



**Figure S3** HSN migration defects in *rde-4(ne299)* determined by anti-serotonin staining. (A) Epifluorescent image of the HSN stained with anti-serotonin in *rde-4(ne299)* animals (B). The asterisk indicates the vulva and the arrow indicates a HSN that has failed to migrate the full distance from its birthplace in the tail to flank the vulva. Note that undermigrated HSNs still differentiate, as they express the neurotransmitter serotonin, a late step in HSN development. Image is oriented with the posterior of the animal to the right. Scale bars: 20  $\mu$ m. (B) Quantification of the percentage of animals with an undermigrated HSN from two pooled independent experiments in wild type (n=78) versus *rde-4(ne299)* (n=100) animals. See Figure S1 for detailed description of worm schematic legend. Error bars represent SEP.