

**Table S3. Probability of finding  $\leq 7$  retinal ganglion cells (RGCs) in the 3115 cells sampled**

Condition	Frequency	<i>P</i> *
Horizontal <sup>†</sup>	0.097	0.0000000
Displaced amacrine <sup>†</sup>	0.048	0.0000000
Adult RGC <sup>‡</sup>	0.006	0.0018114

\*Probability of seeing  $\leq 7$  RGCs in the Ascl1 lineage (3115 total cells) given the frequency at which they are expected to occur using the binomial distribution.

<sup>†</sup>Frequency observed in the E12.5/E13.5 Ascl1 lineage trace.

<sup>‡</sup>From Jeon et al. (Jeon et al., 1998).