Reviewer's report

Title: PEP-1-SOD1 fusion proteins block cardiac fibroblast activation and angiotensin II-induced collagen production

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Reviewer: Katsuhito Fujiu

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To authors;

Tan et al reported new synthetic fusion protein PEP-1-SOD1 suppressed cardiac fibroblast activation in vitro. These data might suggest feasibility of this synthetic protein in avoiding cardiac fibrosis. However, several criticisms should be addressed.

Major point;
Authors have evaluated effects of PEP-1-SOD1 in rodent's heart and brain injury model and successfully reported in ref. 9-11 in this manuscript. Like these reports, authors should evaluate effects of this protein in vivo model like angiotensin II infusion model or other cardiac fibroblast activation model.

Minor points;
In Fig 1A and B, cropped western blotting pictures’ quality is not publication grade, especially PEP-1-SOD1 in 1A and 1B, a-tubulin in 1B.

In Fig 1C and 1D, there are no statistical analysis.

In Fig 2A, control staining or counter staining like nuclei staining or something like that is required, especially in PEP-1-SOD1 groups, to shown the existence of cardiac fibroblast in this slide.

In Fig 2B-D, authors used “#” for significant statistical difference compared to angiotensin II administration group. However, there are two angiotensin II administration group in these experiments. In addition, authors should note details of post-hoc analysis in methods.

In Fig 5A and C, results of western blotting for collagen type III (5A) is not correspond to its summarized data (5C)

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests: none