**Supplementary data**

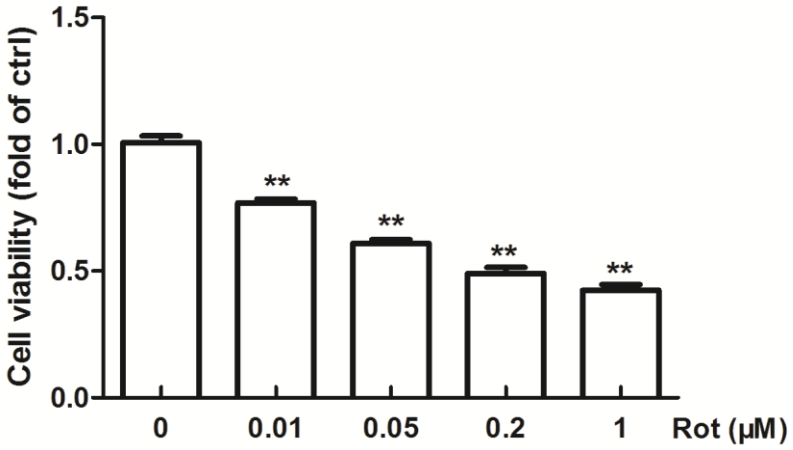


**Fig. S1** Rotenone decreased cell viability dose-dependently. Cell viability was determined by the MTT assay after treatment with different concentrations (0, 0.01, 0.05, 0.2, 1 μM) of rotenone for 24 h. Untreated cells were used as controls. Data represent as mean±SEM from three separate experiments. The statistical significance was determined by one-way ANOVA followed by Dunnett's test. $^{**}p$ <0.01 versus control.

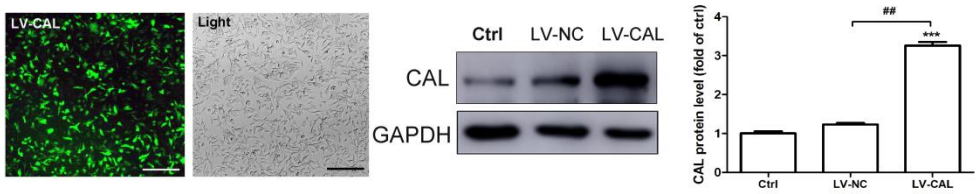


**Fig. S2** The lentivirus mediated gene *CAL* delivery in MN9D cells. After infection with either LV-CAL or negative vector LV-NC, the infection efficiency or the protein level of CAL was detected by microscopy for green fluorescence (left) or western blotting (middle), respectively. The protein level was normalized to GAPDH and represented as the fold difference of the control group (right). Scale bar=100 μm. Data shown in this figure represent as mean±SEM from three

separate experiments. The statistical significance was determined by one-way ANOVA followed by Dunnett's test. $^{***}p<0.001$ versus control; $^{\#\#}p<0.01$ compared to LV-NC group with rotenone treatment.

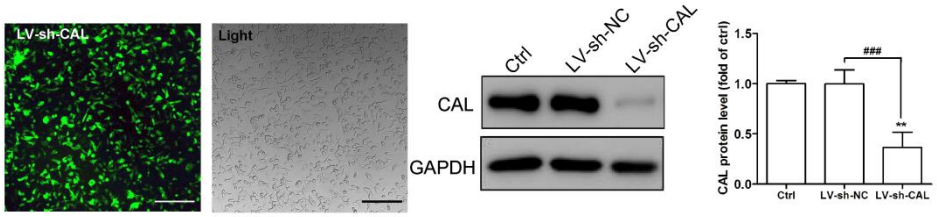


**Fig. S3** The lentivirus mediated CAL knockdown in MN9D cells. After infection with lentivirus delivered CAL knockdown LV-sh-CAL or negative vector LV-sh-NC, GFP in cells was determined by fluorescence microscopy (left), followed by examination of the expression of CAL by western blotting (middle). Scale bar=100 μm. The protein level was normalized to GAPDH and represented as the fold difference of the control group (right). Data shown in this figure represent as mean±SEM from three separate experiments. The statistical significance was determined by one-way ANOVA followed by Dunnett's test. $^{*}p<0.05$ versus control; $^{\#\#}p<0.01$ compared to LV-sh-NC group with rotenone treatment.