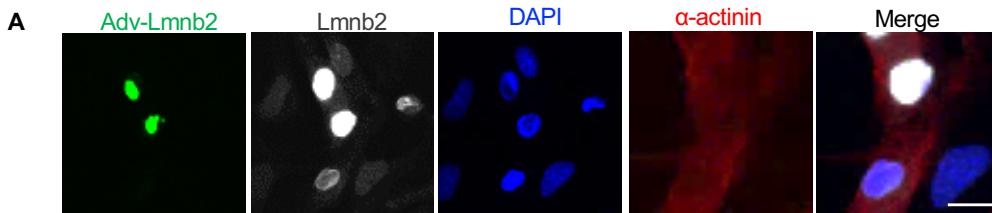
Supplementary Figure S5. *Related to Figure 7*. **Validation of nuclear expression of Adv-Lmnb2 and examples of scar analysis by AFOG staining. (A)** Adenoviral transduction with type V replication-deficient adenovirus increases lamin B2 protein expression in the nucleus. Mice received retro-orbital injection of Ad-GFP (control) or Ad-Lmnb2 (test) on the day of birth and cardiomyocytes were isolated and subjected to immunofluorescence microscopy. Scale bar 20 µm. (**B, C**) Examples of scar formation visualized by AFOG staining of control and Lmnb2 adenoviral-transduced groups. Scale bar 1 mm. Note one heart from Ad-GFP group had adherent to the chest post injury, thus both scar and chest tissue are stained by AFOG.
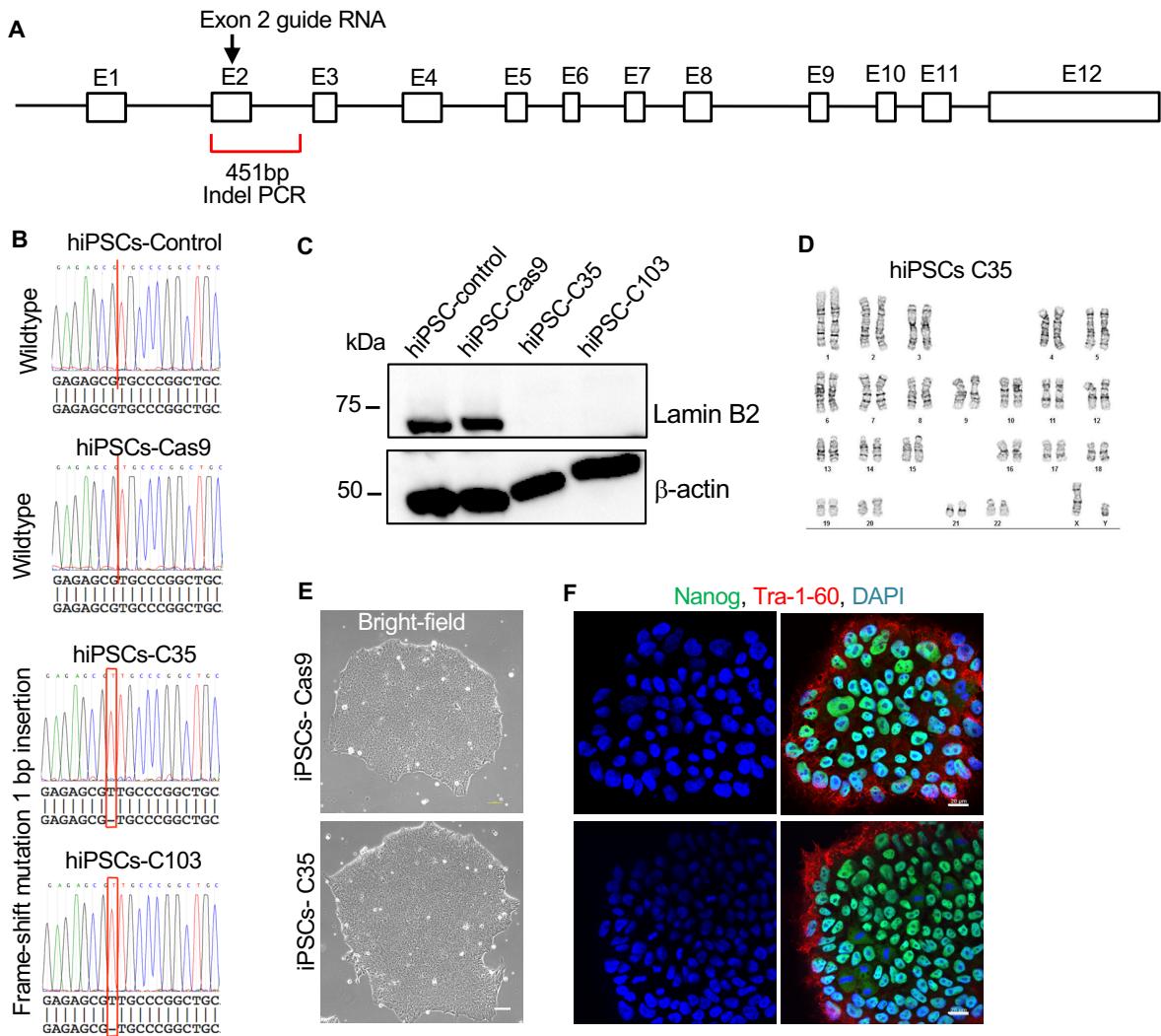
Supplementary Figure S6. *LMNB2* **gene is successfully inactivated with CRISPR/Cas9 in human iPSCs (hiPSCs).** Related to **Fig. 8 A-D**. (**A**) Strategy for creating indel in human *LMNB2* gene. CRISPR-Cas9 mediated deletion using guide RNA targeting *LMNB2* exon 2. SURVEYOR PCR primers amplify 451 bp of exon 2 including indel region. (**B**) Sanger sequencing of PCR products from controls and *LMNB2* guide RNA transduced clones. hiPSCs-Control: hiPS cell line (CiPS0001-013) with no transduction; Cas9-control: hiPS cells transduced with no specific guide RNA; C35 and C103: *LMNB2*-/- clones. Sequencing revealed a 1 bp insertion causing frame-shift mutation in clones C35 and C103. (**C**) Western blot of cell extracts labeled with Lamin B2 antibody shows no protein expression in *LMNB2*-/- hiPS clone C35. (**D**) *LMNB2*-/- hiPS clone C35 has normal karyotype and was used for further experimentation. (**E-F**) Each clone maintained normal morphology (bright-field) (**E**) and expressed pluripotency markers NANOG (green) and TRA-1-60 (red) determined by immunofluorescence microscopy (**F**). Scale bars 100 μm (**E**), 20 μm (**F**).
