



### Supplementary Figure 3: Epac FRET response to PDF in DN1p neurons

A: Representative images showing whole brain imaging using UAS-EPAC;Clk4.1M-Gal4 male flies. Changes in YFP and CFP fluorescence were measured in the region of interest delineated by the blue, red and green lines. B: Representative images (5s interval between images) showing the change in the ratio YFP/CFP after PDF is applied (+0s). Time course of the ratio YFP/CFP is shown in C: for the three region of interest delineated in A. D: Average ratio YFP/CFP with SEM in black, YFP in yellow and CFP in blue) ( $\Delta$ ratio=0.13 $\pm$ 0.05, n=19 cells from 4 brains).