Review of Differential CARM1 Expression in Prostate and Colorectal Cancers

At the beginning, this manuscript reports the data showing that CARM1 expresses highly at colorectal cancers tissues, in contrast to the expression at prostate and breast cancer, by tissue micro array. These features are also can be seen at each kinds of cell-lines and author’s clinical samples. Then, authors look at the function of CARM1 as transcriptional regulator at prostate cancer cell-line, by several kinds of promoter assays, which already reported. Authors also compare the difference of CARM1 as transcriptional regulator between prostate and colorectal cancer cell-lines.

Authors focus on the function of CARM1 at cancer cell. At this point the posed question is well defined. The method and of this article is good at screening study. And, data sounds new and also interesting. But, there are not so critical data that supports the results of screening study at molecular parts. Authors still need a little more experiments at the molecular biological part. (Please see below).

The manuscript adhere to the relevant standards for reporting and data deposition.

Though, at the conclusion authors say that CARM1 has a function as transcriptional modulator, several supportive data still needed to discus and consolidate this conclusion. Then, the limitation of this work might be a little far from current position.

Authors clearly acknowledged any work upon which they are building, both published and unpublished. Authors put title and abstract accurately convey what has been found. And the writing is acceptable.

Major Compulsory Revisions

A. CARM1 is not transcriptional factor. So, authors need to make sure the characters of each cell-line, especially about the existence of certain transcriptional factors for reporter plasmids. And, be recommended to see the interaction of CARM1 to each promoter region. Chromatin immunoprecipitation (ChIP) to each cell-lines might be needed.

B. The localization of CARM1 in each cells should be examined to compare the
function of transcriptional activity.

Minor Compulsory Revisions

A. Lusiferase assays with knocking out system and dominant negative CARM1 expression will be helpful to discuss the feature of CARM1.

B. With the expression of mRNA, that correlate each reporter plasmid will make clear the relationship between tissue micro array and lusiferase assays.

Discretionary Revisions

A. Fig.5 D: Transcriptional activity of TCF4RE seems to be increased by CARM1. Are there any events of cell cycle change at CARM1 over expression?

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests