**Supplementary Figure 2** Models for VAB-8 and small GTPases as regulators of UNC-40 and possibly other guidance cue receptors. (a) Genetic pathway for the regulation of the ALM axon reversals, and possibly normal posterior ALM cell migration. Our data suggest that VAB-8 functions either downstream or interdependently with MIG-2. The reverse arrow represents the possible interdependency of VAB-8 and MIG-2. UNC-73 is placed upstream of MIG-2 by inference due to its well-established role as the GEF of MIG-2 and the requirement of this GEF domain in mediating VAB-8L induced reversals. (b) One possible scenario for the regulation of UNC-40 spatial localization is to allow cross talk between an AP guidance system (possibly Wnt**) and the Netrin guidance system. The AP cue acts through UNC-73 and VAB-8 to localize UNC-40 (either protein or mRNA) to the leading edge or the growth cone. The UNC-40 receptor is then activated by its known ligand, UNC-6, which does not provide polarity information for this AP migration. Alternatively, VAB-8 might convert pre-existing polarity into spatial polarity of guidance cue receptors. (c) A second scenario is that UNC-73, MIG-2 and VAB-8 affect the localization of the UNC-40 so that it becomes available on the membrane, or concentrated in lipid rafts. This would consequently allow further activation of UNC-40 by a guidance cue graded along the AP axis.

*These models are not mutually exclusive; a combination of both is also possible.

**This may also be true for the Q-cell migrations, which involve both Wnt signaling and an UNC-40 function.