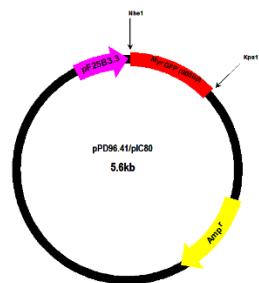


Supplementary Materials and Methods

ins gene overexpression plasmids

ins genomic sequences including all the exons in *C. elegans* were amplified and added with *Nhe*1 and *Kpn*1 in 5' and 3' respectively. The promoter in mother plasmid pPD96.41 (L2528) was replaced by pan neuronal promoter F25B3.3 (*Prgef-1*) to make pIC80 as shown in figure S1. pIC80 and *ins* genes were cut by *Nhe*1 and *Kpn*1 and ligated together. All the primer sequences of *ins* genes are available upon request.

Fig S1. pIC80 sequence map



daf-18 rescue plasmids

pPD96.41 was used as a mother plasmid to make p*Pdraf-18::daf-18* genomic::*daf-18* utr plasmid. *daf-18* genomic sequence was amplified from genomic DNA by using primers:

oIC261: 5'-aattgctagcATGGTTACTCCTCCTCCAGATGTGCC-3'

oIC208: 5'-GTGAAAAGTTCTTCTCCTTACTCATCAAATAAGCTTGATCAAAATTGAATCC-3'

daf-18 site directed mutagenesis plasmids were made by using Q5 QUICK CHANGE KIT (NEB) on pP*daf-18::daf-18* genomic::*daf-18* utr plasmid.

pP*daf-18::daf-18* cDNA::*unc-54* utr plasmid was also made by using pPD96.41 as mother plasmid, *daf-18* cDNA was amplified from a cDNA library by using :

oIC261: 5'aattgcttagcATGGTTACTCCTCCAGATGTGCC -3'

oIC263: 5'aattggtaccTTACAAATAAATAGCTTGATCAAAATTGAAATCC-3'

Tissue specific rescue plasmids were made by using pP*daf-18::daf-18* cDNA::*unc-54* utr or pPr*gef-1::daf-18* cDNA::*unc-54* utr as the mother plasmid, and the promoter was replaced by tissue specific promoters.

Promoter sequences:

daf-18 promoter

oIC-264: 5'-AATTAAGCTGGGGATCCAAAATCTCGTCG-3'

oIC-265: 5'-AATTCCCGGGTGGGGTAGTAGATGTACCTGG -3'

Human PTEN cDNA

oIC-843: 5'-AATTGAATTGACAGCCATCATCAAAGAGATC-3'

oIC-844: 5'-AATTGTCGACTCAGACTTTGTAATTGTGTATGCTG-3'

rgef-1 promoter

oIC-165: 5'-CAAATCCTCCAAGGGTAACGTACC-3'

oIC-166: 5'-AATTCCGGCGTCGTCGTCGATGCCGT-3'

egl-17 promoter

oIC-1726: 5'-ACAACTTGAAATGAAATACAGATGGATGTTACTGCCAAC -3'

oIC-1727: 5'-CTTGGCCAATCCCCAGCTCACATTCGGGCAC -3'

pie-1 promoter

oIC-604: 5'-GATCTCTAAAGTTACATAAAATTGAAAGTTGTGG-3'

oIC-605: 5'-TATCCTGGACTGGGATGATTCCGAG-3'

ges-1 promoter

oIC-443 : 5'-TCACCAATACCTTAGTGACGATG-3'

oIC-444 : 5'-CTGAATTCAAAGATAAGATATGTAATAGATTTTG-3'

Human PTEN cDNA was ordered from "Open Biosystems", Clone ID: 3937787. *Pdaf-18::PTEN::unc-54*

utr PCR product was also used in this study; *Pdaf-18*, PTEN cDNA and *unc-54* utr were stitched together by PCR.

DNA products

Human PTEN cDNA Ordered from "Open Biosystems", Clone ID: 3937787. *Pdaf-18::PTEN::unc-54* utr PCR product also used in this study; *Pdaf-18*, PTEN cDNA and *unc-54* utr were stitched together by using PCR.

aak-2 genomic sequence was amplified from genomic DNA by using:

oIC1989: 5'-gaaagctcccagattcgatttgcattct-3'

oIC1990: 5'-gtacaaaaagaagaaggctgagaaggc-3'

myo-3 promoter (stitch PCR)

Forward: 5'-ATGGTGGCCGATTTGAGTTTGTTGTGTGA-3'

Reverse 1: 5'-GGAGGAGGAGTAACCATTCTAGATGGATCTAGGGCGTGGGTTGA-3'

Reverse 2: 5'-TTACAAATAAATAGCTTGATCAAAATCGAATCC-3'

