

Supporting Information

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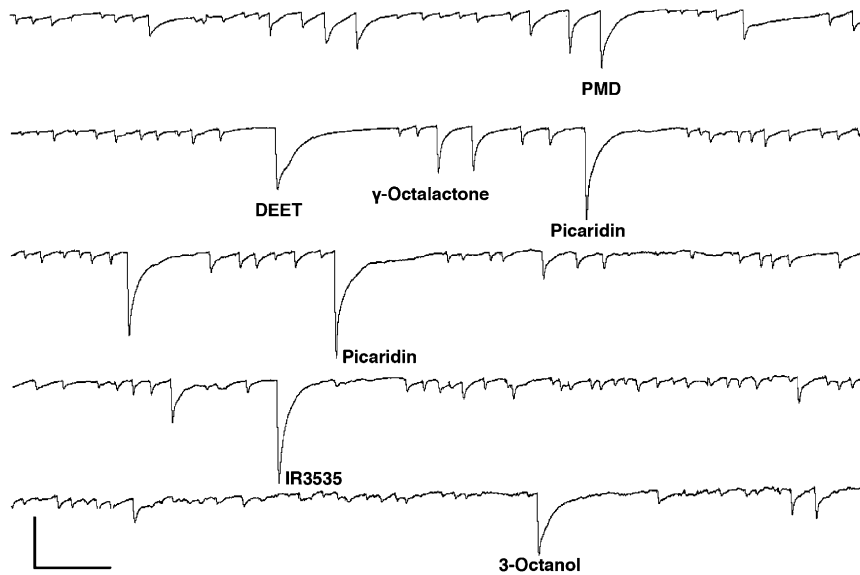


Fig. S1. Representative trace obtained by two electrode voltage clamp recordings from oocytes coexpressing CquiOR136 and CquiOrco. All compounds in our panel were screened at a source dose of 1 mM. Scales: current 200 nA; time, 4 min.

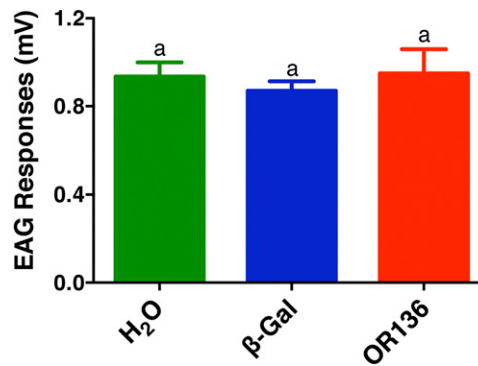
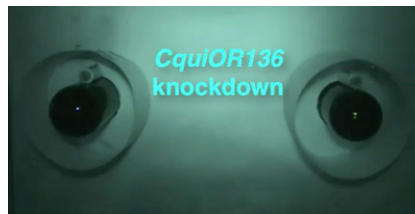


Fig. S2. EAG responses of mosquitoes to an additional control compound, decanal. EAG responses recorded from mosquitoes injected with water (green), β -galactosidase-dsRNA (blue), or CquiOR136-dsRNA (red). Bars represent mean \pm SEM. The three groups are not significantly different at the 5% level (Tukey's multiple comparison tests) as indicated by the same letter.



Movie S1. *CquiOR136* knockdown mosquitoes are not repelled by DEET. Still images of the arena and an assay with WT mosquitoes are shown at the beginning of the movie. Then, movie images captured with a night vision infrared camera in the same manner as described for Fig. 2 are shown initially at regular and then at 2× speed. The movie shows very active females landing on both sides of the arena starting at the onset of the experiment. Intermittent red light inspections help visualize mosquitoes feeding. CO₂ at 50 mL/min was delivered at both sides of the arena, just above Dudley bubbling tubes, whereas defibrinated sheep blood was loaded into cotton rolls and presented as a feeding reward between CO₂ source and warm black tubes. Each Dudley tube was surrounded by a paper ring, loaded either with DEET or solvent only.

[Movie S1](#)



Movie S2. Movie images recorded in the same manner as shown in [Movie S1](#) and captured in a follow-up experiment after rotation of sample and control.

[Movie S2](#)