Supplemental Figure 1. Firing pattern and morphological differences between cell types. **A.** Excitatory cells have a more depolarized first AHP compared to last AHP (arrow). **B.** LTS cells have a more hyperpolarized first AHP compared to last (arrow). LTS cells occasionally also show a rebound burst in response to release from a hyperpolarizing current injection (asterisk). **C.** At max firing frequency (here with an 800pA current injection step), FS cells fire at frequencies above 95Hz. This cell displays an Fmax steady state of 200Hz. For comparison, cells shown in **A** and **B** had an Fmax steady state of 41 and 53Hz, respectively. Additionally, all FS cells, like all LTS cells, show a more hyperpolarized first AHP compared to last AHP. Cells in **A-C** are example cells from THIP baseline shift experiments, and show shifts of 13, 166, and 148pA, respectively. **D-F**. In separate experiments, cells were filled with biocytin during recordings to allow comparison of morphology and firing properties. Scale bars of current clamp insets are 200ms horizontal and 20mV vertical. **D.** A spiny stellate cell displaying firing properties of excitatory cells, including a more depolarized first AHP (inset). **E.** A medium or sparsely spiny LTS cell. **F.** An FS cell which reaches an Fmax steady state of 143Hz. Note the large cell body and lack of spines.

Supplemental Figure 2. THIP induced baseline shifts by cell type and location. Post-hoc evaluation of differences in THIP induced tonic inhibition by cell type for cells located in hollow versus wall versus septa reveals little difference by location. **A.** Excitatory cells show no statistical differences in baseline shift by location (hollow: 16.8±12.2pA, wall: 26.3±8.3pA, septa: 90.5±51.5pA). **B.** LTS cells show no statistical difference in baseline shift by location (hollow: 82.8±40.2pA, wall: 122.0±34.6pA, septa: 109.0±27.6). **C.** FS cells in the wall show a greater baseline shift than those located in the barrel hollow (hollow: 85.5±25.6pA, wall: 172.7±4.17pA, $p<0.05$, paired t-test). FS cells located in the septa showed an intermediate baseline shift, not statistically different than shifts seen in either the hollow or the wall (septa: 127.3±43.3pA). **A-C.** Each symbol represents one cell's baseline shift. Horizontal bars indicate the mean. Overlapping symbols have been offset.

Supplemental Figure 3. Differential sensitivities of tonic inhibition in cortical cells. Bicuculline induced baseline shifts in excitatory (A.1, A.2), LTS (B.1, B.2) and FS (C.1, C.2) cells. **A.1**, Averaged raw trace from an excitatory cell (where each dot represents an average of 10ms, with one dot presented for every 2s) in response to 100 μM bicuculline (black line above trace). Traces of LTS (**B.1**) and FS (**C.1**) cells show greater upward shifts of baseline current than excitatory cells. Current clamp traces of each cell type are shown on the right. Scale bar for voltage clamp responses are 20 pA vertical and 20 s horizontal. Scale bar for current clamp traces are 20 mV vertical and 200 ms horizontal. **D.** Summary bar graph of all cells revealing baseline shifts by cell type. LTS cells show statistically significant baseline shifts from excitatory cells (**$p \leq 0.01$, Mann-Whitney U). FS cells showed greater baseline shifts than excitatory cells, but this did not reach significance ($p = 0.1$, Mann-Whitney U). All inhibitory cells combined show statistically significant larger baseline shifts than excitatory cells (**= $p \leq 0.05$, Mann-Whitney U). Error bars represent SE.

Supplemental Table 1. Values of commonly reported cell parameters by cell type. A description of each parameter is provided in the Methods section. Statistical comparisons were done between cell types using Mann-Whitney. P values less than 0.05 uncorrected are bolded. P values less than 0.001 (corresponding to 0.05, Bonferroni correction) are bolded and italicized. P values less than 0.0001 are reported simply as 0.0001.

Supplemental Table 2. Correlations of cell parameters with THIP-induced baseline shifts by cell type and collapsed across all cell types. Pearson's, Kendall's tau, and Spearman's rho correlation coefficients are provided. P values ≤0.05 are bolded. All significance values are two-tailed. A description of each cell parameter is provided in the Methods section, and values for each by cell group are provided in Supplemental Table 1.