Supplemental figures

Fig S2. The A/PVM co-localization in *zdl5*; *rdvls1*; *daf-18 (ok480)* L1 arrest worms. (A) Q cell lineage in L1 arrest wild-type worms: QL/R. (B) A/PVM divided in *zdl5*; *rdvls1*; *daf-18 (ok480)* L1 arrest (C) Q cells divided in L1 arrest *zdl5*; *rdvls1*; *daf-18 (ok480)* worms: A/PQR, A/PVM and SDQR/L, in which A/PVM are touch neurons. (D) A/PVM co-localization in *zdl5*; *rdvls1*; *daf-18 (ok480)* L1 arrest worms. (E) The percentages of Q cell divisions at different time points (10, 12, 18, 24, 36, 40 and 48 hours) after egg preparation. Sample size larger than 100, three independent experiments were analyzed at each time point, error bars show standard deviations.

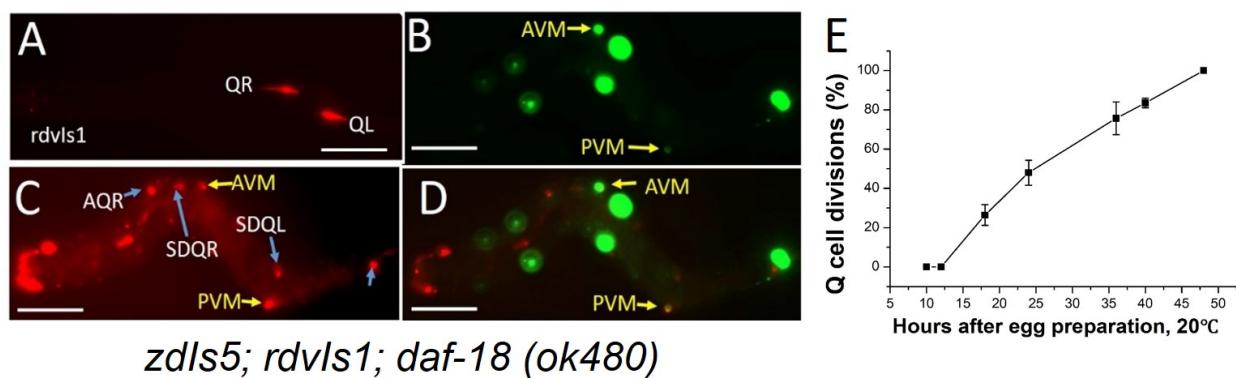


Fig S3. L1 arrest Q cell divisions percentages of rapamycin treated *daf-18* and *aak-2* L1 arrest worms. Data show the average of at least 3 independent experiments for each treatment, error bar show SD.

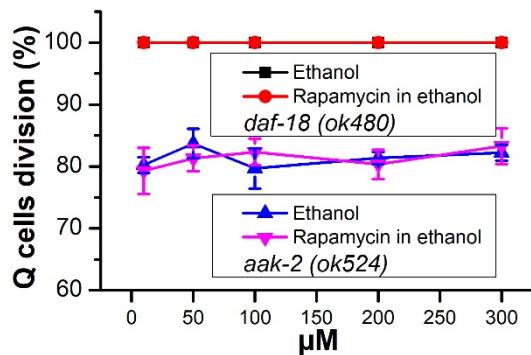


Fig S4. Okadaic acid suppresses L1 arrest Q cell divisions.

Data show average of at least three independent experiments at each concentration, error bars show SD.

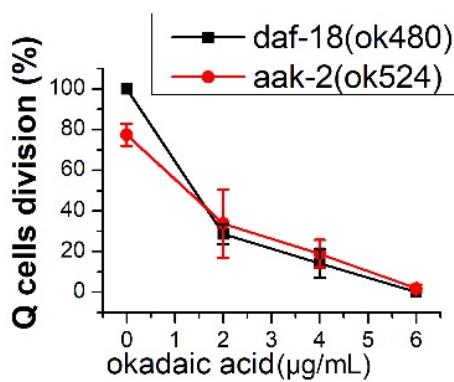


Figure S5. A/PVM percentage in *let-60 (ga89)* and drug treated L1 arrest worms.

Data show average of at least three independent experiments at each concentration, error bars show SD.

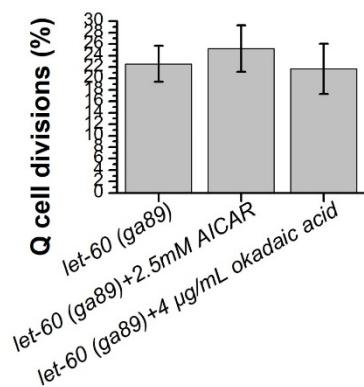


Figure S6. Q cells are in G1/S in L1 arrested worms.

