

Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: Fas 2 positive connectives

Animated 3D reconstruction of the Fas 2 positive connectives of a section of the VNC of a late embryo (Stage 17).

File Name: Supplementary Movie 2

Description: Fas 2 positive connectives of a *puc^{E69}* embryo

Animated 3D reconstruction of the Fas 2 positive connectives of a section of the VNC of a late *puc^{E69}* mutant embryo (Stage 17).

File Name: Supplementary Movie 3

Description: Dynamics of *puc^{E69}* expression

Time course of *puc^{E69}* expression from a *puc^{E69}/I-Gal4>UAS-GFP* viable line. *puc* expression can be observed from early stage 13 in a few neurons at the midline. As development progressed, more and more neurons express *puc*, both within the VNC and at the peripheral nervous system (PNS). Scale bar is 50 μ m. Anterior is to the left.

File Name: Supplementary Movie 4

Description: Minimum consensus for the segmental *puc^{E69}* expression

Animated 3D cartoon representing a single segment of a late *puc^{E69}* mutant embryo (Stage 17). The 18 *puc* expressing cells per hemisegment represented in the minimum consensus are shown in different colors.