

## Additional file 1

**Table S1. p62 shRNA sequences**

<b>No.</b>	<b>Sequences 5' to 3'</b>
p62 shRNA1	GCTGAAACATGGACACTTTGG
p62 shRNA2	GCTCCTACAGACCAAGAATTA
p62 shRNA3	GCAGTGTGTGCCCAGACTACG
Con shRNA	TTCTCCGAACGTGTCACGT

**Table S2. Sequence of primers used in this study**

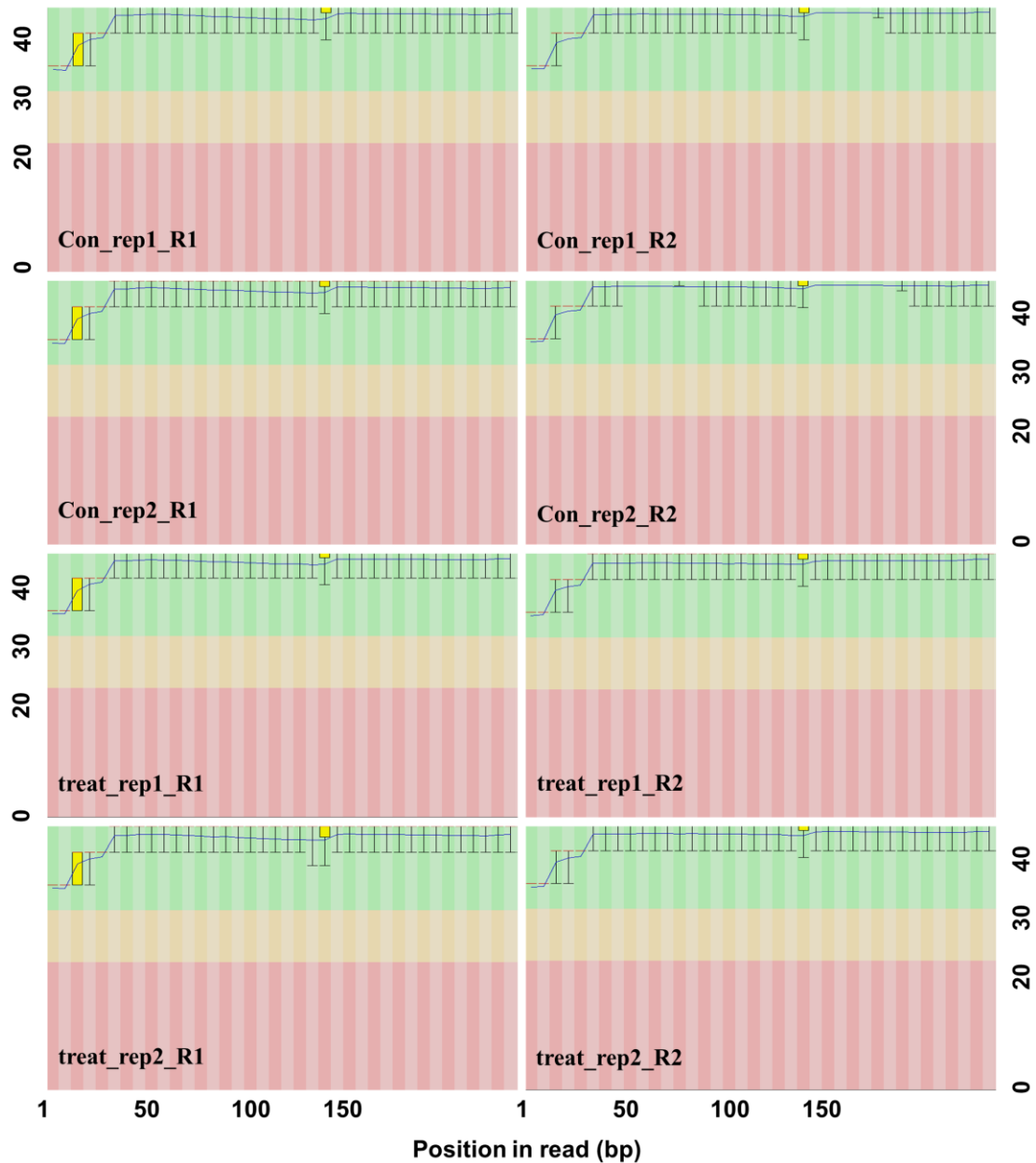
<b>Gene</b>	<b>PCR primer<sup>a</sup></b>	<b>Product size</b>
	qRT-PCR	
<i>Akt3</i>	F: TGGGTTTCAGAAGAGGGGAGAA R: AGGGGATAAGGTAAGTCCACATC	122bp
<i>Tcl1b1</i>	F: CACTTCCAGTCTACCTGGTCT R: GGACAGTTACATGGGTTCTCCT	132bp
<i>Col4a4</i>	F: GCCTGGTGTCTCGGGATCAAAG R: AGCTGGAGTCAACAAAATGCC	211bp
<i>Lpar3</i>	F: CAAGCGCATGGACTTTTTCTAC R: GAAATCCGCAGCAGCTAAGTT	211bp
<i>Gapdh</i>	F: TGGATTTGGACGCATTGGTC R: TTTGCACTGGTACGTGTTGAT	211bp

a. F, forward; R, reverse.