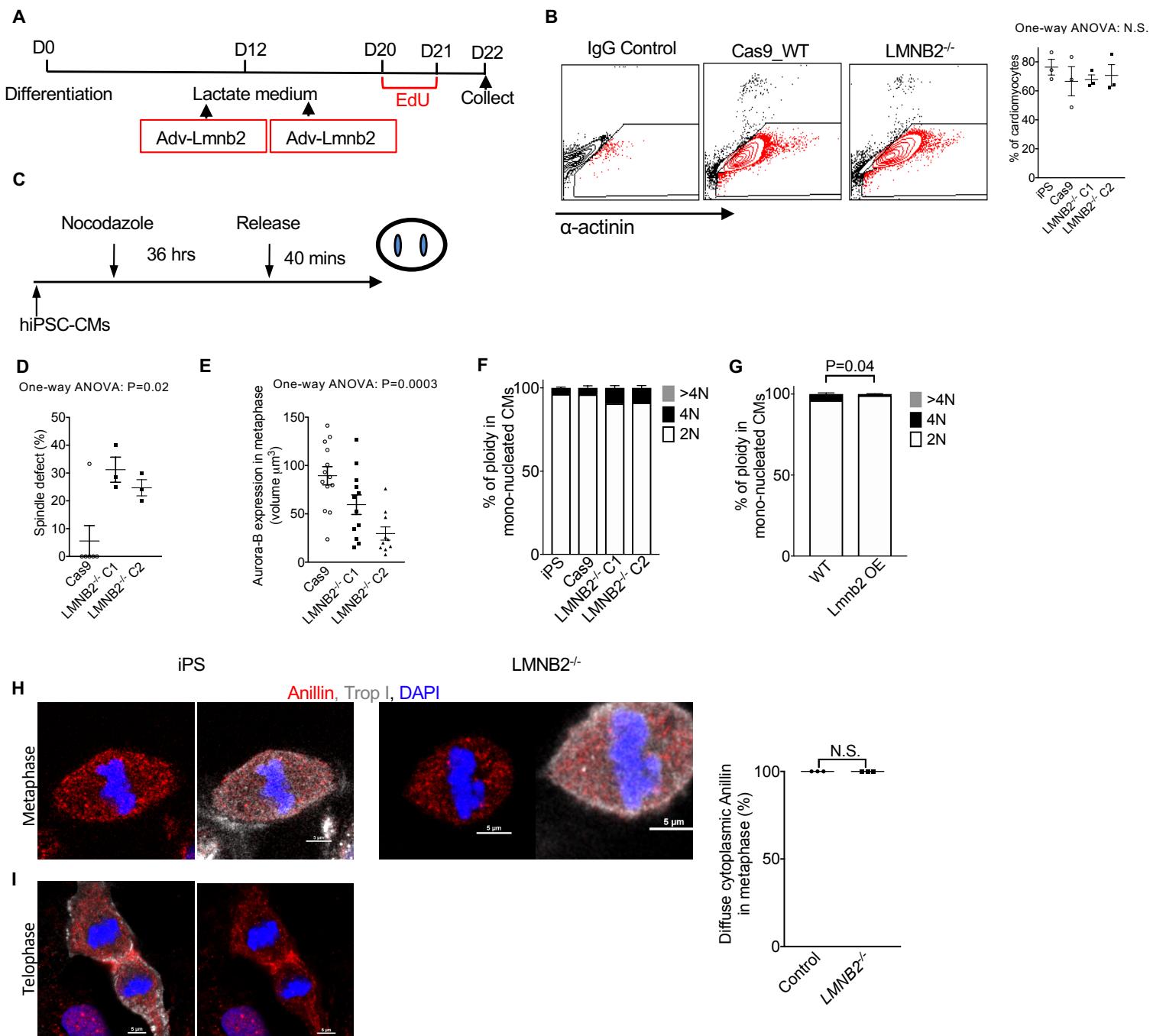
Supplementary Figure S7. *LMNB2* **gene inactivation with CRISPR/Cas9 in human iPSCs (hiPSCs) does not affect differentiation to cardiomyocytes and does not alter Anillin localization in metaphase of hiPSC-CMs.** Related to **Fig. 8 A-D**. (**A**) Experimental design for cardiomyocyte differentiation, and important time points for treatments corresponding to the experiments in **Figure 8**. (**B**) Two clones are analyzed and show consistent differentiation efficiency. The CMs were collected and stained with cardiac marker α-actinin at day 12 before Lactate treatment. N.S. not significant. (**C**) Experimental design to enrich prometaphase and metaphase cardiomyocytes *in vitro*. (**D**) *LMNB2* KO hiPSC-CMs have disorganized spindles. Cas9 control: 25 cells; *LMNB2* KO: clone 1: 20 cells; clone 2: 24 cells; 3 biological replicates. P=0.02 (**E**) Expression of Aurora B kinase, a chromosomal passenger protein, is decreased on centromeres in *LMNB2* KO hiPSC-CMs indicating decreased microtubule attachment in metaphase. n=13 cells from Cas 9, n=12 cells from clone 1, and n=10 from clone 2, 3 biological replicates. P=0.0003 (**F**) *LMNB2* gene inactivation increases nuclear ploidy in hiPSC-CMs in both clones. (**G**) Overexpression of Lmnb2 decreases nuclear ploidy in hiPSC-CMs. P=0.04 (**H-I**) Anillin is present in the cytoplasm of control and *LMNB2⁻/⁻* cardiomyocytes in metaphase (**H**). Anillin marks the contractile ring in telophase of wildtype hiPSC-CMs, which validates the specificity of Anillin antibody for contractile ring (**I**). iPSC and Cas9 WT: n=14 cardiomyocytes in metaphase; *LMNB2⁻/⁻*: n=10 cardiomyocytes in metaphase. N.S. not significant. Statistical significance was tested with One-way ANOVA (**B, C, D, E, F**) and Student's *t*-test (**G, H**). Error bars represent mean ± SEM. Scale bar, 5 μm.

Supplementary Tables

Supplementary Table S1. *Related to Figure 1.* **List of differentially expressed genes between E14.5 cycling and non-cycling cardiomyocytes.** 163 genes were differentially expressed between E14.5 cycling and non-cycling cardiomyocytes. These genes have a p-value of ≤ 0.05 and false discovery rate (FDR) of ≤10%. (See **Supplementary Table 1_163 differentially expressed genes.xlsx**).

Supplementary Table 1. List of differentially expressed genes between E14.5 cycling and non-cycling cardiomyocytes. 163 genes were differentially expressed between E14.5 cycling and non-cycling cardiomyocytes. These genes have a p-value of ≤ 0.05 and false discovery rate (FDR) of ≤10%.

