***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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Pre-determination of sample sizes were not computed throughout the study.

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* You should report how often each experiment was performed
* You should include a definition of biological versus technical replication
* The data obtained should be provided and sufficient information should be provided to indicate the number of independent biological and/or technical replicates
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* High-throughput sequence data should be uploaded before submission, with a private link for reviewers provided (these are available from both GEO and ArrayExpress)

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Replicates are reported in all figure legends (as n numbers) and also in the corresponding source data file for each figure panel. For electrophysiological recordings n corresponds to an individual neuron recorded from a separate slice from a given mouse or human patient. In each experiment, replicates were from a minimum of 3 mice or 2 human patients. No observations were excluded.

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* Statistical analysis methods should be described and justified
* Raw data should be presented in figures whenever informative to do so (typically when N per group is less than 10)
* 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)
* Report exact p-values wherever possible alongside the summary statistics and 95% confidence intervals. These should be reported for all key questions and not only when the p-value is less than 0.05.

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Details of the statistical analyses employed are outlined in the last sub-section of the methods. Exact p-values for statistical significance are indicated within each figure legend where appropriate. In addition, other statistical parameters such as normality tests, degrees of freedom, W or t-values are included in the source data files.

(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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Please indicate the figures or tables for which source data files have been provided:

Figure 1; Figure 1-figure supplement 2; Figure 3; Figure 4; Figure 5; Figure 6; Figure 6-figure supplement 1; Figure 7; Figure 7-figure supplement 1