

**Table S1 Primer sequences used for qRT-PCR.**

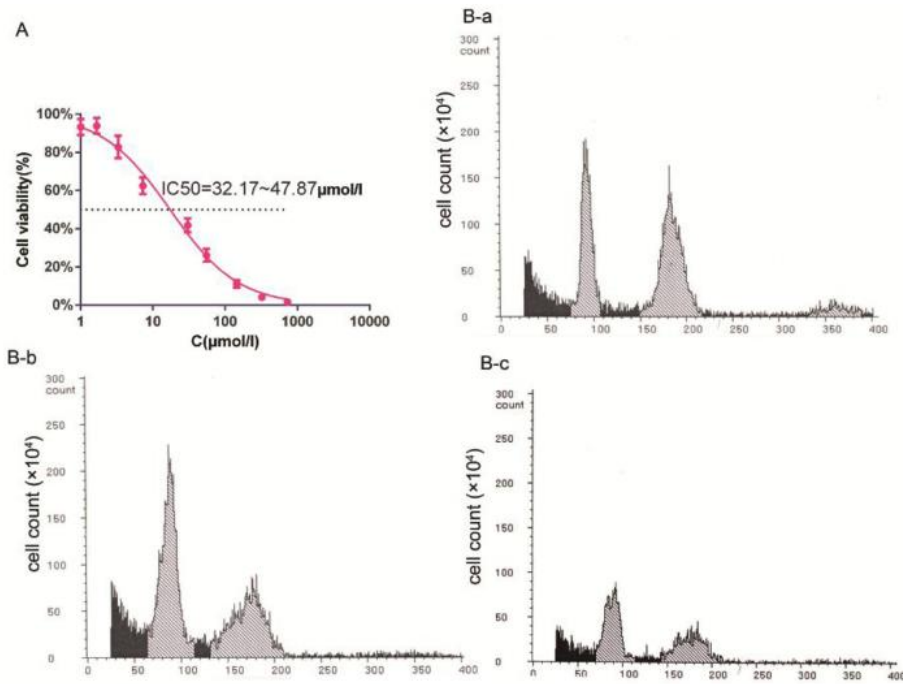
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<b>genes</b>	<b>primers</b>	<b>Sequences (5' to 3')</b>	<b>genes</b>	<b>primers</b>	<b>Sequences (5' to 3')</b>
mdm2	mdm2+	ACACGACTGACTGAATGGG	ccn1	ccn1+	CCAGCAGCGAGAATCAGA
	mdm2-	TGTCAAAGTCGCCCAAGAA		ccn1-	AGCCACAACCTCCACCTT
p53	p53+	GTGTGGCGGTCCCTATGAA	ccn3	ccn3+	TGCGGTGTGTCTGTTTCAGT
	p53-	TAGTAGAGGGGTCTTGCCC		ccn3-	GATACGCTGACCAACCCCAA
p27	p27+	CAAATAATCGTGGTTCCC	bub1	bub1+	CTGTACTTCACCGTCTGC
	p27-	CTACGAGTGGCAGGAGGT		bub1-	CACTGGAAGCCTGAAGTC
gadd45a	gadd45a+	GTCCACTTTTATCTTCCCA	mad2	mad2+	TGGAGACTAATGAGGTGCTG
	gadd45a-	GCCTACTATTACTCTGCCG		mad2-	CAAGAAGGTGACTGTGGC
socs3	socs3+	GACCACAGGCACCAAAAACC	cdc20	cdc20+	GCTGGTAGGCTTGGGTTTCT
	socs3-	CGCAGTAGCTCAAAGGGAT		cdc20-	TGTCTGGTCACGGTTTTGCT
cdc2	cdc2+	TCTTCCAGCCAGTAACC	securin	securin+	CGAGTTTACCAGGAAGGA
	cdc2-	GCCACCCAATAAACAAAT		securin-	CCAGAGCGGTTGAATGTG
$\beta$ -actin	$\beta$ -actin+	CGAGAAGATGACCCAGATCA			
	$\beta$ -actin-	GATCTTCATGAGGTAGTCAG			

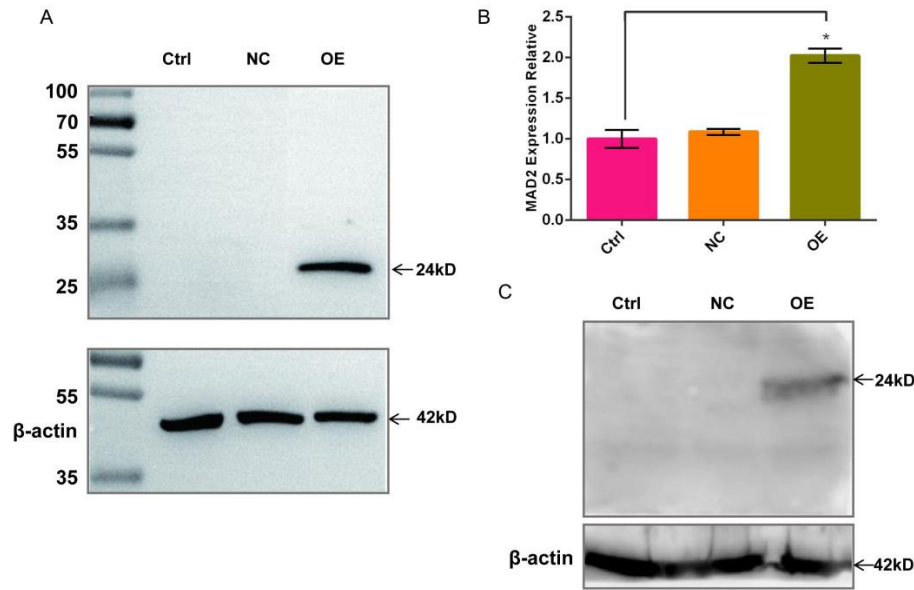
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**Table S2 Analysis of significant difference expressed genes related to cell cycle-regulation (SP600125-treated 48h VS control cells)**