	g1	g2	g5	g6	g8	g10	g25	g27	g28	g29	n3	n5	n7	n8	n10	n21	n23	n24	n25	n28	n30	Pvalue	q
Fam64a	74.7803772	189.443014	1269.18413	163.393132	1224.39001	498.59193	729.333942	895.604214	842.366801	578.853982	0	0	0	0	1.04693264	0	0	25.5932047	0	0	0.47824666	3.081e-11	2.9132E-07
Aspm	709.983811	723.43551	3572.74128	738.536958	3496.48405	1222.79107	5777.80339	260.020794	207.297439	1698.11676	0	0	0	0	0	0	0	44.0990604	0	0	0.95649331	3.9522E-11	2.9132E-07
Cenpe	2226.22042	306.660879	1296.8798	1681.85998	4088.60111	165.821298	5294.42417	2768.45669	4240.11645	5022.90024	0	0	0	2.61733159	0	0	0	2.36244967	0	0	0.95649331	5.7326E-10	2.817E-06
Cdca2	1190.46922	287.716578	411.822554	374.714917	820.640651	1058.09781	5272.62472	1327.38755	2326.55218	1258.53591	0	0	0	0	0	0	0	163.79651	0	0	0	2.0672E-09	5.0126E-06
Nusap1	2954.25467	201.283203	3449.91701	893.21579	8778.81066	1178.79766	14914.1446	4526.80081	4167.80339	8584.8833	0	0	2.53051607	80.5773655	3.14079791	0	0	59.0612416	0	0	2.86947994	2.3802E-06	5.0126E-06
Ccnb1	997.93124	151.554411	5517.4589	610.001027	2038.45969	721.943066	18323.8637	11476.2596	3636.86483	14646.1663	0	0	0	9.94586003	0	0	0	0	14.5496074	0	0.95649331	2.2533E-06	5.0126E-06
Slc6a6	1509.36026	1258.61203	964.531772	1977.0569	129.228999	1166.38927	351.634688	39.6852087	3011.7586	1394.54484	0	0	0	0	0	19.8966229	0	0.78748322	0	0	0	1.9247E-05	5.0126E-06
Sgol1	670.444761	140.898242	34.9206259	1236.34137	1103.9223	887.764364	1665.76271	2260.81673	93.2034996	476.21258	0	0	0	0	0	0	0	21.6557886	0	0	0	5.1389E-09	9.4696E-06
Fam83d	1783.55497	574.249137	15096.5478	781.019172	6538.84134	758.040219	9473.28492	3407.14052	3322.54406	7032.56811	0	0	27.4559912	3.14079791	0	0	0	251.246879	0	0	2.86947994	7.4429E-06	1.0972E-05
Racgap1	989.335795	207.203297	1267.97997	621.98319	1412.7577	180.485766	1414.12117	1216.39298	1949.88149	1043.82316	0	1.26525804	6.56556311	1.04693264	0	4.85904315	14.5684396	0	85.3168567	0	3.3477266	7.204E-09	1.0972E-05
Hmmr	2266.61902	184.706939	10234.1517	250.536136	5535.67385	3640.1723	6429.41754	2402.81537	3428.60322	4195.96599	0	0	0	1.04693264	0	0	0	0	0	0	0.95649331	9.9338E-09	1.3313E-05
Ckap2l	5342.06947	1915.74248	12353.4725	2733.02246	2954.74441	7685.30954	13052.6607	5990.39957	5850.60864	4662.74861	0	0	0	1.04693264	0	0	0	506.745453	0	0	2.39123328	1.1869E-08	1.4581E-05
Prc1	1303.92911	329.157237	2516.69339	291.929063	2502.07786	1223.9191	7549.71997	5172.92561	3236.73257	6621.63981	0	151.589638	0	1.04693264	0	0	0	20.0808222	0	1.11162028	25.8253195	1.5183E-08	1.7218E-05
Anln	4309.75645	5255.85963	31770.5446	10588.9643	11156.0402	24925.0843	18930.9311	4815.55204	4789.37431	7054.32954	0	1206.23199	0	0.59686937	5.23466318	0	0	0	0	0	0	2.7653E-08	2.9118E-05
Kif20b	2505.57241	290.084615	1994.08816	502.16156	7574.13355	3853.37111	4818.15347	916.686982	5455.61864	8424.21142	0	0	0	323.503201	6.28159581	0	0	10.2372819	26.2602671	0	0.95649331	3.9703E-08	3.9021E-05
Aurkb	445.244085	693.835039	14.4499142	223.303947	1517.16305	661.02912	704.69108	845.584316	802.51427	531.341531	0	0	0	0	0	0	0	213.801695	0	0	0	4.2572E-08	3.9225E-05
Kif23	1354.64223	242.723862	7226.16125	623.072478	2691.17566	2579.81842	6513.77195	2085.54039	2129.86066	4581.86864	0	0	0	2.09386527	0	0	0	891.824749	0	0	0	5.197E-08	4.5067E-05
Dlgap5	1049.50391	47.3607535	3178.98112	520.679448	1436.12114	495.207822	4119.6231	4333.7488	717.024164	3635.24653	0	0	0	2.09386527	0	0	0	531.157433	0	0	1.91298663	6.3367E-08	5.1898E-05
C330027C09I	850.089575	607.401664	7450.13492	2327.80749	5632.77813	3784.56092	12576.8639	1787.90133	1349.84379	4059.95706	0	1042.48275	0	3.58121624	1.04693264	0	0	20.0808222	0	0	1.38952535	1.672E-07	0.00012973
Cenpf	3642.74987	187.074977	13476.9533	3283.11267	6465.1005	4620.43562	13378.7047	4965.61174	7662.61323	11528.8418	0	5.06103215	0	2.09386527	0	0	0	100.010369	0	0	993.796553	1.8192E-07	0.00013409
Nek2	650.675236	188.258995	4932.23737	466.215071	2203.46395	793.009336	1301.33269	1305.6847	898.610292	2640.38658	0	0	0	0	0	0	0	871.350185	0	0.55581014	0	1.9145E-07	0.0001344
Mki67	6645.13903	1334.38923	36105.5189	5074.99069	3894.39255	8261.73596	8979.95378	3293.87232	17786.4416	10192.3274	0	0	0	0	0	0	0	4400.84999	0	0.55581014	0.47824666	2.2758E-07	0.0001525
Shcbp1	2532.21829	1605.52955	9951.17423	6238.34979	10243.406	3768.76841	10252.3785	1412.5454	2525.81484	2156.5575	2.32935081	0	0	4.18773054	0	0	0	2095.8866	0	0	1.91298663	2.7492E-07	0.00016887
Kif4	685.916563	78.1452434	77.066209	359.464891	2004.87476	894.53258	2180.41941	642.817703	16.3909603	1197.9666	0	0	0	0	0	0	0	217.739111	0	0	0	2.6513E-07	0.00017
Mxd3	30.9436043	21.3123391	80.6786875	32.6786265	73.7408414	42.8653695	279.127805	230.256888	278.646325	23.2121897	0	0	0	0	0	0	0	0	0	0	0	3.0713E-07	0.00017415
Ndc80	3547.34042	597.929514	668.308531	140.518094	5446.60076	2236.89547	3161.39488	3902.79224	7233.87713	2711.11122	0	0	0	4.18773054	0	0	0	1865.94149	0	1.11162028	0	3.009E-07	0.00017415
Ttk	182.223448	333.893313	2187.95784	786.46561	1845.71136	489.567641	778.145765	240.798271	2278.02209	394.607226	0	0	0	1.04693264	0	0	0	725.665789	0	0	0	3.593E-07	0.00019
Kif2c	305.997865	40.2566405	1411.27495	17.4286008	1035.29221	720.81503	920.790025	2201.49561	776.80296	276.370134	0	0	0	0	0	0	0	0	0	0	0.95649331	5.9262E-07	0.00031202
Ncaph	710.843355	104.193658	564.750813	364.911329	522.756856	462.494777	603.750125	314.79465	449.947929	47.8751413	9.72767733	0	0	1.04693264	0	0	0	368.935889	0	0	0	9.4544E-07	0.00048061
Ccna2	3071.15273	863.149733	6067.7598	3508.59519	11188.895	1714.61478	5969.25947	3493.95191	5641.38286	2637.12237	0	91.6022949	0	1.04693264	0	0	0	1466.29376	0	0	0.47824666	1.0096E-06	0.00049609
