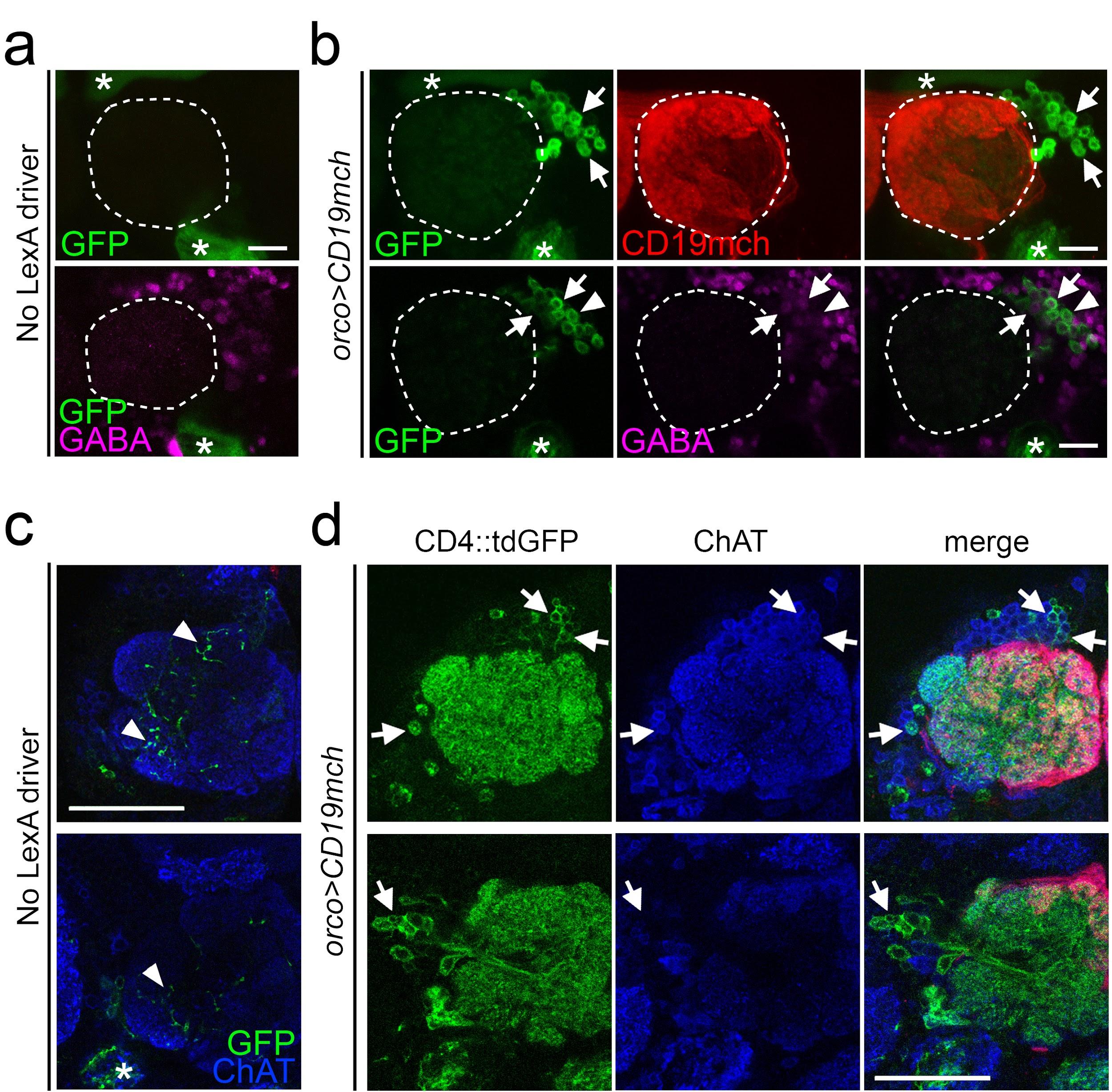
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**Figure 2 –figure supplement 1 : TRACT reveals antennal lobe neurons that have cell-cell contacts with olfactory receptor neurons.**

(a) and (b) Detection of neuron-neuron contacts in the adult *Drosophila* antennal lobe (stippled circle) with nlgSNTG4 driven by *elav* promoter. Top panels show maximum projection of z-stack confocal images; the bottom panels show single optical sections from the z-stack on the top panels. (a) Control samples without *orco-lexA* driver (carrying elav-nlgSNTG4, 5xUAS-CD4::tdGFP and LexAop-CD19mch) show no induction in antennal lobe neurons. The stars mark the ligand-independent background in the mushroom body (top left) and axons from Johnson’s organ neurons (bottom right). (b) Top panels show induction of CD8:GFP expression in neurons (arrows) surrounding the antennal lobe (stippled circle) when the ligand (CD19mch) was driven by the *orco* driver in ORNs. Left: CD8:GFP+ neurons; middle: CD19mch+ axons from ORNs; right: merged images of CD19mch (red), CD8:GFP (green). Bottom panels show a single optical section from the stack on top with GABA immunostaining (magenta), confirming that some of the GFP+ neurons (green) induced by CD19mch+ ORNs are GABAergic LNs (arrows). The arrowheads indicate the GFP+, GABA- neurons. left: distribution of GFP+ neurons; middle: GABA immunostaining; right: merged images of GABA (magenta), GFP (green). Scale bar= 20 μm.

(c, d) Detection of neuron-neuron contacts in the adult *Drosophila* antennal lobe with nlgSNTG4 driven by *nSyb* promoter. (c) Control brains without orco-lexA driver (carrying nSyb-nlgSNTG4, 5xUAS-CD4::tdGFP and LexAop-CD19mch) had low levels of background GFP expression inside of the antennal lobe (arrowheads) and in the antennal mechanosensory and motor center (star in the bottom panel). (d) When CD19mch was driven by the orco-lexA driver in ORNs, it triggered induction of GFP expression in neurons whose dendrites branched throughout the whole antennal lobe. Left: GFP+ cell bodies and neurites from the antennal lobe neurons; middle: ChAT immunostaining (blue); right: merged images of CD19mch (red), CD4::tdGFP (green), and CD19mch+ axons from ORNs (red). The images of two single optical section (top and bottom panels) at different depths show ChAT immunostaining (blue), indicating that some of the GFP+ neurons (green) induced by CD19mch+ ORNs are cholinergic PNs (arrows in the top panels). Bottom panels, some of the GFP+ neurons (green) are non-cholinergic cells, suggesting that they are LNs (arrows in the bottom panels). Scale bar= 50 µm.