

Supplementary Figures

A. mRFP timecourse after novel context

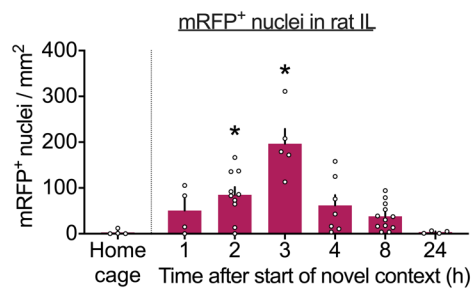


Figure S1. mRFP labels Fos-expressing active neurons in *Fos-mRFP* rats. **A**, Timecourse of mRFP labeling following 1 hour of novel context exploration in *Fos-mRFP* rats ($n = 4 - 12$ per group). Data is expressed as means \pm S.E.M. * significant difference from homecage (HC). See Table S1 for detailed listing of all statistical outputs.

Brief communication

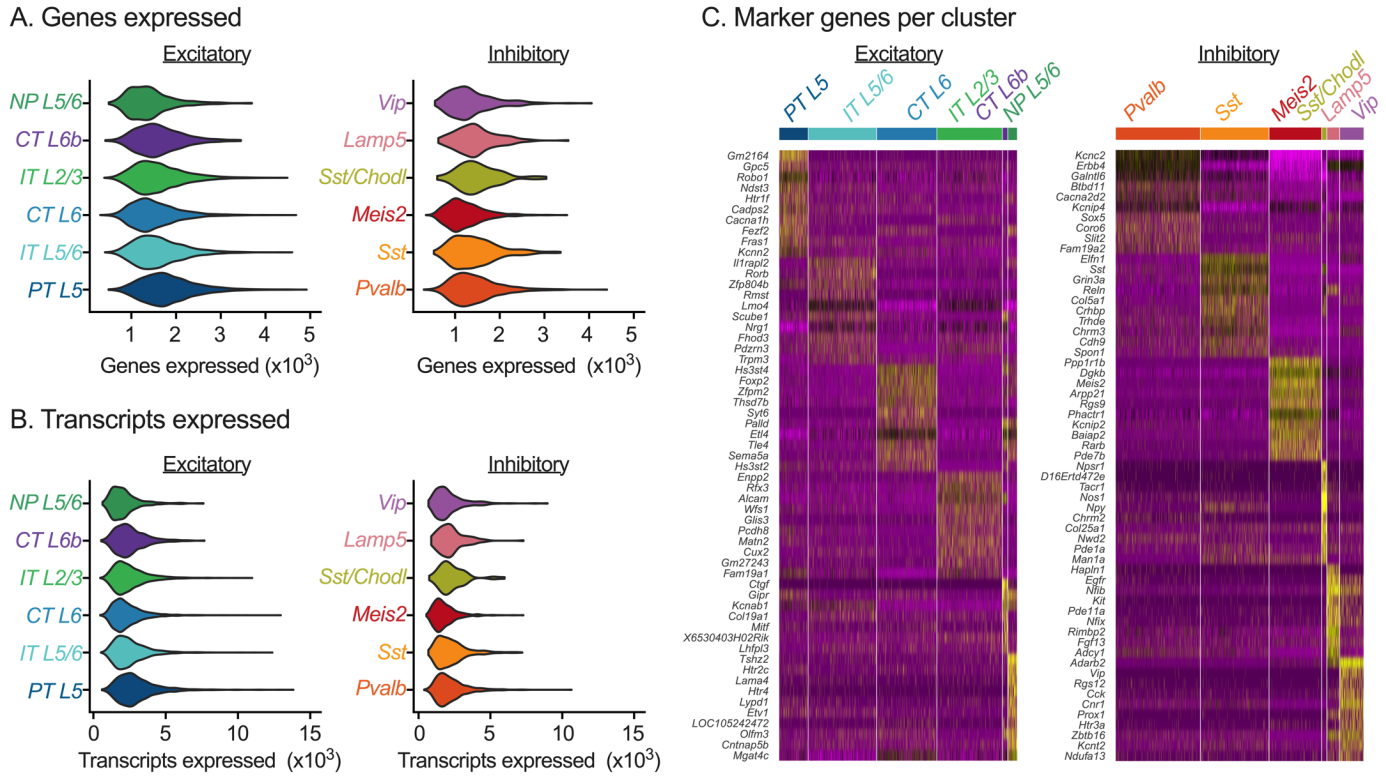
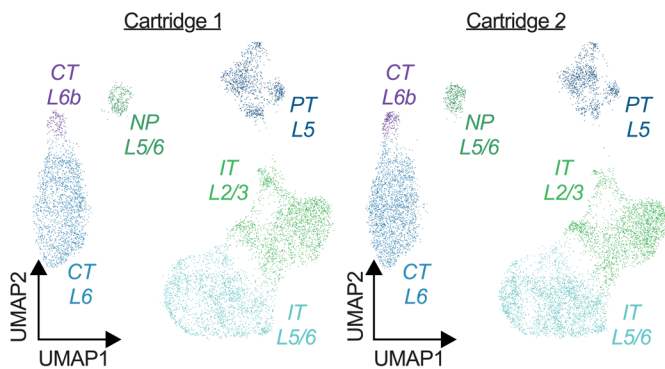


Figure S2. Quality control and cluster markers of excitatory and inhibitory neuron clusters.

(A) Genes expressed in excitatory and inhibitory neuron clusters. Violin plot shows the number of genes expressed in excitatory (left) and inhibitory (right) cluster types collapsed across biological replicates and populations ($n = 8$). (B) Total number of transcripts expressed. Violin plot shows the total number of transcripts expressed in excitatory (left) and inhibitory (right) cluster types. (C) Heatmap of top ten genes expressed in major excitatory (left) and inhibitory (right) neuron clusters of the rat IL.

A. Excitatory clusters by cartridge



B. Inhibitory clusters by cartridge

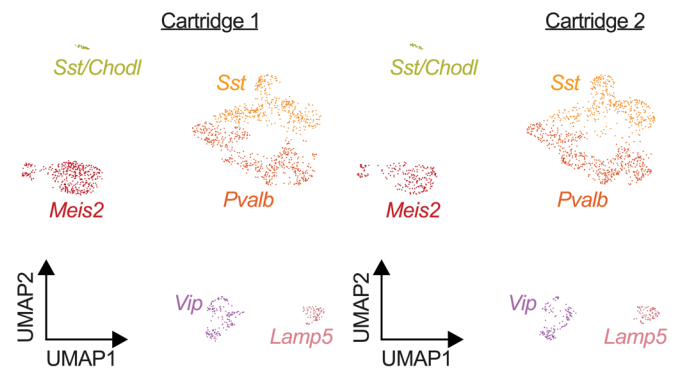


Figure S3. Neuronal cell type cluster type distribution between cartridges.

(A) UMAP representation of excitatory neuron cluster distribution by cartridge. (B) UMAP representation of inhibitory neuron clusters by cartridge.