

Reviewer Report

Title: Proteomic landscape of the primary somatosensory cortex upon sensory deprivation

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Reviewer name: Jeffrey Savas

Reviewer Comments to Author:

In this Data Note Kole et al. present a nice proteomic analysis entitled "Proteomic landscape of the primary somatosensory cortex upon sensory deprivation" based on the widely used label free quantification within MaxQuant. Over all this is a nice analysis of how altered sensory input remodels the barrel cortex proteome. I found the analysis to be rigorous and in general very thorough however the presentation could be improved. Short of a few minor improvements, I think this study should be accepted. 1. More instrument settings and operation details for the Fusion need to be included. 2. P4 please add a comment mentioning that deamidation, oxidation, and loss of ammonia may be occurring in vivo but more likely during the sample preparation steps. 3. P5 please improve wording "decently correlated" is not very scientific. How about Showed a reasonable degree of correlation. 4. Does Figure 4 need a title? the legend is a bit funky. 5. Figure 5 PCA details and conclusions need to be improved, figure is a bit confusing, can it be reduced to 1 or 2 panels? The text for the PCA analysis should also be clarified. 6. In general many of the labels in the figures should be improved so at first glance the reader can follow for example -- Figure 3 labels are a bit un-intuitive. what exactly does 1st Order Spered mean? 7. In the discussion, a sentence or 2 should be added to mention the significant limitation that the apparent protein level could arise from averaging signals from different cells. 8. There are a lot of figure panels here, if possible please try to focus the scope of the figures a bit and move any supportive figures to the supp in order to keep the main text punchy.

Level of Interest

Please indicate how interesting you found the manuscript: An article of importance in its field

Quality of Written English

Please indicate the quality of language in the manuscript: Needs some language corrections before being published

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