Reviewer's report

Title: Overexpression of SERBP1 (Plasminogen activator inhibitor 1 RNA binding protein) in human breast cancer is correlated with favourable prognosis

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Reviewer: Yiannis Drosos

Reviewer's report:

The authors investigated the expression of SERBP1 in human breast cancer and normal breast tissues, at both the mRNA and protein level. The authors pose an interesting scientific question since SERP1 is suggested to regulate the stability of PAI-1 (Plasminogen activator inhibitor 1) mRNA and PAI-1 overexpression is associated with poor prognosis in breast cancer. Based on the study, SERBP1 is not differentially expressed in breast carcinoma compared to normal tissue, but SERBP1 overexpression is correlated with favorable prognosis.

Major Compulsory Revisions

The study is well designed and the investigators use a number of experimental approaches to study the expression of SERBP1. However, the presentation of the data leads to a controversy since, by using RT PCR and immunoblot detection in tissue samples there is no differential expression of SERBP1 however by analyzing the human samples, a significant correlation with favorable prognosis is revealed.

This could be addressed by clarifying/addressing the following issues:

1. What are the clinicopathological characteristics and the outcome of the patients whose tissues were used for the RT-PCR analysis in figure 2? If samples 5, 6 and 7 derive from patients with favorable prognosis, this could strengthen the author's hypothesis.

2. Since the authors hypothesize that cellular localization of SERBP1 can either stabilize or destabilize PAI-1 expression, the lesion scoring should be presented in a different way, distinguishing between nuclear and cytoplasmic immunoreactivity.

3. The immunoblot presented in figure 8 should be repeated with fractionated samples in order to test the expression of SERBP1 in the nuclear and cytoplasmic compartment. In addition, the clinical outcome of patients from whom the samples derived should be included.

Discretionary Revisions

1. Abstract line 2: “a protein which is” should be changed to “a protein that is”

2. Author’s contribution line 5: …immunohistochemistry…

3. Although it is not grammatically wrong, the terms “analysed, hypothesized, localized, e.t.c.” could be changed to “analyzed, hypothesized, localized, e.t.c.”
respectively

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.