A, *rdvls1* worms arrest in L1 for 48 hours, then feed with food and hydroxyurea for another 24 hours; B, *rdvls1* worms arrest in L1 for 48 hours, then feed only with food for another 24 hours;

C, Data summarized, percentages of Q cell divisions. Data show average of at 3 times repeat.

Sample more than 50 in each trail. Error bar show SD. P value was calculated by T-TEST,

P<0.001.

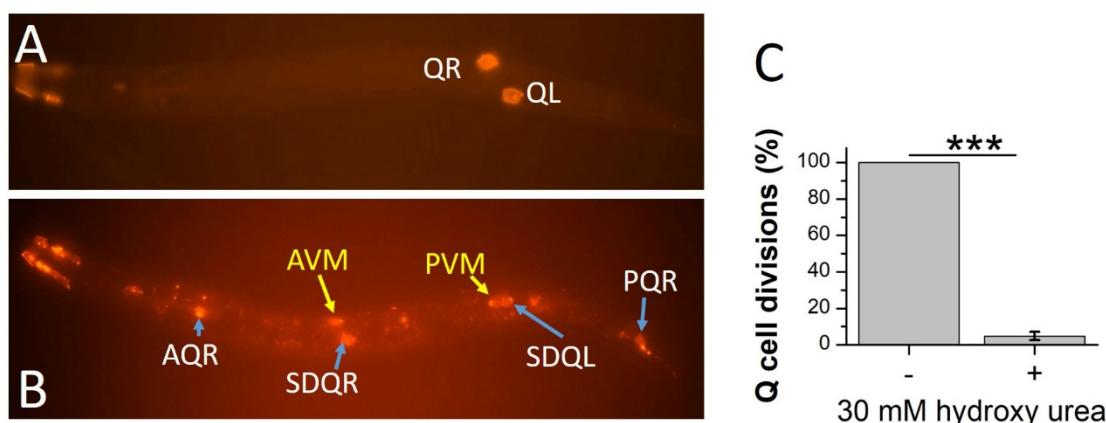


Figure S7. Germ cell divisions in L1 arrest worms was not affected by okadaic acid.

A, Germ cell specific PGL-1 antibody staining (Fukuyama et al., 2006); B, Okadaic acid (4 µg/mL) and AICAR (2.5 mM) have no function on germ cell division in *aak-1*; *aak-2* double mutants; C, Okadaic acid (4 µg/mL) has no function on germ cell division in *daf-18* mutants, AICAR (2.5 mM) fully suppressed *daf-18* germ cell division, which further confirm AMPK is downstream DAF-18 in these signal cascade.