Gtse1	120.336239	22.4963579	827.257587	150.321682	407.399896	316.978127	745.446583	146.959288	352.24495	128.029734	0	0	0	2.09386527	0	0	0	361.061057	1.4194739	0	0	1.1532E-06	0.00054842
C79407	1950.30662	7.10411303	12437.7636	416.107844	11177.2133	318.106163	3200.72868	1837.50784	4458.34119	5852.37334	0	0	2.61733159	0	0	0	0	11.8122483	0	0	0.47824666	1.2082E-06	0.0005566
4930547N16	22.3481587	24.8643956	7203.28222	214.589647	216.84188	188.382019	619.388864	244.725453	132.091856	569.78672	0	0	1.19373875	4.18773054	1.42118735	0	0	0	0	0	0	1.3697E-06	0.00061188
Bub1	1412.23172	303.108823	1345.04618	2710.14742	1877.10597	1031.02494	4930.94195	1261.86562	1912.92148	1374.23417	0	49.4490264	0	0	0	0	0	975.29797	0	0	0	1.4405E-06	0.0006246
Arhgap11a	771.87102	253.380031	14565.5135	1760.28868	5722.58133	2311.34585	1403.22144	913.379881	1169.54322	1096.05058	0	0	0	0	66.4802223	0	0	1409.20123	0.70973695	0	0	1.4924E-06	0.00062862
Neurl1b	239.812934	67.4890738	416.639192	21.785751	154.782756	399.324758	1267.6857	161.634548	90.6323685	541.134173	0	0	2.3874775	0	0	0	0	376.023238	0	0	0	1.5579E-06	0.00063795
Arhgap19	80.7971891	69.8571115	160.153215	2.1785751	676.079397	99.2671715	51.1813293	148.406145	391.77609	98.6318064	0	0	14.324865	0	18.4754356	0	0	0	0	0	0	1.6389E-06	0.00065299
Nuf2	307.716954	183.52292	1213.79279	1017.39457	1266.73624	268.472578	1396.11293	4333.54211	1872.42617	1821.06882	0	0	0	1.04693264	0	0	0	2449.46656	0.70973695	0	0	1.952E-06	0.00073786
Kif18a	2117.05826	189.443014	3286.15132	4.35715019	11226.1305	464.750849	2274.25184	6388.90521	4486.94503	2095.6255	0	0	0	0	0	0	0	14.9621812	0	0	333.33792	1.9054E-06	0.00073786
Incenp	1944.28981	679.626813	930.815305	240.732548	778.294425	874.227931	1521.69674	419.38171	3794.34661	2144.58872	0	0	0	0	0	0	0	2255.35195	2.83894779	1.11162028	0	2.266E-06	0.00083515
Aurka	165.032557	59.2009419	434.701585	3.26786265	844.004086	241.399713	1532.12257	597.138374	312.071028	1170.50061	0	1.62127956	0	2.3874775	0	0	0	1.57496644	0	0	749.412511	2.8333E-06	0.00101875
Spc25	6345.15798	2616.68163	7112.97026	6128.33175	14775.1822	4328.27429	20493.8573	41731.0639	28192.1303	11296.7199	0	0	0	410.646129	3.14079791	0	0	6002.59086	1.4194739	0	0.47824666	3.2291E-06	0.0010819
Sgol2	1273.84505	439.270989	4859.9878	2421.48622	6261.40055	2171.46938	7307.55645	2205.42279	515.833161	2481.16547	27.9522098	6.48511822	0	0	3.14079791	0	0	3676.75916	0.70973695	1.11162028	0.95649331	3.1972E-06	0.0010819
Tpx2	1064.11617	198.915165	446.74318	187.357458	1339.74697	344.050992	3901.62855	1673.59966	370.242867	4616.68692	0	0	0	1.04693264	0	0	0	2747.52896	0.70973695	1.66743042	1.91298663	3.4549E-06	0.0011333
Pbk	986.757161	408.486499	2.40831903	2974.8443	687.031007	1499.1599	441.202014	1480.75435	2671.08374	2238.16286	0	0	0	0.52346632	0	0	0	1176.89368	0	0.55581014	0.47824666	3.5981E-06	0.0011531
Cenpi	845.791852	760.140094	4126.65466	1.08928755	346.070879	146.644685	981.449379	1109.73899	3080.85775	1547.23752	0	0	0	1.04693264	0	0	0	195.689581	0.70973695	0	0	3.8539E-06	0.0012088
Cdkn3	834.617773	15.3922449	508.155315	233.107535	1438.31146	397.068686	1621.21599	1783.56076	1360.77109	1966.87039	0	263.457928	265.704188	0	0	0	0	0	0	0	0	4.5153E-06	0.0013675
Cdkn2c	336.081925	81.6972999	202.298799	99.1251669	319.787015	121.827892	487.644332	663.693776	536.40221	0.72538093	0	0	0	0	0	0	0	0	159.335945	0	0.95649331	4.6094E-06	0.00179678
Cep55	911.117239	696.203077	2.40831903	1055.51963	8012.92806	1047.94548	1795.13773	1207.91854	1900.70861	2507.27918	0	0	0	0	0	0	0	2447.8916	0	1.11162028	0.47824666	5.9764E-06	0.00179678
Hirip3	162.453923	9.47215071	192.665522	49.0179397	96.3741469	64.2980543	169.656628	298.052453	60.1001877	322.794514	0	0	5.96869374	0	0	0	0	237.819933	0.70973695	0	0.47824666	6.5342E-06	0.00188876
Cenpn	530.338997	155.106468	39.737264	777.75131	325.627874	206.430595	171.078332	172.175931	838.831496	399.322202	0	0	7.16243249	0	0	0	0	156.709161	105.395937	0	0	7.4557E-06	0.00211369
2610039C10I	2362.88801	728.171586	466.215071	2062.02133	5445.14054	675.693588	1087.12935	4781.44756	5181.79318	3541.67239	0	0	84.7554511	2.09386527	4.97415573	0	0	6362.86443	2.83894779	0.55581014	0.95649331	1.0378E-05	0.00283309
F630043A04I	482.204501	661.866531	177.011449	193.893184	613.290166	384.66029	839.27902	715.780613	1401.26641	1520.39843	0	0	0	0	0	0	0	2917.62534	2.12921084	0.55581014	0.47824666	1.0337E-05	0.00283309
Spc24	338.660559	131.426091	405.801757	434.625732	547.580505	112.803604	1611.26407	2587.18623	3462.02792	1418.48241	0	0	0	1.04693264	1.42118735	4.31914947	433.903255	0	0	308.469094	0	1.06E-05	0.00284111
Top2a	4036.42128	1064.43294	8272.57587	4491.62036	4850.59745	8689.26162	13039.3914	19822.7617	9444.08564	10456.0034	0	0	27.4559912	1.57039895	0	0	0	5961.24799	15.2593444	2.22324057	440.943418	1.1069E-05	0.0029139
Oip5	439.227273	87.6173941	2073.56268	226.57181	127.038677	4.51214416	22.7472574	414.834447	978.315354	103.729473	0	0	0	0	0	0	0	0.53989368	8.66231544	0	168.342823	1.139E-05	0.00294586
Esco2	1531.70842	831.181225	409.414235	3287.46982	3173.77661	50.7616218	12.7953323	66.555402	781.945222	934.653327	0	0	0	0	0	0	0	1871.06014	0.70973695	0.55581014	0	1.1816E-05	0.00300137
Plk1	236.374755	0	387.739364	67.535828	211.731129	159.053082	567.259733	278.82993	66.2066238	820.768522	0	0	0	0	0	0	0	31.5832942	0	0	0.95649331	1.2012E-05	0.00300137
G2e3	365.30644	133.794129	2043.4587	127.446643	1850.82211	81.2185949	3800.6876	11.5748525	457.018539	2154.74405	0	0	461.380026	0	0	0	0	66.7152731	0	0	0	1.3132E-05	0.00322654
Stil	215.745686	296.00471	0	479.286521	228.523598	430.909767	536.456155	241.004965	1370.09144	990.870349	0	0	22.6810362	0	0	0	0	101.585336	0	0	0	1.5439E-05	0.00373106
