Supplemental Material

Suppl. Fig.1 Details of Rdl-HA and Actin-GFP distribution in larval motorneurons.

A-A") Actin-GFP (Act) and HA-tagged GABA receptors (Rdl) targeted to all motorneurons (*OK6-Gal4*) occur in dotted or speckled patterns in dendrites in segmentally repeated patterns of distribution; areas of high Rdl-HA (open curved arrows) show lower amounts of Actin-GFP. **B-B"**) Dots of Rdl-HA are restricted to dendrites and do not localise to areas of high Actin-GFP accumulation suggesting that they are not situated at postsynaptic densities. Similar observations were made for GABAergic synapses in the calyx area of the cricket brain (Frambach, 2004; Frambach et al., 2004). Note, that also in the mammalian brain GABA receptors are mostly localised at symmetric synapses, which lack pronounced postsynaptic densities (Peters et al., 1991). **C,D)** Actin-GFP accumulates in dendrites (curved arrow), but is only weakly and evenly expressed in motornerves (arrows); in contrast, the cell surface marker mCD8-GFP (CD8) does not discriminate between these compartments.

Suppl. Fig.2 Baz-GFP reliably colocalises with endogenous Bazooka.

A) aPKC, Baz and Par6 are restricted to the apical compartment in embryonic neuroblasts, whereas Lgl is homogeneously distributed (although its phosphorylated inactive form is restricted to the apical cortex) (Betschinger et al., 2003). In analogy, aPKC, Baz and Par6, but not Lgl, are compartmentalised in the late embryonic nerve cord (see Fig.4A-D). **B,D)** Baz-GFP (Baz*) expressed via *scabrous-Gal4* (*sca*) colocalises with endogenous Bazooka (Baz) in neuroblasts (B) and in epidermal cells (D). **C)** Baz-GFP expressed in late larval motorneurons via *OK6-Gal4* localises to presynaptic terminals, as was similarly demonstrated for endogenous Bazooka (Ruiz-Canada et al., 2004). Scale bar 5.8µm in B, 15µm in C, D.

Suppl. Fig.3 Cell types occurring in primary dissociation cultures.

Like in conventional primary cell cultures raised from the neural precursor stage (Küppers-Munther et al., 2004), several cell types develop upon chemical dissociation of 6-7hr old embryos (see Materials and Methods). Identified cell types comprise glia cells (**A**; identified by Repo), neurons (**A,C,D**; indicated by anti-HRP, elav, GABA and Syt = Synaptotagmin) and muscles (**B**; characterised by spindle shape and display of longitudinal Actin fibres labelled with Phal = phalloidin).

