***eLife’s* transparent reporting form**

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**Sample-size estimation**

* You should state whether an appropriate sample size was computed when the study was being designed
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* If no explicit power analysis was used, you should describe how you decided what sample (replicate) size (number) to use

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The sample size was determined to make it large enough for confirming the reproducibility of the experiment and for producing the statistically significant differences. The information is precisely described in each figure legend.

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* You should report how often each experiment was performed
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Every figure includes individual datapoints for each experiment, showing how often every experiment was performed. No data were excluded from the analysis.

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* Statistical analysis methods should be described and justified
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* For each experiment, you should identify the statistical tests used, exact values of N, definitions of center, methods of multiple test correction, and dispersion and precision measures (e.g., mean, median, SD, SEM, confidence intervals; and, for the major substantive results, a measure of effect size (e.g., Pearson's r, Cohen's d)
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Statistical analysis methods are described in the Materials and Methods section. Figure legends include the numbers of animals/cells/glomeruli for each experiment. Source files include the number of individual data points for each figure. Figure legends and source files indicate which statistical test was used.

(For large datasets, or papers with a very large number of statistical tests, you may upload a single table file with tests, Ns, etc., with reference to sections in the manuscript.)

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* Indicate how samples were allocated into experimental groups (in the case of clinical studies, please specify allocation to treatment method); if randomization was used, please also state if restricted randomization was applied
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All behavioral tests were blinded to avoid the unconscious bias so that the objectivity is insured. The information is described in the Materials and Methods section.

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Source data files are provided for Figures 1B, 2, 3B, 4B, 5, 6A, 6D, 7A, 7B, and 8.