

Supplementary Materials

A

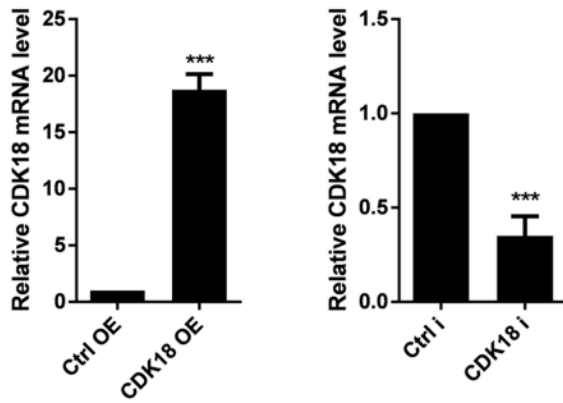


Fig. S1 The overexpression or interference efficiency of CDK18 OE and CDK18i viruses.

A Quantitative PCR assay of mRNA level of *CDK18* in purified OPCs transduced with CDK18 OE viruses or CDK18i viruses and control virus. Results are expressed as mean \pm SEM. Student's *t*-test: * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$. $n=4$ independent experiments.

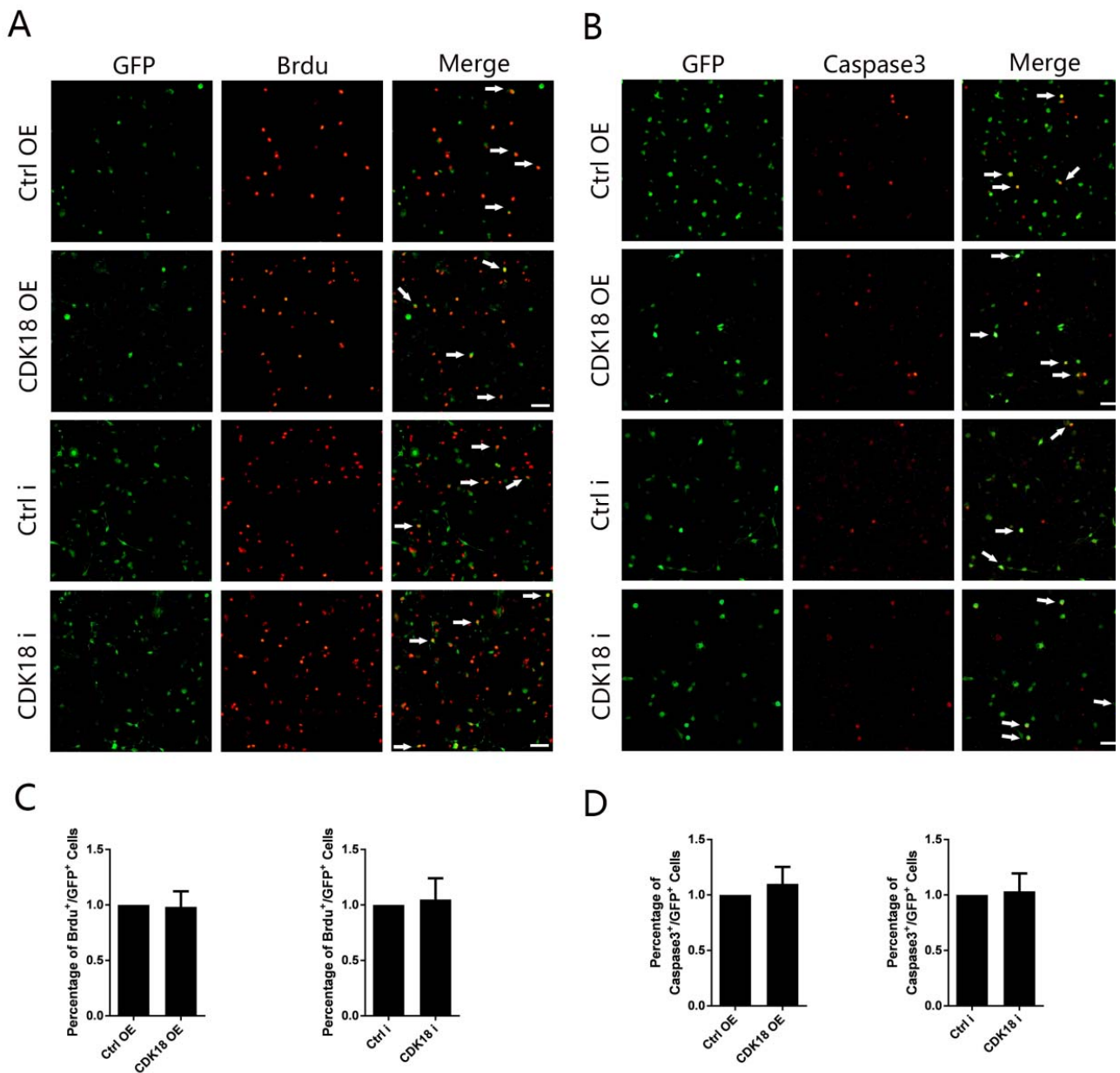


Fig. S2 CDK18 does not affect OPCs proliferation and survival.