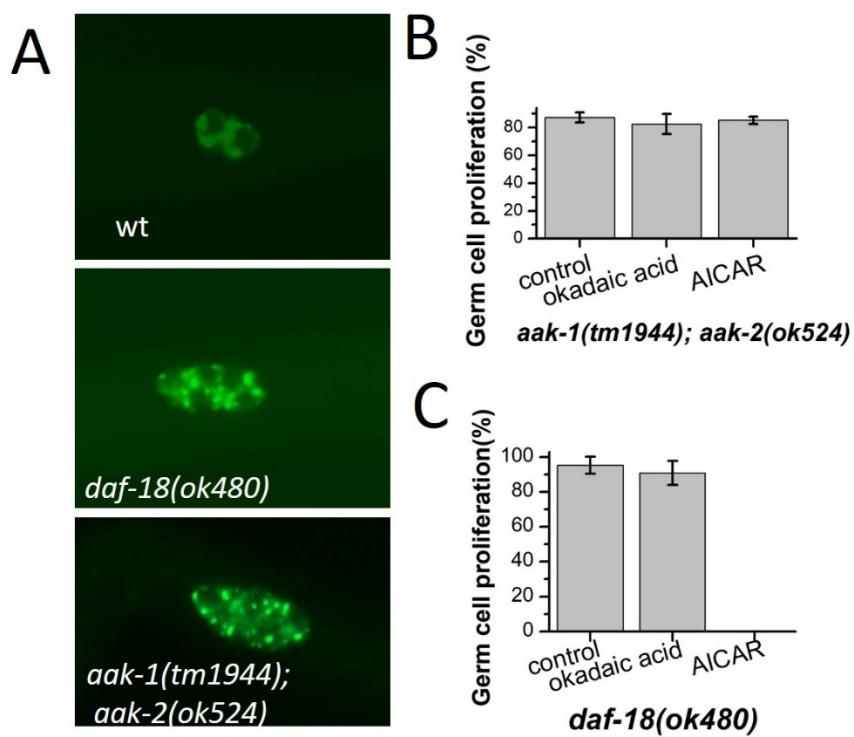
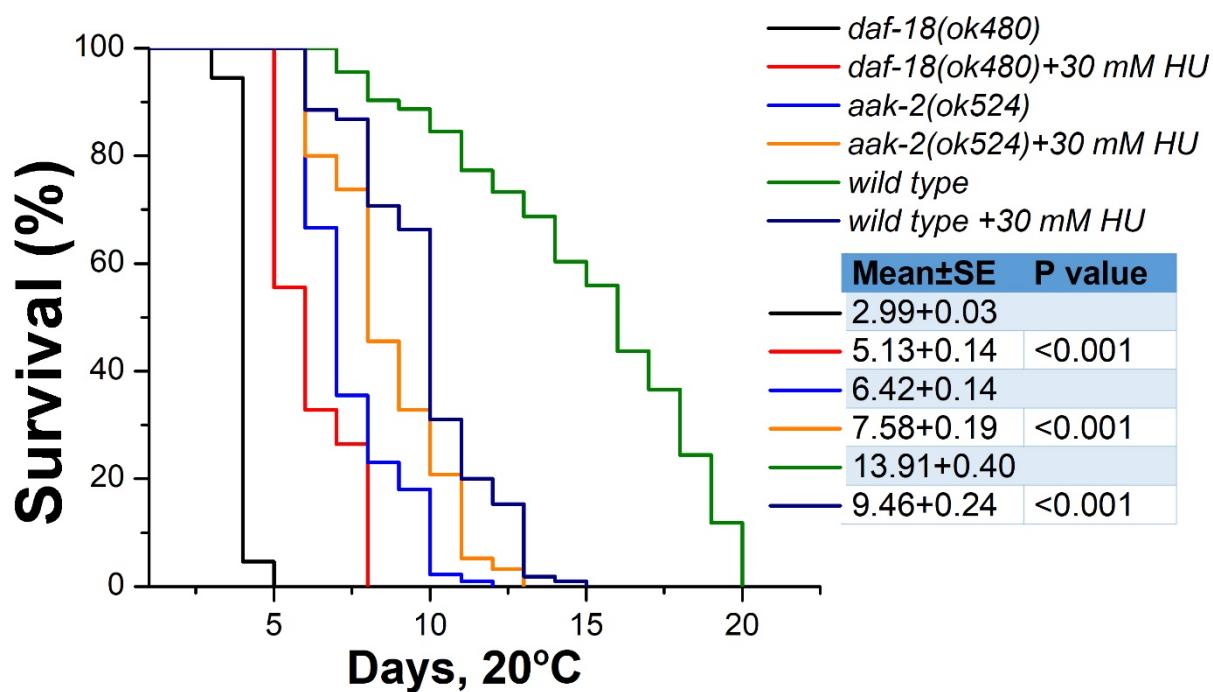


Figure S8. L1 arrest longevity of *daf-18* and *aak-2* mutants can be extended by hydroxyurea.

Hydroxyurea (HU) which will block cell divisions can significantly improve the L1 arrest longevity of *daf-18* and *aak-2* mutants, but not to the full extent of wild-type. Hydroxyurea does not extend wild type L1 arrested longevity, and instead, shortens it. Survival of these worms are checked every day. The mean survival rate was calculated by the Kaplan-Meier method, the significance of difference in overall survival rate is performed using the log-rank test (P value).



Supplemental tables

Table S1. Plasmids rescue in *daf-18* mutants.

