

**Figure S2.** Dopamine and serotonin probe validation. (A) Distribution of *pale* (Quasar 570; green) and *DAT* (CAL Fluor 610 Red; magenta) mRNAs in part of a wild-type brain. A partial z-projection (approximately 24  $\mu$ m depth) of the dorsal posterior brain is shown, with each channel in gray to the right. Scale bar, 10  $\mu$ m. (B) A wild-type brain was labeled with mouse anti-serotonin/Alexa Fluor 568 anti-mouse (green) and a FISH probe for *SerT* (Cy5; magenta) mRNA. Each channel is shown in gray on the right. Scale bar, 50  $\mu$ m. (C) A *SerT-GFP* brain was labeled with mouse anti-serotonin/Alexa Fluor 568 anti-mouse (magenta) and rabbit anti-GFP/Alexa Fluor 488 (green) antibodies. Each channel is shown in gray on the right. Scale bar, 100  $\mu$ m.