

### Supplementary Data

Supplemental figures can be viewed in this issue of *Visual Neuroscience* by visiting [journals.cambridge.org/VNS](http://journals.cambridge.org/VNS)

**Fig. S1.** VGLUT3+ amacrine cells have highly irregular neurites. **(A)** Enlarged image of the two-photon fluorescence reconstruction of a VGLUT3+ amacrine cell from a whole-mount tissue preparation shown in Fig. 2G. **(B)** Enlarged fluorescence image of the neuritic arbor from a VGLUT3+ amacrine cell in slice (from Fig. 3B).

**Fig. S2.** VGLUT3+ amacrine cells express functionally inactivating A-type  $K_v$  channels. **(A)** An inactivation protocol (conditioning steps:  $-90$  to  $+20$  mV in  $10$  mV increments;  $500$  ms; test pulse:  $+30$  mV;  $200$  ms) revealed an inactivating component of the  $K_v$  current. **(B)** Pooled data were fit with the Boltzman equation to derive the half-maximal inactivation potential and  $Z\delta$  of inactivation ( $n = 4$ ).