In vitro 74.5 ± 9.5*** 136.2 ± 14.7***
69.3 ± 11.6*** 159.2 ± 16.8***
83.6 ± 12.5*** 190.9 ± 22.5***
−3.2 ± 11.1n.s. −5.4 ± 15.4n.s.

In vivo (anesthesia) 98.6 ± 12.1*** 156.8 ± 16.7***
41.7 ± 5.4*** 64.4 ± 7.0***
40.8 ± 12.8n.s. 75.5 ± 17.8
10.8 ± 11.4n.s. 40.2 ± 16.0n.s.

In vivo (monkey X) 21.1 ± 16.0n.s. 69.4 ± 23.1n.s.

In vivo (monkey Y) 73.7 ± 6.8*** 172.8 ± 11.0***

LLR values for the comparison of the single-parameter power law with the lognormal and the gamma distribution for all data sets (i.e., 7 data sets recorded in vitro, 7 in vivo under anesthesia, and 2 in vivo in awake monkeys). Reported values are the mean ± SD for decorrelated sub-sets of the data; the chosen avalanche lags were 4–26 (in vitro), 5–14 (in vivo, anesthesia), and 10 (monkey X and Y). *p-values (Eq. 18, main text) and statistical significance are reported for the sub-set that had the largest p-value; **p < 0.001, ***p < 0.0001, n.s. not significant (p ≥ 0.01).