Cdc25c	73.9208326	49.7287912	1124.68499	38.1250642	1454.37382	287.64919	2815.92091	10.7480773	2426.5049	2145.3141	2.32935081	0	0	1.04693264	0	0	0	503.989262	0.70973695	0.55581014	0.95649331	1.6786E-05	0.00392798
Gtsf1	1168.98061	35.5205652	16.8582332	302.821939	256.267676	136.492361	51.0993289	532.0868364	1472.2939	10.8807139	0	0	405.871174	0	0.53989368	0	0	0	0	0	0.47824666	1.6602E-05	0.00392798
Ckap2	559.563512	434.534914	2682.8674	1260.30569	1035.29221	297.801515	1986.59382	2551.22151	2397.90107	3099.9154	0	0	87.739798	0	0	0	0	865.444061	1.4194739	0	240.079822	2.1726E-05	0.00500444
Tacc3	584.490304	136.162166	2340.8861	1660.07422	500.123528	424.141551	4472.20559	2700.45443	1325.73943	970.922374	0	427.207163	0	0	0	0	0	803.232886	0.70973695	20.8428803	5.26071323	2.2697E-05	0.00511451
Kif15	1491.30982	354.021633	326.327229	508.697285	680.460041	1182.18177	1628.79841	763.113492	1609.52802	291.603134	0	0	0	0	0	0	0	5156.0464	11.7106596	0	0	2.2898E-05	0.00511451
4930427A07I	99.7071696	0	63.8204543	153.589544	37.9655817	69.9382345	186.24317	32.4509258	537.366384	55.1289506	0	0	0	0	0	0	0	572.500302	0	0	0	2.6939E-05	0.00592741
Asf1b	219.183864	139.714223	39.737264	84.9644288	610.369737	359.843497	95.2541406	1418.33282	1627.20455	25.751023	0	0	45.9589418	0	0	0	0	572.500302	0	0	0	2.7811E-05	0.00602931

Gene																							
Lmnb2	34.3817826	21.3123391	7.22495709	346.39344	29.934401	118.443784	15.1648383	149.026226	2.57113102	150.879233	0	0	0	0.59686937	0	0	0	2.36244967	1.4194739	0	22.9558395	2.955E-05	0.0062233
Cdca5	477.906778	87.6173941	0	179.732446	146.021468	282.00901	117.053596	1128.75482	191.22787	15.2329995	0	0	0	0	0	0	0	39.3741611	0	0	0	2.918E-05	0.0062233
Casc5	254.425191	413.222575	4409.63214	0	86.8827735	58.6578741	2404.57467	610.573471	672.993545	163.93609	0	0	0	0	0	0	0	48.4302182	0	0	0	3.2241E-05	0.00669422
Rad51ap1	223.481587	394.278273	3157.30625	660.108255	835.242797	369.995821	65.8722664	598.998618	1787.25745	253.883325	0	0	120.567614	0	0	1824.99237	0.70973695	1.11162028	0	3.5052E-05	0.00717109
Kif11	1372.69267	532.808477	7698.19178	1706.91359	3830.14311	3703.34232	2702.65853	3294.07901	812.156012	1470.70983	95.9044195	229.411057	10.1220643	170.107772	2.09386527	0.71059368	0	1836.01713	0.70973695	2.77905071	2.86947994	3.6483E-05	0.00717109
Poc5	700.528821	460.583328	231.198627	1885.55675	1859.5834	598.987137	1424.0731	206.900489	1435.65528	1010.81832	0	115.921488	0	7.16243249	1900.18273	0	0	7.80710642	5.55810141	0	3.6213E-05	0.00717109
Depdc1a	256.14428	46.1767347	125.23259	0	310.29562	51.8896579	46.4423173	832.149219	307.89294	703.982192	0	0	1.04693264	0	0	0	0	0	0	0	0	3.5778E-05	0.00717109
Cdc20	235.515211	14.2082261	231.198627	0	221.952631	133.108253	1876.64874	270.355484	552.471779	1129.7808	0	0	39.9902481	0	0	0	0	0	0	0	0	3.7069E-05	0.0071904
Melk	2144.56369	248.643956	0	3390.95214	3188.37876	794.137372	8313.6487	4746.30962	1094.33764	4578.60443	0	1.62127956	0	1.04693264	0	0	0	3037.32279	2.48407932	0.27790507	0	4.0687E-05	0.00778978
Nup37	192.537983	338.629388	3950.84737	443.340032	484.061167	391.428506	1682.82315	1899.10259	1860.85608	4114.72332	0	0	452.962377	0	2.09386527	0	0	12.5997316	0	1567.94041	2.39123328	4.1245E-05	0.00779524
Cenph	487.361768	380.070047	40.9414235	2236.30734	355.562275	1328.82646	6.63461676	288.544538	1019.77484	334.037918	0	3.24255911	0	1.19373875	4.18773054	4.26356205	9.17819263	612.661947	7.80710642	4.44648113	2.86947994	4.1778E-05	0.00797607
Mad2l1	1559.21384	1498.96785	939.244422	2981.38002	2034.07905	1027.64083	2319.27246	1524.57343	2659.51365	153.780757	0	0	257.84757	2.09386527	0	0	0	933.955101	1.4194739	264.843532	2.86947994	4.2538E-05	0.00783873
Ankle1	189.959349	0	787.520323	35.9464891	995.866412	103.779316	988.557897	146.339207	1330.8817	2783.28663	0	0	0	1.04693264	0	0	0	824.494933	0	0	0	4.5573E-05	0.0082942
Ska1	679.040207	9.47215071	1214.99695	1259.21641	1166.71153	1218.27892	0.94780239	688.290338	4656.31828	883.513972	0	0	0	1.57039895	0	0	0	824.494933	0	0	0	4.6463E-05	0.00835313
Reep4	231.217488	55.6488854	3406.56727	465.125783	595.76759	1226.17518	1604.15555	209.794202	761.376174	727.194382	0	0	3.58121624	0	0	424.896329	374.448272	0.70973695	0	60.2590788	5.6386E-05	0.00989579
Cenpc1	894.785892	2729.16342	3454.73365	2486.84347	5775.87917	6221.11876	2958.09127	3173.16314	3858.94627	2967.17069	2583.25005	313.717594	18.9788706	37.0059012	215.668123	79.5864916	0.26994684	0.78748322	1.4194739	11.3941079	1.43473997	5.5968E-05	0.00989579
Cenpl	34.3817826	221.411523	0	467.304358	195.668767	99.2671715	612.280346	2460.48294	623.177882	122.226687	0	0	357.004029	0	0	0	0	0	0	0	0	5.7658E-05	0.00999987
2700099C18l	835.477317	23.6803768	92.7202827	1009.76956	292.773044	1047.94548	420.824263	4187.82298	4758.19935	1670.18959	0	0	9.42239372	294.185782	0	0.78748322	0	28.3463172	696.327132	6.2835E-05	0.01077111
Prr11	471.889966	81.6972999	174.60313	11.982163	86.1526662	0	485.74827	301.15286	571.112478	2371.63295	0	0	1.04693264	0	0	0	0	0	0	0	0	6.959E-05	0.01179192
2610021K21l	752.961039	17.7602826	0	1136.12691	1037.48253	684.717876	3627.71366	545.464925	6526.8161	222.329255	0	0	11.9373875	0	159.883577	0	0	0	0	0	0	7.5369E-05	0.01262607
Kpna2	38.6795054	7.10411303	101.149399	25.0536136	54.0279432	9.02428832	771.511148	98.3862465	26.354093	79.7919022	0	12.6525804	1.19373875	17.7978548	0	0.53989368	4.72489933	17.0336867	0	0.95649331	7.8053E-05	0.0129288
Dbf4	2584.65051	159.842543	5784.78231	2274.4324	5551.00611	6067.70586	3067.56245	4408.77865	11148.7455	4278.65941	0	0	305.00025	5546.6491	0	0	12.5997316	20.5823715	441.035347	3.82597326	8.3506E-05	0.01355534
C130080G10	1228.28918	2571.68892	0	5164.31227	3438.80557	485.055497	296.188248	587.837153	8.03478445	6047.50081	0	0	0	138.48273	0	0	0	0	0	0	0	8.3675E-05	0.01355534