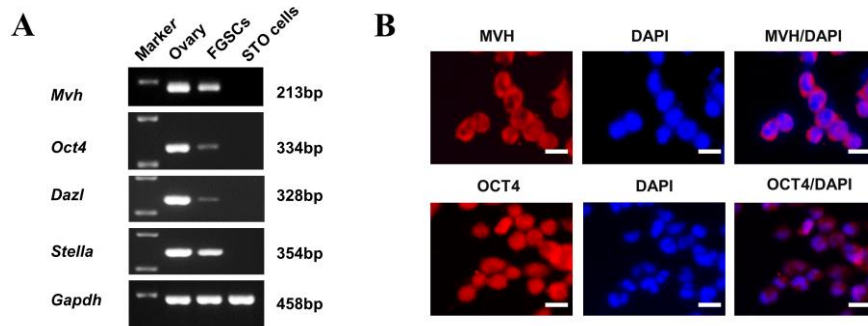
**Table S3 Sequence of primers used in RT-PCR**

<b>Gene</b>	<b>PCR primer<sup>a</sup></b>	<b>Product size</b>
<i>Mvh</i>	F: GGAAACCAGCAGCAAGTGAT R: TGGAGTCCTCATCCTCTGG	213bp
<i>Oct4</i>	F: CTCGAACCACATCCTTCTCT R: GGC GTTCTCTTTGGAAAGGTGTTC	334bp
<i>Dazl</i>	F: GTGTGTCGAAGGGCTATGGAT R: ACAGGCAGCTGATATCCAGTG	328bp
<i>Stella</i>	F: CCCAATGAAGGACCCTGAAAC R: AATGGCTCACTGTCCCGTTCA	354bp
<i>Gapdh</i>	F: GTCCCGTAGACAAAATGGTGA R: TGCATTGCTGACAATCTTGAG	458bp

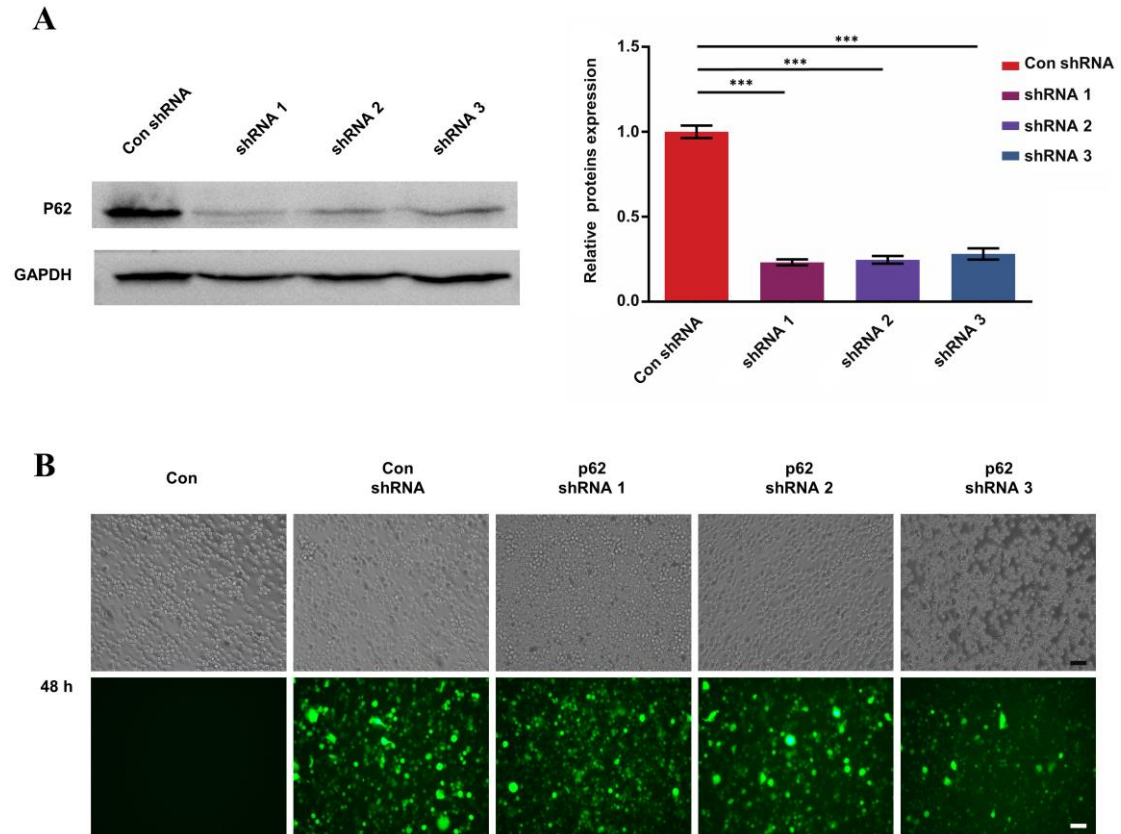
b. F, forward; R, reverse.



**Figure S1. Quality control of RNA-seq.** FastQC data showing the position-specific sequencing quality in each replicated group. Data filtering criterion was a Q-score > 10 (error rate < 10%). Con: untreated FGSCs. treat: SPD-treated FGSCs.



**Figure S2. Characteristics of FGSCs.** (A) The mRNA expression of FGSCs markers were detected by RT-PCR. STO is negative control. Ovary from adult mice was used as a positive control. Glyceraldehyde 3-phosphate dehydrogenase (*Gapdh*) expression was used as an internal control. *Mvh*, 213 bp; *Oct4*, 334 bp; *Dazl*, 328 bp; *Stella*, 354 bp; *Gapdh*, 458 bp. (B) Immunofluorescence staining of MVH and OCT4 in FGSCs (scale bars: 20  $\mu$ m).



**Figure S3. Verification of p62-knockdown efficiency.** (A) Western blotting was performed to validate knockdown efficiency of three shRNA lentiviruses. All data are expressed as the mean  $\pm$  SEM of values from experiments performed at least in triplicate. \*\*\* $P < 0.001$  compared with controls. (B) Fluorescence microscopy was used to determine the infection efficiency of three shRNA lentiviruses. Con: control.