pIC	PLASMIDS	MUTANTS	A/PVM	N	A/PVM	N	A/PVM	N	AVE	SD	P (T-TEST)		
			(%)	(%)	(%)								
1022	<i>Pdaf-18::daf-18 genomic::daf-18 UTR</i>	<i>daf-18 (ok480)</i>	0	100	5.22	115	1.32	76			2.18	2.71	<0.001
1110	<i>Pdaf-18::daf-18 cDNA::unc-54 UTR</i>	<i>daf-18 (ok480)</i>	8.33	136	3.12	164	2.38	98			4.61	3.24	<0.001
1109	<i>Pegl-17::daf-18 cDNA ::unc-54 UTR</i>	<i>daf-18 (ok480)</i>	0	70	0	110	0	99			0	0	<0.001
1022	<i>prgef-1::daf-18 cDNA::unc-54 UTR</i>	<i>daf-18 (ok480)</i>	0	117	13.24	151	15	60			9.41	8.20	<0.001
1126	<i>Pdaf-18::human pten cDNA::unc-54 UTR</i>	<i>daf-18 (ok480)</i>	0	111	0	214	0	76			0	0	<0.001
1211	<i>Pmyo-3::daf-18 cDNA::unc-54 UTR</i>	<i>daf-18 (ok480)</i>	100	54	100	114	98.88	157			99.62	0.64	#
1212	<i>Pges-1::daf-18 cDNA::unc-54 UTR</i>	<i>daf-18 (ok480)</i>	99.32	77	100	56	100	89			99.773	0.39	#
611	<i>Ppie-1::daf-18 cDNA::unc-54 UTR</i>	<i>daf-18 (ok480)</i>	93.33	45	100	83	98.65	105			97.32	3.52	#
1022	<i>Pdaf-18::daf-18 genomic D137A::daf-18 UTR</i>	<i>daf-18 (ok480)</i>	3.20	95	0	104	1.58	65			1.59	1.60	<0.001
1065	<i>Pdaf-18::daf-18 genomic C169S::daf-18 UTR</i>	<i>daf-18 (ok480)</i>	100	118	98.88	118	100	91			99.62	0.64	#
1025	<i>Pdaf-18::daf-18 genomic G174E::daf-18 UTR</i>	<i>daf-18 (ok480)</i>	89.92	129	100	112	95.65	138			95.19	5.06	#
1209	Genomic <i>aak-2</i>	<i>aak-2(ok524)</i>	10.22	235	3.25	114	5.69	185			6.38	3.54	<0.001
1210	<i>prgef-1::aak-2 cDNA::unc-54 UTR</i>	<i>aak-2(ok524)</i>	15.32	247	9.18	98	7.63	106			10.71	4.06	<0.001
1208	<i>prgef-1::dbl-1 genomic DNA::unc-54 UTR</i>	<i>zds5</i>	63.23	93	59.87	101	52.37	124			58.49	5.56	
1208	<i>prgef-1::dbl-1 genomic DNA::unc-54 UTR</i>	<i>daf-2(e1370)</i>	0.32	53	6.51	108	4.34	92			3.72	3.14	

N: sample size; AVE: average of independent experiments; SD: standard deviation; P: p value vs control, #: no significant difference.

Table S2. Function of components in IIS pathways on L1 arrest Q cell divisions.

IC	mutants	test 1	test 2	test 3	test 4	test 5	test 6	test 7	test 8	test 9	AVE	SD	P (T-TEST)
strains													
1609	<i>daf-18 (mg198)</i>	83.09	82.92	73.97	56.12	85.71	100	77.77	100		82.45	14.21	
	<i>N.</i>	138	113	125	136	117	134	138	113				
1599	<i>daf-18 (e1375)</i>	35.94	49.51	48.57	86.11	87.88					61.60	23.80	
	<i>N.</i>	132	158	148	142	140							
1193	<i>daf-18(ok480)</i>	100	100	1000	100	100	100			100	0	0	
	<i>N.</i>	161	72	100	85	107	127						
1578	<i>daf-18 (ok480);daf-2 (e979)</i>	0	0	0							0	0	<0.001
	<i>N.</i>	124	100	87									
1647	<i>daf-18 (ok480);age-1 (m333)</i>	0	8.57	1.69	1.17	6.06	0	0	0	1.28	2.08	3.10	<0.001
	<i>N.</i>	173	35	100	109	50	180	68	143	90			
1687	<i>daf-18 (ok480);akt-2(ok393)</i>	80.00	62.50	70.00	66.66						69.79	7.46	<0.001
	<i>N.</i>	220	132	201	140								
1744	<i>daf-18 (ok480);akt-1(ok525)</i>	20.08	36.96	26.58							27.87	8.51	<0.001
	<i>N.</i>	79	87	75									
1784	<i>daf-18 (ok480);pdk-1(sa680)</i>	31.53	35.59	28.56							31.89	3.53	<0.001
	<i>N.</i>	111	59	177									
1749	<i>daf-18 (ok480);daf-16(mu86)</i>	100	100	100							100	0	#
	<i>N.</i>	152	211	117									
1766	<i>daf-18(ok480);daf-16 (+)</i>	99.87	100	96.78							98.88	1.82	#
	<i>N.</i>	155	243	214									

Percentages of worms with A/PVM; N: sample size; AVE: average of independent experiments;

SD: standard deviation; P: p value vs *daf-18*, #: no significant difference.

Table S3. INS function on Q cell divisions during L1 arrest.

INS	TEST1	TEST2	TEST3	TEST4	TEST5	TEST6	TEST7	TEST8	TEST9	TEST10	TEST11	AVE	SD
	A/PVM (%)												
<i>ins-3</i>	90	85.71	100	100	100	85.71	100	100				95.18	6.78
<i>ins-4</i>	100	100	100	100	100	100	100	100	100	84.61	100	98.6	4.64
<i>ins-6</i>	95.12	92.1	90.69	85.71	74.07	82.5	80.48					85.81	7.38
<i>ins-9</i>	100	100	86.96	100	100							97.39	5.83
<i>daf-28</i>	43.04	46.82	40.9	26.31	50	45.95	40	38.46	33.33			40.53	7.28

AVE: average of independent experiments; SD: standard deviation; each sample size>60

Table S4. AMPK, TOR and TGF- β on L1 arrest Q cell divisions.