Trim59	5902.49253	3207.50703	11757.4135	682.983293	19669.0918	3461.94261	16417.8331	15037.1803	5364.66488	10549.2149	0	0	85.9491898	2.61733159	0	38.8723452	10690.4785	4.25842169	3436.2962	6.6954532	9.3109E-05	0.01491974
Dleu2	1517.09616	86.4333752	0	30.5000514	161.353722	457.982632	97.1497453	1036.98277	482.087067	210.360469	235.264432	0	0	2.09386527	0.71059368	0	0	2.36244967	0	0	0	9.5033E-05	0.01505569
Cenpa	1069.27344	325.605181	3707.60715	183.000308	2691.90576	472.647101	8328.33963	4432.54844	2194.13894	3373.7467	0	139.430042	0	196.966893	1.04693264	0	0	173.530684	72.2553184	711.631025	0	9.6E-05	0.01505569
Spag5	194.257072	15.3922449	888.669722	871.430039	105.135457	48.5055497	646.875134	255.266837	1724.58613	765.639571	0	0	0	1.04693264	0	0	0	564.231729	0.70973695	0	385.466805	0.00010061	0.01561313
Bub1b	563.861235	157.474506	541.871782	261.429012	327.818196	408.349047	1638.75034	469.814996	1489.00625	853.047973	4.65870163	0	407.661782	1.04693264	27.0025597	0	373.267047	56.0692189	0	0	0	0.00012159	0.01687213
D2Ertd750e	460.715887	33.1525275	3112.75235	474.929371	1063.76639	439.934056	2172.83699	1524.78013	320.748595	1407.239	0	156.891997	1.19373875	1.04693264	1.42118735	0	237.426191	0	0	1270.70137	0.00012517	0.01902332
Troap	104.004892	0	38.5331045	80.6072786	65.7096606	2.25607208	528.399834	302.186329	137.55551	154.868828	0	9.72767733	0	0.52346632	0	0	0	0	0	0	0	0.00012976	0.01952017
Cdca3	1653.76374	153.922449	1328.18795	349.661303	2794.8509	503.104074	4178.38685	6551.57323	4458.98398	2201.89381	0	379.379416	2.53051607	0	2.09386527	1.42118735	328.795253	307.118457	0	0.55581014	552.374889	0.00013285	0.01978322
Ccdc9	200.273884	100.641601	132.457547	31.5893389	24.0935422	31.5850091	1.89560479	565.927611	88.0612375	319.530299	0	0	97.8865773	73.2852845	0	0	0	0	0	0	0	0.00013542	0.01990975
Ccnb2	2429.93249	760.140094	12128.2946	949.858742	3557.81307	1440.50202	4511.53939	2601.6548	4163.30391	5523.77578	0	406.941168	0	1.19373875	5.75812949	0	927.807296	0	0	5210.01908	0	0.00013641	0.01990975
Ccnf	121.195784	23.6803768	31.3081474	4.35715019	509.614924	311.337947	113.736287	67.7955648	237.82962	360.877012	1108.77099	0	0	0	0	0	0	4.72489933	0	0	0	0.00015784	0.02273239
Hmgb2	1981.25022	1765.37209	4461.411	3294.00555	3219.77337	3266.79237	1971.42989	3164.6887	2685.22496	3668.25136	18.6348065	289.398401	193.58448	193.982547	3.14079791	90.2453967	326.365732	2528.60863	569.918769	173.134859	147.778217	0.00015883	0.02273239
Smc2	6205.91176	2446.18292	17481.9878	5293.93749	7050.64659	9368.33931	8924.98124	3465.22148	19254.5574	3291.77866	0	0	1004.53116	3.14079791	854.133598	0	5148.17156	113.557912	1.11162028	110.953224	0	0.00016064	0.02277068
Nup35	147.841665	137.346185	2697.31731	370.357767	2075.69517	365.483677	1525.01405	1439.62228	525.474903	1335.0636	0	196.174826	0	140.861172	1425.39878	0	0.53989368	27.9556544	0	0.95649331	0	0.00017799	0.02499003
Birc5	8764.77593	1900.35024	29675.3071	3736.25629	13452.9579	9431.50933	14996.1295	24166.8452	24665.1813	26076.719	0	485.573227	0	5.23466318	4.26356205	8843.45854	7425.96678	3.54868474	1.66743042	645.15474	0.00019513	0.02713847
Ppargc1b	134.948497	59.200419	354.022897	39.2143518	63.5193386	151.156829	78.6675987	37.2048831	809.906272	231.033826	0	64.8511822	36.6924831	3.58121624	0	0	242.020299	0	0	0	0.00020082	0.02766793
Trip13	6872.91834	3270.26003	14097.0954	2697.07597	4622.30957	2126.34794	10981.2385	12176.9516	16021.3602	5587.6093	272.534045	0	539.569914	1.57039895	0	0.53989368	15763.4454	771.129194	5.00229127	0	0.00020828	0.0285025
Gm6531	61.8872087	60.3849608	482.867966	54.4643774	135.799965	117.315748	86.723919	76.2700104	123.414289	110.257901	83.8566293	21.887274	0	4.17808562	14.1335906	0	5.39893684	45.6740269	12.0655281	12.2278231	19.6081129	0.00021571	0.02890892
Spint2	76.4994663	15.3922449	197.48216	270.143312	93.4537396	9.02428832	508.495984	152.126633	76.4911479	65.2842836	30.2815606	0	0	1.04693264	1.42118735	0	146.078138	0	49.4671026	0	0.00021424	0.02890892
Lin54	996.212151	561.22493	1988.06736	2965.04071	1128.74595	3315.29792	3058.08442	42.5789218	1425.04937	852.013407	0	0	475.108022	1.04693264	0	1.61968105	7296.42579	9.93631727	0.55581014	32.042526	0.00022344	0.02967507
Cdca8	3982.26997	449.927159	8878.2681	1645.91349	3849.1259	2279.76084	7154.01247	13246.7986	10374.1923	6718.11548	0	132.134284	297.335639	185.029506	2.61733159	0	5409.22225	0.70973695	1.11162028	955.058574	0.00022966	0.03022921
Kif22	565.580324	54.4648666	1424.52071	135.071656	402.289145	523.408723	3355.69437	2008.857	1463.93773	1303.50953	0	0	0	0	2273.07032	2.12921084	2060.944	0.95649331	0.00024299	0.03169996
Uhrf1	805.393258	1024.1763	366.064493	1166.62696	2326.85209	817.826129	219.890155	66.555402	93.8462823	173.003352	34.9402622	0	35.0722433	0	0	5884.07463	2.48407932	1.66743042	0	0.00024703	0.03194552
Ect2	4910.5781	561.22493	24008.5324	9200.12264	9912.66736	820.082201	7499.01254	6433.13768	4637.0348	7919.70899	0	0	1.19373875	3309.87753	3823.70457	1.07978737	4292.1773	0	1.11162028	1.91298663	0.00025093	0.03216751
Ptgr2	1067.55435	2004.54389	622.550469	1126.32333	1058.65564	1494.64775	265.38467	505.27813	334.247033	505.953198	1551.34764	1466.44736	5171.1096	3329.93424	1184.08081	2618.53769	5745.81853	1774.98718	1824.73369	2390.53942	6017.29944	0.00026193	0.03314194
Ube2c	3981.41043	1143.7622	14453.5267	1700.37786	9948.44262	4060.92975	43576.1628	33860.5775	13512.9005	28656.899	0	1733.95848	1155.18059	23.2779056	10.4693264	1.42118735	538.274003	380.354396	142.657126	15.840589	5886.25985	0.00026303	0.03314194
