Reviewer's report

Title: Over-expressing Akt in T cells to resist tumor immunosuppression and increase anti-tumor activity

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Reviewer: maria D pastor

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Review
Over expressing Akt in T cells to resist tumor immunosuppression and increase anti-tumor activity

Major Compulsory Revisions
The proposed study does not make clear the importance of it; for example, what are the reasons that led them to the study? What are the principals finding? or a clear conclusion thereof.

In this study, authors use a lot of different experiments with diverse methodologies, but they didn’t keep in mind that these methods need a good positive and negative control to be sure that the results are a really biological response mechanism and not an artifact.

On the other hand, in the part of the discussion, authors mainly justify some of the data which go against the previous studies, without the explanation about the biological relevance of the data. Likewise, the conclusion are not very clear.

Minor Essential Revisions.

Background.
The bibliography used by the authors to highlight the need of the study does not address recent studies, which would be interesting.

Methods
1. Cell lines

The authors indicate that the reference of the origin of the cellular line used in the studio called “B16-OVA” is the number 12. However the number 12 of the reference index is something which isn’t connected with the cellular line.

On the other hand, there is a work of Face K. Fraser and col. entitled "Dasatinib Alters the metastatic phenotype of B16-OVA melanoma in vivo" which perfectly describe the use of these cells. They have used a murine syngenic model of metastatic melanoma in which B16F10 cells expressed ovalbumin. In this case, cells was grow up in 10% FCS RPMI (Sigma Aldrich, St. Louis, MO, USA, 2 mM glutamine, 1 M HEPES, 100 µg/ml streptomycin and 100 U/ml penicillin) instead of the DMEM medium supplemented 10% FBS. In the literature has extensively
reported that many types of cell lines change their phenotype when culture conditions (such as the medium) have changed. Related to this, the authors don’t say anything about that.

2. Retroviral vector construction and retrovirus preparation.
   The authors should include the construct of the control retrovirus.

Results.
   The results should have been presented more clearly and with a better explanation of why the authors have chosen this type of experimentation.

Discussion
   The author should explain why T cells transduced with myr-Akt displayed higher apoptosis rate than T cells transduced with wtAkt, with or without exposure to tumor cells, whether all previous experiments both have behaved in the same way.

**Level of interest:** An article of insufficient interest to warrant publication in a scientific/medical journal

**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 interest.