A letter answering reviewers

June 15, 2015

Dear Editor,

Please find enclosed the edited manuscript in Word format (file name: 18549-Revised manuscript.doc).

Title: Equol inhibits proliferation in human gastric carcinoma cells via modulating AKT pathway

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Name of Journal: *World Journal of Gastroenterology*

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The manuscript has been improved according to the suggestions of reviewers:

1 Format has been updated

2 Revision has been made according to the suggestions of the reviewer

(1) In Material and methods it would necessary to explain more detailed the principal of MTS assay.

Response: Thanks for your sincere suggestion. We feel sorry that the information was not described in detail. In the revised manuscript, the information of the principle of MTS assay was as indicated below:

MGC-803 cell viability was examined with the MTS assay, which is based on the conversion of a tetrazolium salt into a coloured, aqueous soluble formazan product by mitochondrial enzyme activity of viable cells at 37°C, and the amount of formazan produced by dehydrogenase enzymes, which are present in living cells, is directly proportional to the number of living cells in culture and can be measured at 490 nm by a microplate reader.

(2) It is not clear which method was used for study of Akt phosphorylation at the Thr450, Ser473 and Thr 308 sites, results of which are presented on p. 11 and on the Fig. 5A and 5B. It should be added in Material and methods.

Response:Thanks for your comments. We feel very sorry that unclear description in the text cause misunderstanding. In our study, detection of Akt phosphorylation at the Thr450, Ser473 and Thr308 sites was determined by western blotting assay, and the detailed information has been added in Material and methods in our revised manuscript. And it was as indicated below:

Cells were treated with 20 μM of equol for 12, 24 and 48 h or various concentrations of equol for 24 h. The protein expression and phosphorylation level of AKT at Thr450, Ser473, and Thr 308 sites were detected by western blotting analysis. The detailed steps were conducted as we described above.

(3) In the Results are presented data about the role of Ly294002 (a PI3K-specific inhibitor) on AKT inhibition, however, there is no information about it in the Material and method as well in the Introduction. It should be added.

Response:Thanks for your comments. We feel very sorry that the missing information about Ly294002, a PI3K-specific inhibitor. In our revised manuscript, the added information was as follows:

In general, AKT is the downstream target of PI3K and PI3K inhibition could play a role in suppressing phosphorylation of Akt.

3 References and typesetting were corrected

Thank you again for publishing our manuscript in the *World Journal of Gastroenterology*.

Sincerely yours,

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