IC strains	mutants	Test1	Test2	Test3	Test4	Test5	Test6	Test7	Test8	AVE	SD	P (T-TEST)
1915	<i>aak-1(tm1994);aak-2(ok524)</i>	76.66	92.68	82.28	80.85	82.35	87.09			83.65	5.54	
	<i>N.</i>	60	241	79	94	68	183					
1685	<i>aak-2(ok524)</i>	76.58	88.88	74.89	91.89	68.30	78.26	76.34	75.29	78.80	7.76	
	<i>N.</i>	134	217	142	115	93	173	183	170			
1997	<i>ins-4(oe);daf-4(ok827)</i>	94.02	100	97.32						97.11	3.0	#
	<i>N.</i>	67	96	135								
2111	<i>ins-4(oe);sma-9(ok1628)</i>	100	96.22	90.25						95.49	4.92	#
	<i>N.</i>	61	53	135								
1999	<i>aak-2(ok524);daf-4(ok827)</i>	45.46	95.71	83.47	72.42					74.26	21.43	#
	<i>N.</i>	81	103	68	175							
2095	<i>aak-2(ok524);sma-9(ok1628)</i>	76.53	70.786	74.76						74.02	2.94	#
	<i>N.</i>	98	106	107								
2097	<i>aak-2(ok524);age-1(m333)</i>	72.44	86.88	79.48						79.60	7.22	#
	<i>NO.</i>	98	122	78								
1921	<i>aak-2(ok524);genomic daf-18(oe)</i>	68.45	75.32	65.88						69.88	4.88	#
	<i>N.</i>	317	241	146								
2018	<i>daf-4(ok827);daf-18(ok480)</i>	58.90	45.46	44.50	46.15	58.33	37.80	35.00		46.59	9.19	<0.001
	<i>N.</i>	89	128	100	147	207	201	142				
1916	<i>lin-31(gk569);daf-18(ok480)</i>	66.10	37.18	62.72	61.88	62.58				58.09	11.80	<0.001
	<i>N.</i>	147	199	346	118	181						
2102	<i>sma-9(ok1628);daf-18(ok480)</i>	0.00	5.56	9.67	0.00	2.78	3.38	9.38	4.08	4.36	3.71	<0.001
	<i>N.</i>	59	64	54	55	138	102	111	214			
1991	<i>daf-7(e1372);daf-18(ok480)</i>	90.90	89.34	98.50	100.00	100.00	92.12			95.14	4.88	#
	<i>N.</i>	133	122	132	67	94	135					
2109	<i>dbl-1(ok3748);daf-18(ok480)</i>	56.88	59.62	58.30						58.26	1.37	<0.001
	<i>N.</i>	109	52	112								
1876	<i>hif-1(ia4);daf-18(ok480)</i>	94.39	100.00	98.98	95.71					97.27	2.65	#
	<i>N.</i>	106	107	140	98							
2165	<i>unc-51(e369);daf-18(ok480)</i>	94.36	97.86	96.70	100.00					97.23	2.35	#
	<i>N.</i>	124	140	91	251							

1877	<i>rsks-1(ok1255);daf-18(ok480)</i>	97.08	100.00	99.38						98.82	1.54	#
	<i>N.</i>	137	125	87								
1878	<i>sgk-1(ok538);daf-18(ok480)</i>	98.80	96.55	97.02						97.46	1.18	#
	<i>N.</i>	168	187	129								
1880	<i>raga-1(ok386);daf-18(ok480)</i>	100	98.23	100						99.41	1.02	#
	<i>N.</i>	148	108	224								
1785	<i>raga-1(ok386); aak-2(ok524)</i>	76.58	88.88	74.89	68.3					77.16	8.58	#
	<i>N.</i>	132	87	158	65							
1742	<i>par-4(it47)</i>	0	0	0								
	<i>N.</i>	65	108	53								

Percentages of worms with A/PVM; N: sample size; AVE: average of independent experiments;

SD: standard deviation; P: p value vs control (*ins-4*, *aak-2* or *daf-18*), #: no significant difference.

