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Cellular Senescence Regulated by SWI/SNF Complex Subunits through p53/p21 and p16/pRB Pathway

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Highlights:

- H_2O_2 treatment (150 μM, 2 h) induced cellular senescence of HaCaT and GLL19 cells, as well as G2 cell cycle arrest.
- Separately overexpression of BAF57, BAF60a and SNF5 inhabited the cell proliferation and induced S cell cycle arrest of HaCaT and GLL19 cells.
- Separately knockdown of BAF57, BAF60a and SNF5 before H_2O_2 treatment alleviated the senescent state.
- BAF57, BAF60a and SNF5 regulated the cellular senescence involved in both p53/p21 and p16/pRB pathways by directly binding to p53.

[1]Abbreviations

[1] DDR，DNA damage response；DMSO, dimethyl sulfoxide; GFP, green fluorescent protein; IP, immunoprecipitation; LC50, Lethal Concentration 50; MRT, malignant rhabdoid tumor; MSP58, 58-kDa Microspherule Protein；NC，non-specific；PI，Propidium Iodide；PVDF，polyvinylidene fluoride；RS，replicative senescence；rMSCs，rat mesenchymal stem cells；SAHF, senescence associated