Title: Myofibrillogenesis Regulator 1 (MR-1) is a Novel Biomarker and Potential Therapeutic Target for Human ovarian cancer

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Author's response to reviews:

Editor's comments and our point-by-point response:

1. please describe the cell line 293T which obviously is NOT an ovarian cancer cell line.
A: Exactly, 293T is non-ovarian cancer cell line, so we indicated it in revised manuscript.

2. if for the migration assay the migration of the cells through a matrigel layer was analyzed, it is actually an invasion assay since cells not only have to be motile to pass this layer, but have to be able to secrete proteinases which degrade the constituents of this layer. Please change or comment.
A: We added the Matrigel, so it is an invasion assay (as you indicated), we changed.

3. page 10: "We tested that MR-1 expression level in 293T cells was not affected by the factors in our experiment (data not shown) and..." Which factors??
A: We deleted them because these data are not related directly to this study.

4. Figure 6A is not sharp and not convincing.
A: We performed the tunel assay to analyze the cell apoptosis and added to the revised manuscript.

Reviewer's comments and our point-by-point response:

1. Title “... Human ovarian cancer” should be “...Human Ovarian Cancer”
A: We had it changed.

2. Abstract “... 26 ovarian cancer tissue samples and 20 ovarian cyst samples was analyzed” should be “... samples were analyzed”.
A: We have replaced “was” with “were”.

3. p2, the sentence in Method, “After transfection of pMX-MR-1 plasmid in 293T cells, the MR-1 was overexpressed and the cells’ spread and migration were
enhanced. Stable transfection of SKOV3 cells with short hairpin DNA (shDNA)-pGPU6/GFP/Neo plasmid against MR-1 expressing led to inhibitions of cell proliferation, migration and adhesion. These indicated that MR-1 was pivotal for ovarian cancer growth.” should be described in Results.

A: We described them in results in p2 as reviewer indicated.

4. p2, last paragraph “… to develop the full therapeutic potential target of MR-1” may be better phrased “… be an actual therapeutic target”.

A: We have changed it in p2.

5. p3, paragraph 2 “… (9)(Ref)” should be “… (8)” and “… (8)” should be “… (9)”.

A: The reference number has been converted.

6. p9, the subtitle “MR-1 is differentially expressed in human malignant and benign ovarian tumors” may be “MR-1 is differently expressed…”?

A: We have corrected it in p8 of the revised manuscript.

7. p11, “MR-1 could be a potential therapeutic target” is not suitable for subtitle.

A: We changed it for “Role of MR-1 in anti-cancer drugs therapy” in p9 of the revised manuscript.

8. p11, “… both the mRNA and protein levels of MR-1 were increased exclusively in the cells treated with carboplatin at 160 mg/L(Fig 6B)” is not correct and please carefully check Fig 6B.

A: We revised as “both the mRNA and protein levels of MR-1 were increased in the cells treated with carboplatin at 160 mg/L, whereas its apoptosis degree was decrease exclusively (Fig 6C).”

9. Fig 6A, the optical microscope is not good for analysis of apoptotic morphology, suggesting use apoptotic kit such as TUNEL assay.

A: We performed the assay and added to the revised manuscript.

10. MR-1 and GAPDH should be labeled in Fig 1A.

A: We relabeled it.

11. In Fig 6B and Fig 6C, what are ZI-0… and KA-0…? And indicated concentrations are not correct.

A: We have checked and revised in Fig 6B and Fig 6C.

12. The figure legends should be simplified.

A: We revised and canceled some unnecessary words.