Reviewer’s report

Title: TREK-1 Mediates Isoflurane-Induced Cytotoxicity in Astrocytes

Version: 0 Date: 09 Apr 2017

Reviewer: Tiandong Leng

Reviewer's report:

The current study "TREK-1 Mediates Isoflurane-Induced Cytotoxicity in Astrocytes" may disclose a potential mechanism for the cytotoxicity effect of isoflurane in clinical use. I have several concerns:

1) The method that how the cells were treated with isoflurane are not detailed.

2) As the volatilization characteristics of isoflurane, how to keep the stable constant concentration in cultures needs to be clarified.

3) Which concentration is clinical reverent needs to be clarified. The concentrations used in the current study seems higher and the duration of treatment for 9h seems rare in surgery.

4) I would like to see whether the TREK-1 protein level is changed.

5) Whether the over-expression and knockdown alone affects the viability of astrocyte needs to be confirmed.

6) The in vivo experiments will provide more convincing data.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Unable to assess

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

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Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Not suitable for publication unless extensively edited

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