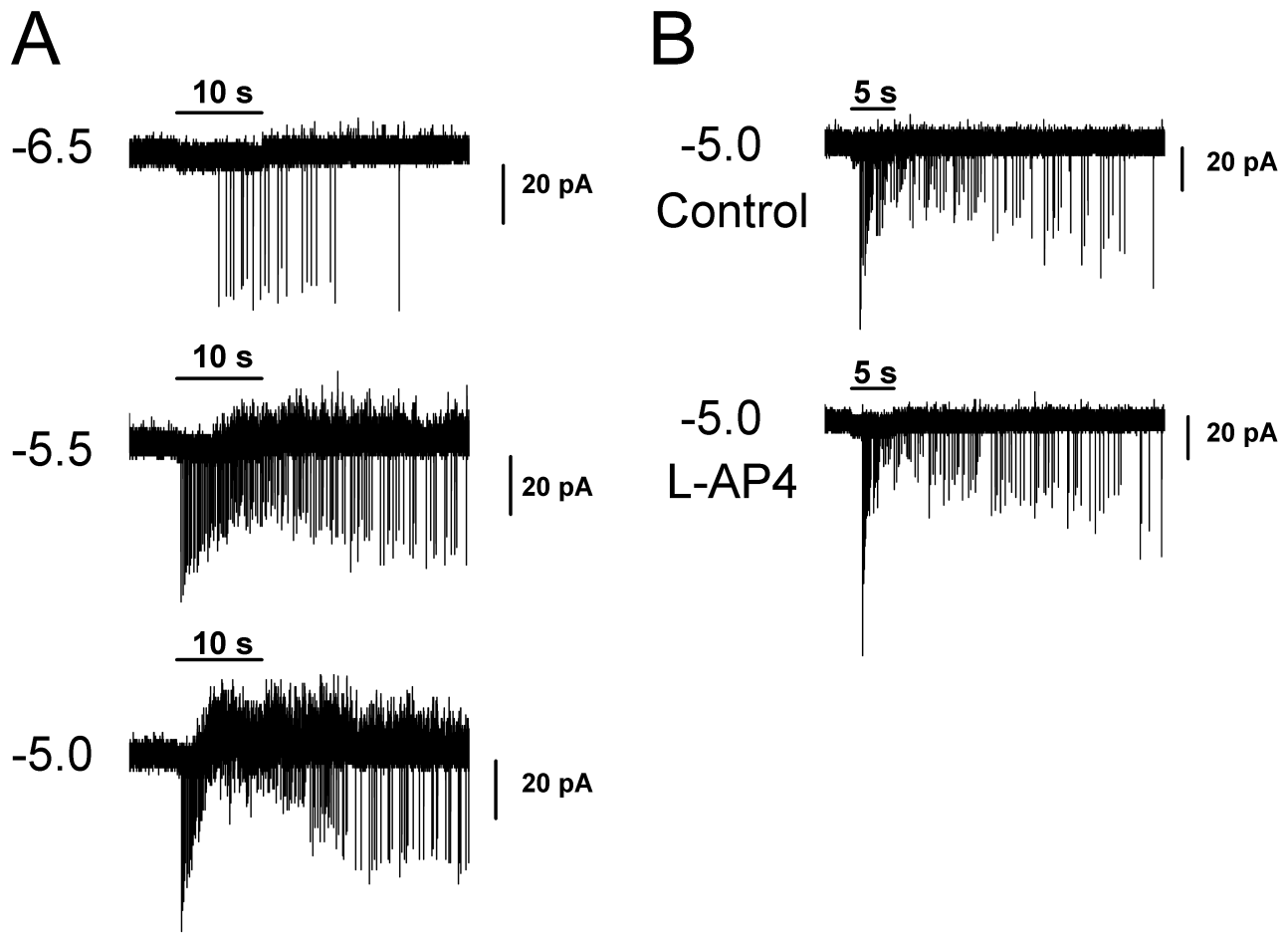
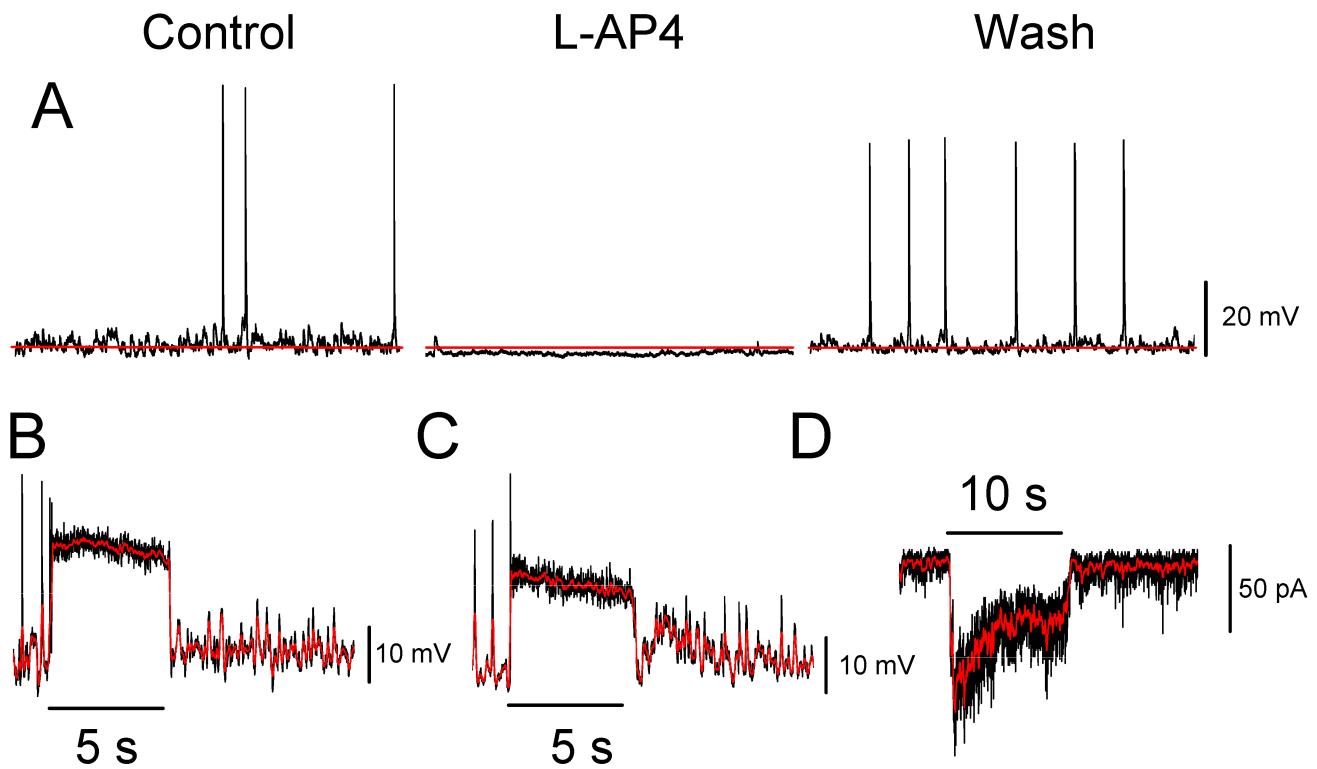