Supplementary References

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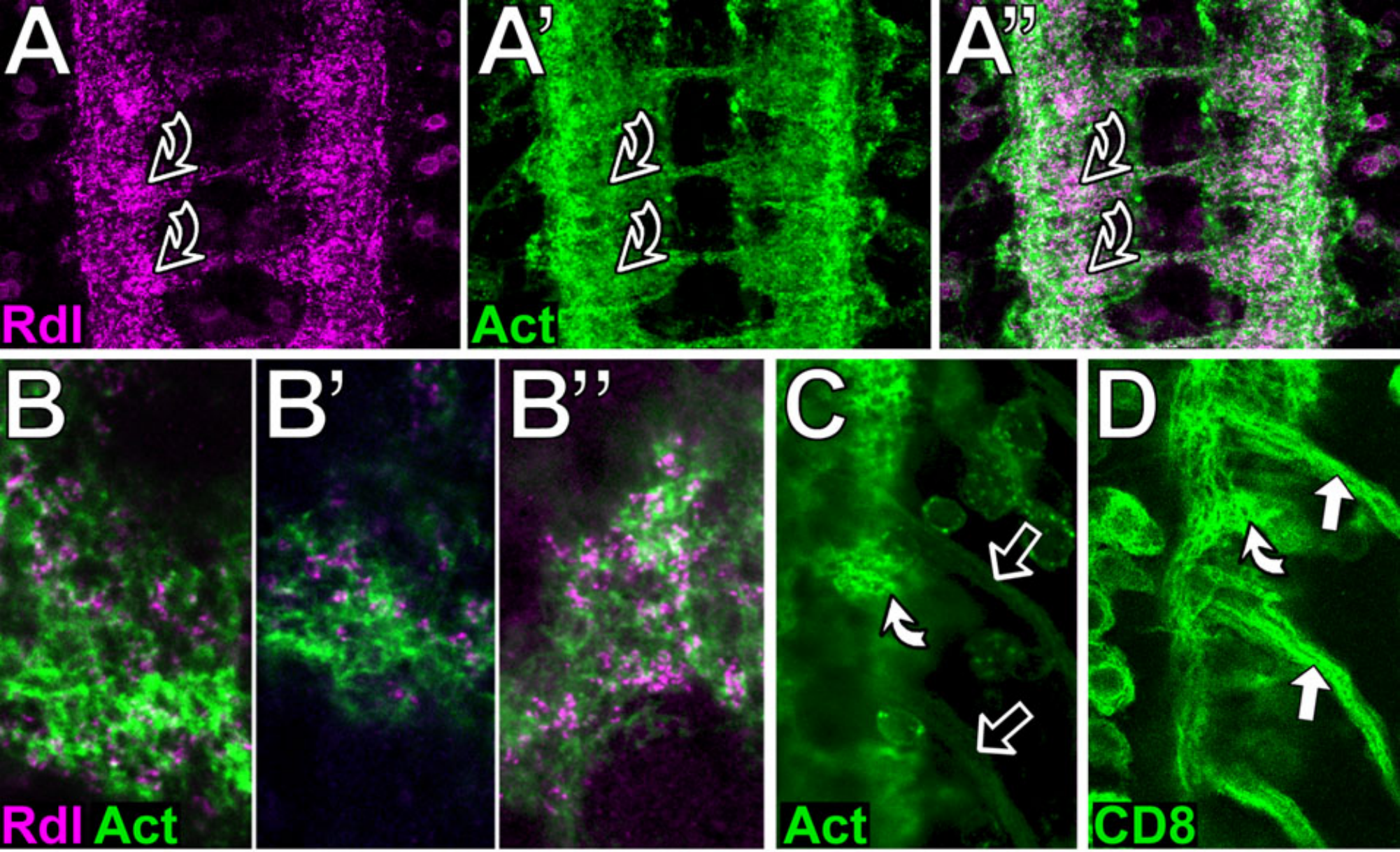
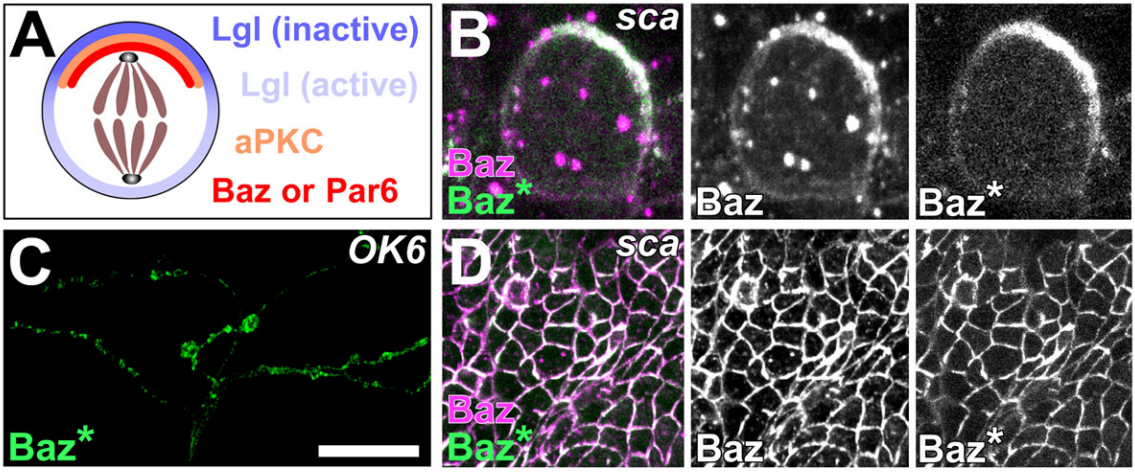
