



Figure 2. Bidirectional Modulation of PV Cell Activity Demonstrates Their Tight Control of Pyr Cell Contrast Response

(A) Top: coronal section of V1 from a *PV-Cre x tdTomato* reporter mouse injected with Cre depend Arch-GFP AAV-vector. In red: the naive expression of tdTomato; in green: Arch-GFP expressing cells (anti-GFP immunostaining). Bottom: image detail. Note that Arch-GFP expression only occurs in tdTomato expressing, and hence PV expressing, cells.

(B) Left: PV cell expressing Arch-GFP targeted for loose-patch recording with red electrode. Right: raster plot and PSTH of spiking response to grating during interleaved trials: either control (cyan, no led) or during PV cell suppression by Arch photo stimulation (green, LED on). Gray area on the raster plot illustrates the