Table S5. AICAR function on suppressing L1 arrest Q cell divisions.

	treatment	Test1	Test2	Test3	Test4	Test5	Test6	average	stdev	P (T-TEST)
<i>daf-18 (ok480)</i>	Control	100	100	100				100	0	
	N.	78	68	93						
	aicar	5.88	5.56	2.03				4.49	2.14	<0.001
	N.	119	126	246						
<i>ins-4</i>	Control	100	91.78	100				97.26	4.74	
	N.	289	73	207						
	aicar	1.96	2.90	3.11				2.66	0.61	<0.001
	N.	51	69	159						
<i>aak-2 (ok524)</i>	Control	61.11	72.44	73.08	83.05			72.42	8.96	
	N.	59	272	180	98					
	aicar	26.20	27.98	21.05				25.08	3.60	<0.001
	N.	145	168	114						
<i>aak-1(tm1994);aak-2(ok524)</i>	Control	92.18	82.66	79.55				84.80	6.58	
	N.	128	75	214						
	aicar	74.78	78.75	75.98				76.50	2.04	#
	N.	116	213	169						
<i>aak-1(tm1994);daf-18(ok480)</i>	Control	100	100	90.38				96.79	5.55	
	N.	241	101	52						
	aicar	4.76	9.09	11.23				8.36	3.30	<0.001
	N.	42	88	175						
<i>aak-2(ok524);daf-18(ok480)</i>	Control	100	100	100				100	0	
	N.	79	111	125						
	aicar	6.98	15.34	9.88				10.73	4.24	<0.001
	N.	43	99	145						

AICAR concentration is 2.5 mM. Percentages of worms with A/PVM; N: sample size; AVE: average of independent experiments; SD: standard deviation; P: p value vs control, #: no significant difference.

Table S6. Okadaic acid function on suppressing L1 arrest Q cell divisions.

		Test1	Test2	Test3	Test4	AVE	SD	P(T-TEST)
<i>daf-18(ok480)</i>	Control	100	100	100		100	0	
	N.	97	111	251				
	4 µg/mL	8.88	22.32	11.23		14.14	7.18	<0.001
	N.	79	112	60				
<i>aak-2(ok524)</i>	Control	81.11	72.44	73.08	83.05	77.42	5.44	
	N.	105	231	79	83			
	4 µg/mL	21.88	25.46	9.78	18.65	18.94	6.71	<0.001
	N.	82	92	56	81			
<i>aak-1(tm1994);aak-2(ok524)</i>	Control	76.66	82.28	80.85	82.35	80.54	2.67	
	N.	79	94	68	113			
	4 µg/mL	13.85	20.87	18.39	25.82	19.73	4.99	<0.001
	N.	96	101	152	93			

Percentages of worms with A/PVM; N: sample size; AVE: average of independent experiments;

SD: standard deviation; P: p value vs control, #: no significant difference.

Table S7. PP2A genes functions on L1 arrest Q cell divisions.

IC strains		Test1	Test2	Test3	Test4	AVE	SD	P(T-TEST)
1550	<i>ins-4(oe)</i>	100	100	100	100	100	0	
	<i>N.</i>	150	73	86	124			
2172	<i>ins-4(oe);sur-6 (ku123)</i>	9.36	5.97	17.35		10.89	5.84	<0.001
	<i>N.</i>	77	86	118				
2098	<i>ins-4(oe);pptr-2 (ok1467)</i>	25.22	16.9	26.47	5.71	18.575	9.57	<0.001
	<i>N.</i>	70	115	71	103			
2015	<i>ins-4(oe);pptr-1(tm3103)</i>	36.17	20	42.1		32.76	11.44	<0.001
	<i>N.</i>	147	138	112				
1193	<i>daf-18(ok480)</i>	100	100	100		100	0	
	<i>N.</i>	201	68	113				
2173	<i>daf-18(ok480);sur-6 (ku123)</i>	10.59	15.68	8.75		11.67	3.58	<0.001
	<i>N.</i>	212	98	69				
2098	<i>daf-18(ok480);pptr-2 (ok1467)</i>	37.61	22.63	20		26.74	9.50	<0.001
	<i>N.</i>	109	53	114				
2017	<i>daf-18(ok480);pptr-1(tm3103)</i>	33.33	37.04	38.1	13.72	30.54	11.40	<0.001
	<i>N.</i>	63	145	96	127			
1685	<i>aak-2(ok524)</i>	78.26	76.34	75.29	81.92	77.95	2.92	
	<i>N.</i>	152	93	78	114			
2099	<i>aak-2(ok524);pptr-2 (ok1467)</i>	37.73	33.33	41.84	69.23	45.53	16.18	<0.001
	<i>N.</i>	84	83	76	96			
2174	<i>aak-2(ok524);sur-6 (ku123)</i>	30.85	29.62	40.25		33.57	5.82	<0.001
	<i>N.</i>	111	98	67				
2016	<i>aak-2(tok524); pptra-1(tm3103)</i>	82.35	70.95	90.38		81.22	9.76	#
	<i>N.</i>	51	79	123				

Percentages of worms with A/PVM; N: sample size; AVE: average of independent experiments;

SD: standard deviation; P: p value vs control, #: no significant difference.