Supplemental Figure 1. Extracellular recordings of M2 cell light responses in WT mouse. (A) Representative loose patch recording of M2 cell response to increasing intensities of full field white light stimulation ranging from -6.5 (top panel) to -3.0 (bottom panel) LogI. (B) Cell-attached recording of single M2 cell response to white light stimulus at -3.0 LogI in control conditions (top panel) and at -3.0 LogI (middle panel) and -2.0 LogI (bottom panel) following application of L-AP4.



Supplemental Figure 2. Extracellular recordings of M1 cell light responses in WT mouse. (A) Representative loose patch recording of M1 cell response to increasing intensities of full field white light stimulation ranging from -6.5 (top panel) to -5.0 (bottom panel) LogI. (B) Loose-patch recording of single M1 cell response to white light stimulus at -5.0 LogI in control conditions (top panel) and after application of L-AP4 (bottom panel).



Supplemental Figure 3. “Atypical” M1 cells are modulated by the On pathway similarly to M2 cells. All recordings are from M1 cells in WT mice. (A) Whole-cell current clamp recording of M1 cell where V_m was recorded continuously in the absence (left panel) and presence (middle panel) of 100 μM L-AP4. Right panel shows washout. Note the hyperpolarized V_m of the cell and the further hyperpolarization in the presence of L-AP4. (B-C) Response of 2 M1 cells in current clamp mode to 5 s white-light stimulus at intensity of -3LogI (B) and -2LogI (C) in control solution. Note the lack of continued depolarization following stimulus offset that is typical of M1 cells (see Figure 6A). (D) Voltage clamp recording of M1 light-evoked current to a 10 s, full-field, bright, white-light stimulus at -2LogI . Note fast offset kinetics and lack of persistent inward current following stimulus offset that is typically observed in M1 cells (see Figure 5A) Red line (A) indicates -65 mV (B-C) 0.1 s smoothing of membrane voltage (D) 0.1 s smoothing of membrane current. V_m , resting membrane potential.