Reviewer's report

Title: Characterisation and analysis of thioredoxin peroxidase as a potential antigen for the serodiagnosis of sarcoptic mange in rabbits by dot-ELISA

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Reviewer: Samer Alasaad

Reviewer's report:

Zhang and colleagues has important focus. A new method for scabies/mange diagnosis is of great interest, however I have some concerns.

- My main concern is about the specificity of the new method. It seems that it work both for S. scabiei and P. cuniculi, and maybe for other Psoroptes species, not tested in the present study.

- The scientific name is not “S. Scabiei” but “S. scabiei”. Please correct this mistake in whole paper.

- We use “scabies” when we speak about Sarcoptes affecting humans, but we should use “mange” when we speak about Sarcoptes affecting animals, which is the case of this paper. Hence “scabies” should be substituted by “mange” in whole paper.

- The sentence “may be suitable for development of as a diagnostic tool in humans in the developing world” should be modified. The other ELISA-based methods for the diagnosis of mange in animals were not effective in humans, for some reasons, and scabies is not only a problem in the developing world but it is a worldwide problem.

- Introduction: Please give more details about other mange/scabies diagnosis methods.

- Methods: what do authors mean with “Mites were starved prior to treatment.”?

- Do authors have the sequences encoding the open reading frame (ORF) of SsTPx? Why they did not submit them to the genbank.

- Figures are not clear: Fig.2: two colours in the same gel? Fig.3: body parts are not clear

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.