Table S8. MAP kinase signaling pathway function on L1 arrest Q cell divisions.

IC strains		Test1	Test2	Test3	Test4	Test5	Test6	AVE	SD	P(T-TEST)
1193	<i>daf-18(ok480)</i>	100	100	100				100	0	
	<i>N.</i>	81	59	111						
2038	<i>daf-18(ok480);mpk-1(ga119)</i>	15.32	23.46	10.89				16.56	6.38	<0.001
	<i>N.</i>	124	102	231						
2089	<i>daf-18(ok480);lin-45(n2018)</i>	50	45	36.89				43.96	6.62	<0.001
	<i>N.</i>	69	100	122						
2100	<i>daf-18(ok480);mek-2(n1989)</i>	55.3	56.47	50	41.42	41.02	40.08	47.38	7.50	<0.001
	<i>N.</i>	132	85	68	70	78	102			
2175	<i>daf-18(ok480);let-23(n1045)</i>	99.38	100	100				99.79	0.36	#
	<i>N.</i>	159	89	76						
2177	<i>daf-18(ok480);egl-15(n1458)</i>	100	98.45	100	100			99.54	0.74	#
	<i>N.</i>	67	147	79	123					
1685	<i>aak-2(ok524)</i>	88.88	83.1	73.12				81.70	7.97	
	<i>N.</i>	105	84	93						
2037	<i>aak-2(ok524);mpk-1(ga119)</i>	42.86	31.82	31.5	37.39	22.13		33.14	7.72	<0.001
	<i>N.</i>	49	63	88	127	115				
2093	<i>aak-2(ok524);lin-45(n2018)</i>	35	35.08	50.78	45.06			41.48	7.79	<0.001
	<i>N.</i>	60	57	63	161					
2179	<i>aak-2(ok524);mek-2(n1989)</i>	25	45.81	30.78	41.02			35.6525	9.472800976	<0.001
	<i>N.</i>	160	75	136	96					
2176	<i>aak-2(ok524); let-23(n1045)</i>	75.29	81.92	68.88	83.33			77.36	6.64	#
	<i>N.</i>	254	123	89	124					
2178	<i>aak-2(ok524); egl-15(n1458)</i>	74.89	91.89	68.3	78.26			78.34	9.94	#
	<i>N.</i>	114	75	69	98					
2008	<i>daf-18(ok480); let-60(sy93)</i>	100	99.38	98.47	100			99.46	0.72	#
	<i>N.</i>	56	102	221	74					
2177	<i>aak-2(ok524); let-60(sy93)</i>	86.25	85.38	80.16				83.93	3.29	#
	<i>N.</i>	105	83	65						

Percentages of worms with A/PVM; N: sample size; AVE: average of independent experiments;

SD: standard deviation; P: p value vs control, #: no significant difference.

Table S9. Activated dpMPK-1 antibody staining in various mutants.

	Test1	Test2	Test3	Test4	Test5	AVE	SD	P(T-TEST)
<i>daf-18(ok480)</i>	80.35	75.63	87.38	90	84.26	83.52	5.70	
N.	134	231	125	71	358			
<i>pptr-2(ok1467);daf-18(ok480)</i>	25.89	12.58	26.39			21.62	7.83	<0.001
N.	358	321	189					
<i>sur-6(ku123);daf-18(ok480)</i>	11.25	3.69	19.65			11.53	7.98	<0.001
N.	151	247	159					
<i>aak-2(ok524)</i>	61.68	70.28	60.38			64.11	5.38	
N.	152	258	166					
<i>sur-6(ku123); aak-2(ok524)</i>	13.12	17.35	10			13.49	3.68	<0.001
N.	89	137	68					
<i>aak-2 okadaic acid</i>	2.71	1.32	1.80			1.94	0.70	<0.001
N.	258	456	111					
<i>aak-2(ok524) AICAR</i>	0.89	3.84	0			1.58	2.00	<0.001
N.	112	78	67					
<i>daf-18(ok480) AICAR</i>	0	1.61	0			0.54	0.92	<0.001
N.	147	124	94					
<i>daf-18(ok480) okadaic acid</i>	1.73	2.26	0			1.33	1.18	<0.001
N.	346	221	114					

Percentages of worms with dpMPK-1; N: sample size; AVE: average of independent experiments; SD: standard deviation; P: p value vs control.

Reference

Fukuyama, M., Rougvie, A. E. and Rothman, J. H. (2006) 'C. elegans DAF-18/PTEN mediates nutrient-dependent arrest of cell cycle and growth in the germline', *Curr Biol* 16(8): 773-9.