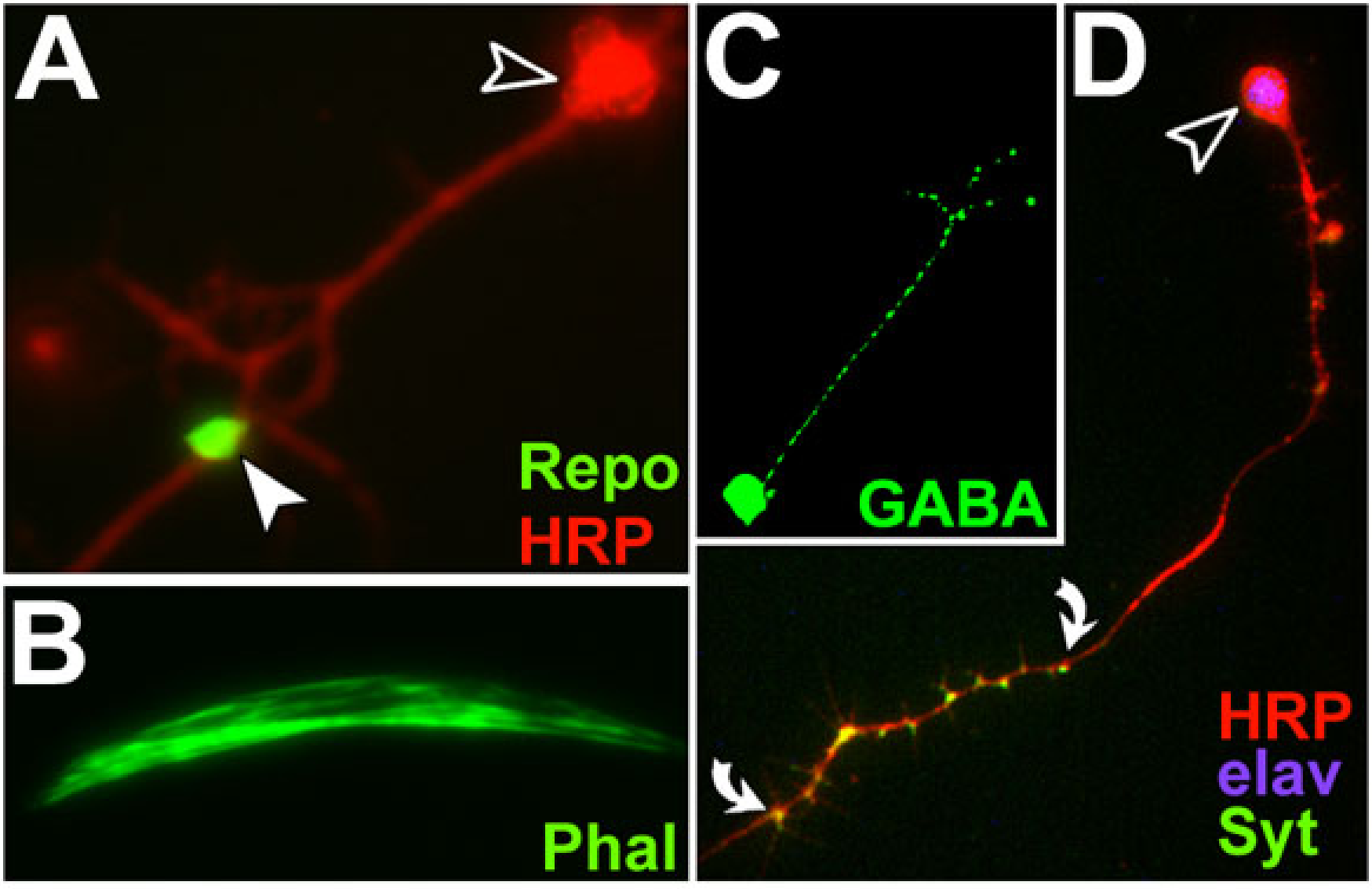


Suppl. Fig.1 Sánchez-Soriano



Suppl. Fig.2 Sánchez-Soriano



Suppl. Fig.3 Sánchez-Soriano