

Accepted Manuscript

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

Authors: Ling He, Ying Chen, Jianguo Feng, Weichao Sun, Shun Li, Mengting Ou, Liling Tang



PII: S1357-2725(17)30171-1
DOI: <http://dx.doi.org/doi:10.1016/j.biocel.2017.07.007>
Reference: BC 5172

To appear in: *The International Journal of Biochemistry & Cell Biology*

Received date: 11-2-2017
Revised date: 2-7-2017
Accepted date: 13-7-2017

Please cite this article as: He, Ling., Chen, Ying., Feng, Jianguo., Sun, Weichao., Li, Shun., Ou, Mengting., & Tang, Liling., Cellular Senescence Regulated by SWI/SNF Complex Subunits through p53/p21 and p16/pRB Pathway. *International Journal of Biochemistry and Cell Biology* <http://dx.doi.org/10.1016/j.biocel.2017.07.007>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

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

Ling HE^{1#}, Ying CHEN^{1#}, Jianguo FENG^{1, 2}, Weichao SUN¹, Shun LI¹, Mengting OU¹, Liling TANG^{1*}

¹Key Laboratory of Biorheological Science and Technology, Ministry of Education, College of Bioengineering, Chongqing University, Chongqing, China

²Department of Anesthesiology, The Affiliated Hospital of Southwest Medical University

*Correspondence to: Liling Tang, College of Bioengineering, Chongqing University, Chongqing, China. E-mail: tangliling@cqu.edu.cn

These authors contributed equally to this work.

Highlights:

- H₂O₂ 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 inhibited the cell proliferation and induced S cell cycle arrest of HaCaT and GLL19 cells.
- Separately knockdown of BAF57, BAF60a and SNF5 before H₂O₂ 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.

¹Abbreviations

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

Download English Version:

<https://daneshyari.com/en/article/5511271>

Download Persian Version:

<https://daneshyari.com/article/5511271>

[Daneshyari.com](https://daneshyari.com)