Reviewer's report

Title: miR-302b inhibits tumorigenesis by targeting EphA2 via Wnt/β-catenin/EMT signaling cascade in gastric cancer

Version: 0 Date: 14 Aug 2017

Reviewer: Aditi Chatterjee

Reviewer's report:

This manuscript by Jin Huang et. al. titled 'miR-302b inhibits tumorigenesis by targeting EphA2 via Wnt/β-catenin/EMT signaling cascade in gastric cancer' studies the role of miR-302b and its molecular target EphA2 in the tumorigenesis and metastatic capability of gastric cancer.

Major

1. In Figure 1 (B, C, D and E), the western blot bands of GAPDH used to depict loading control by the author appears unclear and burnt out due to prolonged exposure on the autoradiograph. This could result in an imprecise interpretation of the expression of EphA2 in these experiments by the reader, despite the authors' claims. It is recommended that the author repeats the western blotting experiment for the aforementioned sets and presents clear and distinguishable GAPDH bands.

2. In Figure 4 A, the images of the cells (all sets of AGS and SGC7901) appear to have been captured at a high confluency, making it difficult for the reader to interpret the authors' claims of cellular morphology mentioned in 'Results' section (Page 13, lines 15-17). Hence the author is recommended to re-capture the images of the cells (treated with miR-NC, miR-302b, si-NC and si-EphA2 conditions) at a lower confluency.

3. Figure 5 is of poor quality and an inadequate portrayal of the work carried out in this manuscript. The author is suggested to add more details regarding the pathway focused in this work, highlighting targeted molecules, or the image can be removed altogether.

Minor

1. If the protocol for experiments such as cell cycle analysis and scratch wound healing assay have been adopted from a previously published literature, the author is suggested to reference them in the 'Methodology' section.
2. In the 'Results' section (Page 10, line 18-20), the author has mentioned how 'only miR-302b led to the decreased EphA2 expression'. However, in the western blot and qPCR images (Figure 1 B and 1 C) it is obvious that miR-143 also confers similar effects on EphA2 expression as miR-302. Hence the author is suggested to re-write the aforementioned sentence including the fact about miR-143. Additionally, the author may also include the reasons, if any, for not choosing miR-143 as a candidate for further analysis along with miR-302b.

3. In results section (Page 10, line 48), the notation of miR-302b has been mentioned incorrectly. Correction suggested.

4. In the 'Discussion' section (Page 15, line 41-47), the sentence 'Translocation of … epithelial differentiation' needs to be referenced.

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

Yes

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

Yes

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

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