



**Extended Data Figure 10 | DVB in hermaphrodites does not show neurite branching upon *gar-3b::Chr2::yfp* activation or NRX-1 or NLG-1 manipulation.** **a**, Confocal images of *lim-6<sup>int4</sup>::wCherry* and *Ex[gar-3b::Chr2::yfp]* expression in day 1 hermaphrodites showing DVB axon projection after activation with retinal (488-nm light for  $3 \times 15$  s every 45 min for 4.5 h). **b**, Confocal images of *lim-6<sup>int4</sup>::wCherry* or *lim-6<sup>int4</sup>::gfp* in control, *nrx-1(wy778)*, *nlg-1(ok259)*, and *Ex[lim-6<sup>int4</sup>::gfp::nrx-1<sup>LONG</sup>]* hermaphrodites at day 3. **c**, Quantification of the percentage of hermaphrodites with DVB axon abnormalities or

neurites (in almost all cases, a single neurite off the axon just posterior to the pre-anal ganglion) in day 1 control and *Ex[gar-3b::Chr2::yfp]* with activation, day 3 control, *nrx-1(wy778)*, *nlg-1(ok259)*, and *Ex[lim-6<sup>int4</sup>::gfp::nrx-1<sup>LONG</sup>]* worms. *n* shows number of worms, data points represent average percentage for each replicate of multiple hermaphrodites. Dot represents one worm; magenta bar, median; boxes, quartiles; one-way ANOVA and post-hoc Tukey HSD, *P* values shown above plots, bold shows significance ( $P < 0.05$ ), scale bars, 10  $\mu$ m.