Ndufb10	4369.92457	4926.70239	7351.39384	9181.60475	4586.53431	5694.32593	4849.43095	8074.07972	11638.2246	6191.48892	6815.68048	18339.1037	17669.3285	10879.7349	8475.44315	12807.7404	14166.2704	12646.1931	9357.88166	11385.7707	24637.3548	0.00026838	0.03352892
H2afv	5850.06031	4802.38041	7801.7495	6555.33247	7698.9819	5662.74092	8178.11295	18581.1521	16486.0921	9959.48016	3799.17118	3634.90876	5316.61427	3738.78976	1995.97707	1338.75848	1800.27549	8945.8094	1850.63909	3629.44022	3760.45346	0.00027748	0.03437534
Maged2	1077.86888	996.943862	345.593781	260.339724	476.029986	605.755354	162.074209	360.267285	439.342014	1067.76073	2147.66145	2507.30883	1732.13825	1881.33227	5668.09329	4063.17463	1323.27942	323.261863	1176.03412	4066.5849	1531.3458	0.00028654	0.03520085
Tcfap2d	82.5162783	177.602826	195.073841	197.161046	205.89027	276.36883	74.4024879	52.2935302	170.33743	81.968045	69.8805244	55.1235049	25.3051607	26.8591218	55.4874297	55.4263067	38.8723452	31.4993289	22.7115823	71.6995082	123.387637	0.00029154	0.03551954
Tab3	673.023395	1456.34317	1885.7138	1152.46623	156.242971	1262.27233	599.958915	1448.9235	2428.75464	759.836523	0	43.774548	0	1052.87758	1.04693264	0	0.78748322	1015.98844	190.920784	0	0.00030319	0.03661707
Mns1	328.346024	309.028917	0	1.08928755	475.299879	7191.22976	544.512475	1127.30796	670.422414	4224.25584	0	0	0	1.61968105	162.221544	0	0	0	0	0	0	0.00030551	0.03661707
Uap1	378.199609	422.694725	195.073841	879.055052	86.1526662	358.715461	8.53022154	590.110785	48.2087067	99.3771873	0	41.3426287	35.427225	132.505001	0	0	1.18122483	0	0	170.734057	0.00036522	0.04342053
Gm6724	17.1908913	15.3922449	36.1247855	10.8928755	35.0451523	13.5364325	26.0645658	72.5495221	34.7102688	52.9528078	13.9761049	16.2127956	10.1220643	9.54990998	14.6570569	5.6847494	5.39893684	9.44979866	1.4194739	7.78134198	9.56493314	0.00038922	0.04590313
Rtkn2	157.296655	0	697.208359	52.2858023	181.796728	0	369.169032	632.483013	372.492607	38.0824988	0	0	0	0	0	0	0.78748322	0	0	0	0.00039398	0.04609554
Mastl	1785.27406	4271.93997	20733.2185	86.0537163	291.312829	4297.81731	5.68681436	0	3956.64925	7314.3786	0	0	0	3.14079791	0	0	823.313709	0	0	3.3477260	0.00040469	0.04667924
Gas2l3	691.07383	319.685086	8633.82372	350.750591	4670.49666	205.302559	4611.05864	2070.24505	4846.26059	755.484238	0	1.62127956	0	523.454441	525.036716	0	1.57496644	493.267179	3.33486085	804.410877	0.0004053	0.04667924
H2afx	603.400285	224.963579	463.601413	484.732959	530.057929	536.945105	1096.13347	1508.8647	1200.71819	284.712015	37.269613	286.155841	0	161.154731	0	91.5119794	5.90612416	318.317021	3.33486085	31.5642794	0.00041211	0.04709513
Exosc6	89.3926348	124.321978	497.31788	131.803793	403.749359	527.920867	138.379149	443.978272	610.643618	2.17614279	0	3.24255911	0	187.924408	0	40.2220794	0.78748322	1.06460542	262.064482	0	0.00042403	0.04771809
Cdk1	8264.52099	3483.38342	38582.475	6642.47547	20610.2001	10768.232	19603.8708	35052.1673	41386.5319	22837.5305	0	905.484632	0	367.074665	10.4693264	783.07423	1970.61195	12413.098	7.09736948	2.22324057	1393.13251	0.0004215	0.04771809
Atp5sl	85.9544565	92.2009419	2.40831903	11.982163	15.3322541	41.7373335	16.1124738	74.4024879	96.3193085	11.5700896	10.8807139	181.689363	56.7447844	479.532796	423.777255	179.548947	26.291966	217.037261	157.890386	59.6179036	108.938788	236.253849	0.00043516	0.04906965
Zbtb41	1276.42368	859.597677	2309.57795	2300.5753	1382.8233	691.486093	799.94522	385.277234	0	434.503177	0	4.05319889	0	20.2935587	0	16.1968105	0	22.0018454	771.186571	94.6928381	0.0004427	0.04906965
Espl1	192.537983	34.3365463	124.02843	0	121.197819	618.16375	870.556499	211.86114	10.2845121	0.72538093	0	0	0	1.88962789	0	0	0	0	0	0	0	0.00047499	0.05225635
Rheb	8568.79977	15443.1577	22814.0062	15062.6682	14447.3641	9069.40976	14944.9481	13448.9452	7582.90817	11426.2004	5946.83262	8152.60424	2372.35882	6440.22054	11515.7355	7208.26224	3875.89676	4676.07537	5908.20522	3687.80029	11659.6535	0.00048283	0.05272451
Rad21	12036.2025	6719.30691	16540.3351	4173.0606	10794.637	7944.75783	25532.8487	33963.0976	6614.55595	25142.4284	2576.262	2807.24555	485.859086	1004.53116	3294.697	2711.62546	3620.2571	16779.2988	4044.08113	3038.05823	4713.1208	0.00053219	0.05726651
Fbxo5	6817.90749	2407.1103	0	14751.132	8476.54622	2760.30419	7172.96851	7381.8622	1666.0929	3778.50929	2217.54197	0	0	2.3874775	3.14079791	0	12593.4317	9.58144879	2.77905071	0	0.00053193	0.05726651
BC030867	25.786337	2.36803768	45.7580616	21.785751	7.3010734	0	55.9203412	71.9294407	35.9958343	98.6518064	0	59.4671278	1.79060812	0	0.78748322	0	0	0	0	0	0.00057314	0.05995681
Rad51	1542.02295	1532.12038	358.839535	2889.87987	1793.14363	1134.80426	415.137448	1895.3821	1114.5853	2596.86373	0	27.5617524	0	78.7867574	1.04693264	0	0	6473.50583	1932.25884	1.66743042	0	0.00056639	0.05995681

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Poc1a        101.426259  134.978148  169.786492  87.1430039  61.3290166  121.827892  2.36950598  406.566695  15.4267861  311.188419          0           0           0  5.96869374          0  29.1343407  41.3018668  14.9621812          0          0  76.9977118  0.00057101  0.05995681
Neil3        3340.19018  176.418807           0  5877.79561  806.038504  1758.60819  6.63461676  6040.41947  2145.60884   257.51023          0           0           0           0          0  875.437608  149.621812          0          0          0  0.00057346  0.05995681
Kif18b        145.263032          0  439.518223           0  669.508431  90.2428832  67.2939699  374.942544  683.920852  883.876662          0           0           0           0          0   178.36495          0          0          0  0.00058232  0.06045512