Seq- ID	Gene name	SP600125-treated		Note
		Vs control log2 fold Change	Adjusted P-value	
c81783_g4	p53	1.52	6.46E-07	Cellular tumor antigen p53
c88250_g2	mdm2	1.94	5.48E-10	E3 ubiquitin-protein ligase Mdm2
c80659_g3	p21(CDKN1)	1.2	2.07E-03	cyclin-Dependent Kinase Inhibitor 1A
c87763_g3	p27(CDKN1B)	1.13	1.96E-03	cyclin-Dependent Kinase Inhibitor27
c59135_g1	p15(CDKN2B)	1.4	1.93E-04	Cyclin-dependent kinase inhibitor 2A
c80044_g1	gadd45a	2.28	4.59E-08	growth arrest and DNA damage-inducible protein
c50597_g1	14-3-3σ	-1.39	7.63E-04	14-3-3sigma protein
c86455_g1	cdc2	-2	6.47E-04	cyclin-dependent kinase 2
c89577_g2	cyclinB1	-1.92	1.15E-03	cyclin-dependent kinase B1
c88235_g1	cyclinB3	-2.29	4.23E-04	cyclin-dependent kinase B3
c87470_g1	cyclinA	-2.16	6.72E-04	Cyclin-A2
c86200_g1	p48	2.43	8.16E-13	Interferon consensus sequence-binding protein
c88655_g1	rbl2	1.26	2.26E-05	retinoblastoma like protein 2
c86566_g1	bub1	-1.76	7.75E-06	mitotic checkpoint serine/threonine-protein kinase
c81863_g1	mad2	-1.63	1.51E-03	spindle assembly checkpoint protein
c86627_g1	cdc20	-1.82	1.87E-03	cell division cycle protein 20 homolog
c87478_g1	securin	2.05	2.16E-05	Securin
c86455_g1	cdk1	-2	6.47E-04	cyclin-dependent kinase 1
c87293_g1	pk11	-1.95	4.90E-04	Polo-Like 1
c90774_g1	cdc14	1.26	1.81E-04	cell division cycle gene14A
c80357_g1	cks1	-1.69	1.57E-03	CDC28 protein kinase 2
c86804_g1	socs3	1.29	1.80E-04	suppressor of cytokine signaling 3b
c91500_g1	smc4	-1.81	1.02E-03	Structural maintenance of chromosomes protein 4
c88581_g3	rassf5	1.37	4.27E-05	ras association domain-containing protein 5-like isoform X1
c83067_g1	pttg	-1.91	1.88E-03	pituitary tumor-transforming 1
c93217_g2	esp1	-2.25	3.30E-04	Extra spindle poles-like 1 protein
c89653_g1	yeg1	-1.64	4.33E-03	non-SMC condensin I complex, subunit G
c86622_g1	bm1	-1.74	4.33E-03	non-SMC condensin I complex, subunit H
c91486_g2	frizzled	2.33	5.19E-12	Frizzled homolog 7a



**Figure S1 Effects of PFT-  $\alpha$  on SP600125-induced polyploidization in diploid crucial carp cells.** (A) The cytotoxicity of PFT- $\alpha$  was detected by cell counting kit-8 (CCK-8). (B) Diploid crucial carp cells treated with the indicated concentrations of PFT- $\alpha$  were determined by flow cytometry examination. The “a”, “b”, and “c” represent 30, 40, and 50  $\mu$ M concentrations of PFT- $\alpha$ , respectively.



**Figure S2 Overexpression of MAD2 by recombinant adenovirus pAd-MAD2-GFP-3Flag fusion protein in fin cells.** (A) Expression level of the recombinant adenovirus pAd-MAD2--GFP-3Flag fusion protein in 293T cells as detected by Western blot. The anti-Flag primary antibody was used at a 1:4000 dilution, while the Marker was diluted 1: 3000. (B) The mRNA expression of *mad2* gene in fin cells transfected with Ad-MAD2 recombinant protein. (C) The protein expression of *mad2* gene in fin cells transfected with Ad-MAD2 recombinant protein. The “Ctrl”, “NC”, and “OE” represent the blank control group, negative control group (transfected pAd-mCMV-GFP-3-Flag-pA), and MAD2-OE group (transfected pAd-mCMV-MAD2-GFP-3-Flag-pA), respectively. Values were normalized by β-actin expression level. Each bar represents the mean ± SD of three independent experiments (\*P < 0.05).