Author's response to reviews

Title: Antitumor Mechanisms of S-Allyl Mercaptocysteine for Breast Cancer Therapy

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Author's response to reviews: see over
Dear Editor,

Thank you for your consideration of publication of our manuscript entitled “Antitumor Mechanisms of S-Allyl Mercaptocysteine for Breast Cancer Therapy” in your journal. The authors greatly appreciate the reviewer’s efforts to improve our manuscript. We have revised the manuscript according to the reviewer’s comments. Here are explanations of the revisions:

Referee #1:
1. Page 2, line 10: …by *inducing* cell cycle arrest in G0/G1 phase…
   
   Response: It is revised as suggested.

2. Page 12, line 15: …SAMC was able to improve E-cadherin…
   
   Response: It is revised as suggested.

3. Page 15, line 17: It is believed that...
   
   Response: It is revised as suggested.

Referee #2:
1. Page 10, line 10: Method part is well written but too long, need to be shortened or some of them can go to supplement.
   
   Response: The method section is simplified as suggested.

2. Page 11, Line 2: Fig. 1B, please add statistical analysis.
   
   Response: The labels of statistical analysis are added in Fig. 1B.

3. Page 11, Line 13: there is no such thing like fig 1a or fig 1b. please correct it. Also fig 2 western blot need to show that the results came from what numbers of experiment. Their densitometry analysis with statistic analysis.
   
   Response: Figure 1 includes the sub-sections of A, B and C, and therefore Figures 1A and 1B do exist. The Western blot experiments were performed in triplicate and statistical analysis and related information are updated in Fig. 2 and the figure caption.
4. Page 11, Line 20: “DAN” should be DNA?
   **Response:** It has been revised as suggested.

5. Page 12, Line 7: Fig. 3A: no mentions about how many experiments were done for the results.
   **Response:** The wound closure assays shown in Fig. 3A were performed in duplicate and this information is updated in Fig. 3A and the figure caption as well.

6. Page 12, Line 16: Fig. 3B: western blot need to show that the results came from what numbers of experiment, their densitometry analysis with statistic analysis.
   **Response:** The Western blot experiments were performed in triplicate and statistical analysis and related information are updated in Fig. 2b and the figure caption as well.

7. Page 12, Line 20: DAPI stains only nuclei, so need to rephrase to see nucleic morphological changes or something.
   **Response:** The description of DAPI stains is revised to reflect the nucleic morphological changes.

8. Page 13, Line 2: Fig. 4A: how many experiments were done? Also numerализed data and corresponding statistic analysis required.
   **Response:** The apoptotic analyses were performed in triplicate and numerIALIZED data with statistical analysis are plotted in Fig. 4C (newly added sub-figure).

9. Page 13, Line 4: Fig. 4B: please show the results of statistics (ex. P value). How many experiments were done?
   **Response:** The statistical significant results (p < 0.05) of apoptosis for treated samples are plotted in Fig. 4C.

10. Page 13, Line 17: Fig. 5D: western blot need to show that the results came from what numbers of experiment, their densitometry analysis with statistic analysis.
    Bands of the cleave-caspase-7 in MDA-MB-231 cells are not visible. Wonder what time point of the treatment was used to see the western blots because the band trend and caspase activity looked not matching each other.
    **Response:** The Western blot analyses were performed in triplicate and their densitometry readings with statistic analysis are inserted in Fig. 5D. The reason for invisible bands of the cleaved-caspase-7 in MDA-MB-231 was because the cleaved caspase 7 in MDA-MB-231 was not activated by SAMC, which was different from MCF-7. The data of the Western blot analyses shown in Fig. 5D were obtained at the time point of 24 h. The mismatches between the caspase activities (caspase 3/7) in Fig. 5A and band trends (caspase 7 only) in Fig. 5D are due to different caspases that are plotted.
Fig. 6C: western blot need to show that the results came from what numbers of experiment, their densitometry analysis with statistic analysis.

**Response:** The Western blot analyses were performed in triplicate and their densitometry readings with statistic analysis are inserted in Fig. 6C.

Sincerely yours

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