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Please complete the table below to indicate the contributions of all named authors to the manuscript.

| Author Full Name               | Specification of Contribution to the Manuscript                                                                 |
|--------------------------------|---------------------------------------------------------------------------------------------------------------|
| Kristel Martínez-Lagunas      | Performed molecular biology, cell culture, imaging, and immunohistochemistry experiments and data analysis. Prepared figures and wrote the manuscript. |
| Yoshifumi Yamaguchi           | Performed imaging of neural tube closure and data analysis. Prepared figures.                                  |
| Cora Becker                   | Performed immunohistochemistry experiments and data analysis. Prepared Suppl Fig. 8.                          |
| Caroline Geisen              | Conceived and designed the sA5-YFP expression cassette. Helped with the molecular biology experiments.         |
| Marco C DeRuiter             | Helped to design and interpret microscopic and immunostaining findings.                                       |
| Masayuki Miura               | Involved in imaging of neural tube closure and data analysis. Designed experiments and helped writing the manuscript. |
| Bernd K. Fleischmann         | Designed the study and wrote the manuscript.                                                                  |
| Michael Hesse                | Was involved in the generation of sA5-YFP-mice. Conceived and designed the experiments, wrote the manuscript and prepared figures. |
Please complete the table below to indicate the contributions of all named authors to the figures.

Figure 1:
KML performed the experiments.
BKF and MH designed the experiments. KML and MH prepared the figure.

Figure 2:
MH, CG and KML generated the transgenic sA5-YFP mice. KML performed the imaging. KML and MH prepared the figure.

Figure 3:
a,b) KML performed the live-imaging and did the analysis of fluorescence intensity.
c,d) YY and MM designed and performed the experiment, YY prepared the figure.

Figure 4:
KML performed the experiments.
BKF and MH designed the experiments. KML and MH prepared the figure.

Figure 5:
KML performed the experiments.
BKF and MH designed the experiments.
MCD helped to interpret microscopic and immunostaining findings. KML and MH prepared the figure.

Figure 6:
KML performed the experiments.
BKF and MH designed the experiments.
MCD helped to interpret microscopic and immunostaining findings. KML and MH prepared the figure.

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