Ccdc99        283.649707  1031.28041  2.40831903  954.215893  1560.23939  1279.19287  937.850468  894.777439  866.149763  0.72538093          0  423.964604           0           0          0          0  452.015369          0          0          0  0.00059327   0.0611607
Taf8          390.233233   1018.2562  2402.29823  52.2858023  150.402112   119.57182  111.840682           0  597.466571           0          0  59.9873435           0           0          0          0          0          0          0  0.00060451  0.06188662
Wee1          1263.53051  533.992496  1127.09331  401.947105  1222.19969  329.386524  505.178676  816.440491  1725.55031  3129.65602          0  91.6022949  87.3028046  1283.86602  2.09386527          0  1459.60015  19.1628976          0          0  0.00062658  0.06370331
Stk17b        1126.86292  1520.28019  16299.5032  1196.03773  9165.76755  3289.35309  7280.07019  5546.00791  878.362636  5510.71892  7477.21611           0  2.53051607  389.755701  2.09386527          0          0  2652.24349          0  1.11162028  682.457979  0.00063837  0.06445794
Lrrc10         532.91763  670.154663  131.253387  640.501079  309.565512  271.856686  396.655302  974.147857   89.346803   101.19064  1409.25724  842.254729   2448.2743   1676.0092  1224.91118  2258.2667  275.075832  845.363239  744.15919  1547.09753  2386.92906  0.00071237  0.07095761
Cks2          2708.42492  992.207787  8297.86322  2069.64634  10076.2114  1581.50653  10043.3881  10619.7205  7162.52825  6905.26376          0   693.90765           0  503.757752  39.2599738  1.42118735  858.700904  655.186041  483.68573  107.549262  1064.09881  0.00070765  0.07095761
Kifc1         292.245152  8.28813187  8.42911661           0  32.8548303  226.735244  126.057718  0.41338759  136.269944   343.46787          0           0           0  1.04693264          0          0          0  0.00075591  0.07432706
Rfc4          116.898061   73.409168  122.824271  435.715019    68.63009  160.181118  253.063239  378.456339  243.936056  8.34188069          0           0  47.1526805           0          0   303.18104  289.217806  0.55581014          0  0.00075628  0.07432706
Chek2         205.431151  14.2082261           0  150.321682  290.582721           0  52.1291316  95.6992272  42.7450533  831.286545          0           0           0  19.6870805          0          0          0  0.47824666  0.00078453  0.07659295
Tmem194       126.353051  7.10411303           0  421.554281  186.907479  760.296291  821.744675  639.510602  561.792128  1184.90975          0           0           0  94.9022305  1.04693264  880.425564  0.53989368          0          0          0   0.0008405  0.08151748
Lcorl         4853.84816  1564.08889  2924.90346  1826.73522  1355.07922   959.95867  1648.70226  1043.59697  4574.68487  672.065431          0  522.862657           0  2662.63428  5.23466318  2250.45017  0.53989368  45.6740269  3.54868474  1.11162028  124.344131  0.00085987  0.08197665
Csrp3         6383.83749  10726.0267  6758.94736  4081.56045  6352.66397  5957.15833  8786.60209  5330.42628  6680.11979  8002.03972  7363.07792  11426.7783  19228.1264   13913.622  33278.8477  21771.8796  12892.3912   8929.666   8339.764  9102.50269  12091.5102  0.00086192  0.08197665
Lnx1            4040.719  589.641382  13426.3786  3730.80985  3645.42595  5704.47826  12.7953323  1254.01126  1255.35472           0          0           0  235.763403  3.14079791          0          0  1.57496644  2.12921084          0   4649.514   0.0008551  0.08197665
Iqgap3         572.45668  26.0484145  146.907461  297.375501  196.398875  54.1457299  297.609952  183.957478  82.9189755  668.438526          0           0  105.645879           0          0  142.534463          0          0  956.97156  0.00087943  0.08310635
Cit           179.644814  2.36803768           0  216.768222   29.934401  4.51214416  4.73901197  68.2089524  7.71339307   374.65925          0           0           0           0          0          0          0  0.00091078  0.08517937
Gm6682        24.9267924  9.47215071  172.194811  7.62501284   70.820412  42.8653695  196.668997  161.014466  117.307853  213.624684  4.65870163  38.9107093           0   2.3874775  92.6535382  4.97415573  22.6755347  1.18122483  10.2911857          0  0.95649331  0.00091293  0.08517937
4931417G12    117.757605           0           0  191.714609  253.347247  107.163424  1.89560479   1209.3654  779.374091  262.225206          0           0           0           0  16.2274558          0  127.572282          0          0          0  0.00098371  0.09120651
Tubb5         18285.9511  6922.95815   23605.139  15867.6517   15405.995  16819.0174  38907.7622  45434.6033  33794.3034   29022.491  2382.92588  1900.95028  6269.35358  7917.47225   6246.0001  2327.90488  11995.3579  22322.3932  10948.4022  8469.43493  14143.6666  0.00102803  0.09472006
Nup155        804.533713  181.154882  774.274568  1470.53819  691.411651  300.057587  740.233669   3934.2097  1682.48386   624.19029          0  595.009597           0  10.4693264   54.715713  957.771395  289.793826  114.977386   19.73126  0.95649331   0.0010364   0.0948983
Tsr1                   0  318.501068           0           0           0           0           0           0           0           0  498.481074  450.715716           0  2624.13665  5242.04954  1.07978737  1006.00982  1714.01473  7419.78748  202.298336  0.00109896   0.0993922
2810006K23I   422.895926  248.643956  20.4707118           0  177.416084  21.4326848  458.736359  13.8484843  34.0674861  9.42995208          0           0           0  16.2274558          0  127.572282          0          0          0  0.00109499   0.0993922
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