Reviewers' comments:   
  
Reviewer #1 (Technical Comments to the Author):   
  
1) Molecular weight markers and/or arrows to indicate the band of interest are required for the Western blots in Fig 1 c) since multiple bands are shown.   
  
2) Figure legends missing from Fig 7 b)   
  
  
Reviewer #1 (Remarks to the Author):   
  
The manuscript is much improved based on the additional data, the separate discussion section and the changes made to the conclusions of the experiments. On the whole, the work is technically sound and the conclusions made are appropriate. However, I have a two points based on the new data that I would like the authors to comment on before I can recommend publication of this work in Scientific Reports.   
  
1) The statement "Furthermore, this activation is independent of Akt signaling, which was actually decreased during the transition from 10% FBS to 2% horse serum." has not been demonstrated. This data is suggestive of an association with altered Akt signalling. I would suggest that the text should be altered to reflect this difference.   
  
2) A helpful addition to the Drosophila data in Fig 6 and 7 would be some basic histology (e.g. H and E stain) of the adult musculature of the flies that have enclosed at different ages. Based on the differences observed in the function, but not lifespan, of MHC-GAL4 vs other GAL4 lines this seems a very simple way to gain significant insight into the observed phenotypes. Can the authors explain why they have not done this?   
  
  
Reviewer #2 (Remarks to the Author):   
  
The Authors are to be commended for generating new data in responses to my comments.