

Editorial comments:

1. Please note that the editor has formatted the manuscript to match the journal's style. Please retain the same. The updated manuscript is attached and please use this version to incorporate the changes that are requested.

We thank the editor for formatting the manuscript to match the journals style and have incorporated the below changes directly into the document provided.

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Line 723: Figure 4: Panels B and F adapted and/or reproduced with permission from Hippenmeyer et al.¹ and Rulands and Simons² respectively. We have now included copyright permissions to reuse the panels of these figures (See attached forms below).

3. Please address specific comments marked in the attached manuscript.

Line 367: Please include this product in the Table of Materials

The mounting medium consists of 25 mg/mL DAPCO, 6 g Glycerol, 2.4 g Mowiol 4-88, 6 mL dH₂O, 12 mL 0.2M Tris-HCl (pH 8.5). The text and table of materials has been updated to reflect this.

Line 424: I rephrased this sentence. Please review for accuracy.

We approve of this rephrasing.

Line 473: Correct?

The step order is correct, however "repeat" has been rephrased to "Perform" to decrease confusion.

Line 539: Please remove the link from the manuscript text and include it in the Table of Materials.

We have moved this url to the table of materials.

Line 544: Please remove the link from the manuscript text and include it in the Table of Materials.

We have moved this url to the table of materials.

Line 551: How?

We have updated the text to elaborate on how this step is performed. The next text reads, "Split channels into DAPI (blue), GFP (green), and tdT (red) within "Color" option under "Image" tab."

Line 579: Please reference each panel of Figures 4-6 in this section.

We have included reference to each panel of Figures 4-6 in the Representative Results section.

Line 629: E11?

The editor is correct, and the "E" has now been added to fix this.

Line 680: Figure legends should be placed directly after the results section according to JoVE guidelines. Please update reference numbers accordingly.

We thank the editor for pointing this out and have updated the reference numbers accordingly.

Line 683: Please rephrase to avoid overlap with previously published text.

We have rephrased the text to avoid overlap with previously published text.

Line 700: Please update reference numbers here.

We have updated these references.

Line 724: Please update the reference number here.

We have updated these references.

Line 743: Please rephrase to avoid overlap with previously published text.

We have rephrased the text to avoid overlap with previously published text.

Line 747: Please update reference numbers here.

We have updated these references.

Line 763: Please rephrase to avoid overlap with previously published text.

We have rephrased the text to avoid overlap with previously published text.

Line 802: Please update reference numbers here.

We have updated these references.

Line 863: Please spell out journal names.

We have updated and ensured that the names of all journals are spelt out.

4. As we can only film 2.75 pages of the protocol, please review and shorten the highlighted portion to 2.75 pages. Note that the highlighted content should contain essential steps of the protocol for the video, i.e., the steps that should be visualized to tell the most cohesive story of the Protocol. Please ensure that the highlighted steps form a cohesive narrative with a logical flow from one highlighted step to the next. Please note that the editor has made some minor changes (e.g., combining some shorter steps) to condense the highlighted content. Please do not highlight any steps describing anesthetization and euthanasia.

We have highlighted only the necessary steps, making for a script that is 96 lines (2.25 pages) long.

References

- 1 Hippenmeyer, S. *et al.* Genetic Mosaic Dissection of Lis1 and Ndel1 in Neuronal Migration. *Neuron*. **68** (4), 695-709, (2010).
- 2 Rulands, S. & Simons, B. D. Tracing cellular dynamics in tissue development, maintenance and disease. *Curr Opin Cell Biol*. **43** 38-45, (2016).

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