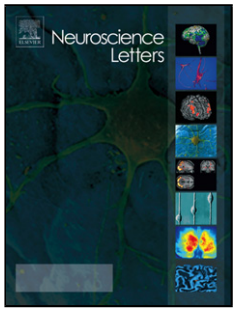

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PII: S0304-3940(18)30229-5
DOI: https://doi.org/10.1016/j.neulet.2018.03.052
Reference: NSL 33511

To appear in: *Neuroscience Letters*

Received date: 27-11-2017
Revised date: 5-3-2018
Accepted date: 21-3-2018

Please cite this article as: Guang Feng Li, Su Jing Zhuang, Guang Cai Li, Inhibition of microRNA-34a protects against propofol anesthesia-induced neurotoxicity and cognitive dysfunction via the MAPK/ERK signaling pathway, Neuroscience Letters https://doi.org/10.1016/j.neulet.2018.03.052

Inhibition of microRNA-34a protects against propofol anesthesia-induced neurotoxicity and cognitive dysfunction via the MAPK/ERK signaling pathway

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Highlights

- Protective effect of microRNA-34a (miR-34a) on propofol-induced neurotoxicity and cognitive dysfunction was studied.
- Propofol anesthesia had an adverse effect on cell survival due to the increased expression of apoptosis-related genes
- MicroRNA-34a could improve anesthesia-induced cognitive dysfunction

Abstract

Aim: To investigate the protective effect of microRNA-34a (miR-34a) on propofol-induced neurotoxicity and cognitive dysfunction. **Methods:** After SH-SY5Y cells were treated with propofol to induce neurotoxicity, microRNA-34a mimics and inhibitors were transfected into the cells. The expression of apoptosis-related genes and the proteins were measured by quantitative