Reviewer's report

Title: Screening of potential target genes for cataract by analyzing mRNA expression profile of mouse Hsf4-null lens

Version: 2 Date: 17 March 2015

Reviewer: Akira Nakai

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Summary:
To understand molecular mechanisms of cataract formation in HSF4-null mouse lens, the authors performed in silico analysis of HSF4 target genes. Genes up-regulated or down-regulated were subjected to ontology analysis, and nine gene ontology biological processes including DNA damage stimulus were enriched. They also identified the functional module of the genes that were related to DNA damage. The authors discuss about the relationship between DNA damage and identified genes.

Comments:
The authors well conducted the in silico analysis of the HSF4 target genes, and identified genes related to the DNA damage response. The information is helpful to understand cataract formation in HSF4-null lens. This manuscript should be published after minor modifications as described below.

1) In line 155, the authors state “cataracts may be caused primarily by damage to DNA”. They should discuss more about relationship between cataract and DNA damage and should cite references.

2) In line 159, the reference 6 is not correct. They should at least refer Fujimoto et al, EMBO J. 23, 4297-306, 2004.

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:
Yes.