A Representative images showing BrdU immunocytofluorescence staining (red) of CDK18 OE and CDK18i virus transduced OPCs (Green). **B** Representative images showing Caspase3 immunocytofluorescence staining (red) in CDK18 OE and CDK18i virus transduced OPCs (Green). **C** Quantitative analysis of the percentage of BrdU⁺GFP⁺ cells in all GFP⁺ cells in indicated conditions in A, Data are normalized to control. **D** Quantitative analysis of the percentage of Caspase3⁺GFP⁺ cells in all GFP⁺ cells in indicated conditions in B, Data are normalized to control. Results are expressed as mean ± SEM. Student's *t*-test. Scale bar, 20 μm. *n*=3 independent experiments.

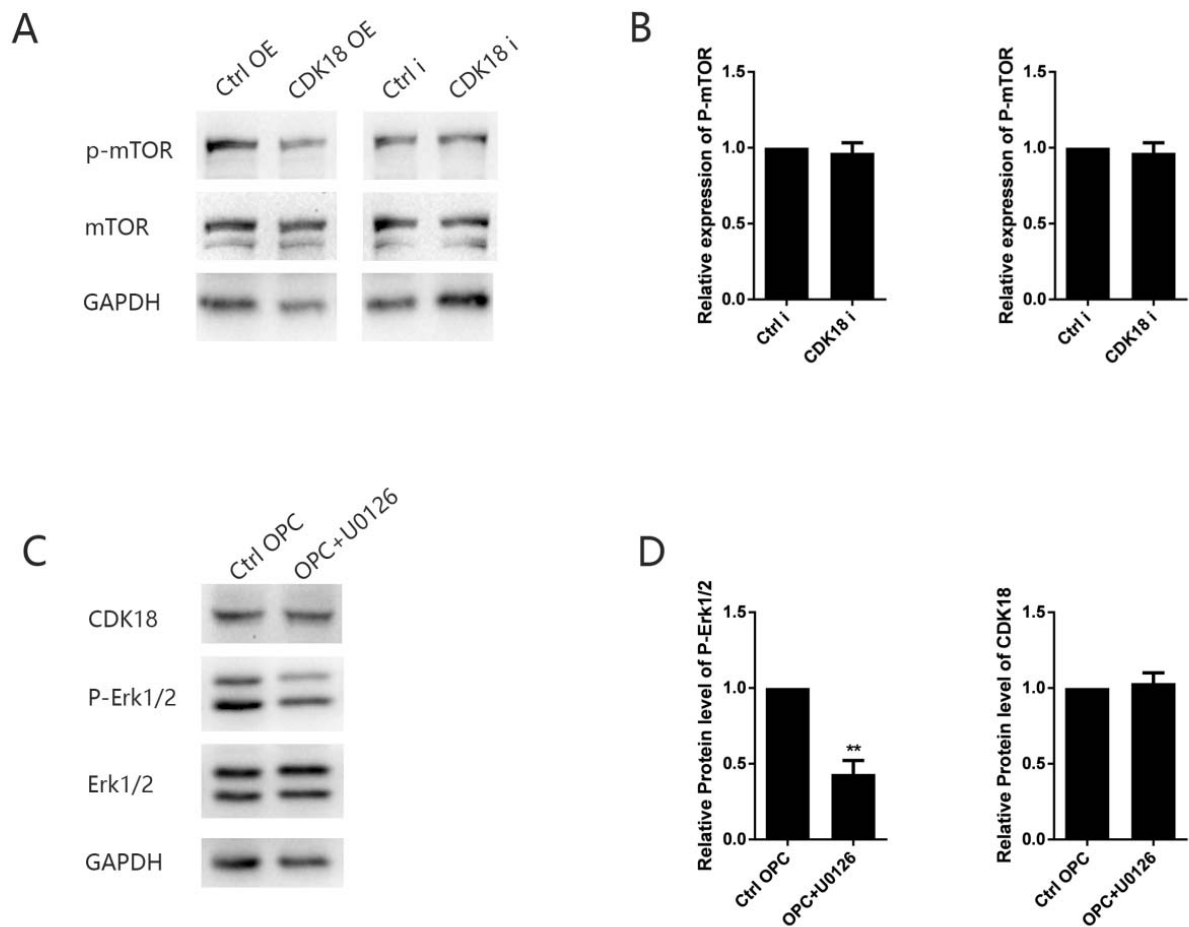


Fig. S3 The effects of CDK18 OE and CDK18i virus on P-mTOR expression, and the effects of Erk1/2 inhibitor on CDK18 expression.

A, B Representative western blotting figure(**A**) and statistical analysis(**B**) of the expression of P-mTOR and mTOR in purified OPCs transduced with CDK18 OE or CDK18i virus and control viruses.

C, D Representative western blotting figure(**C**) and statistical analysis(**D**) of the effect of Erk1/2 inhibitor U0126 (10nmol/L) on the expression of P-Erk1/2, Erk1/2 and CDK18 protein level in purified OPCs cultured in differentiation medium for 72 h. Results are expressed as mean \pm SEM. Student's *t*-test. *n*=3 independent experiments.