

**Table S1.** Values from Figure 1C. Response amplitudes to 100  $\mu$ M of each compound are presented as a percentage of the response of the same oocyte to 100  $\mu$ M OLC3 (mean  $\pm$  SEM, n=3-8). nt, not tested.

	Dmel\Orco + Dmel\Or35a	Dmel\Orco	Cqui\Orco + Cqui\Or10	Cqui\Orco	Onub\Orco + Onub\Or1
<b>VUAA1</b>	50 $\pm$ 9	24 $\pm$ 7	75 $\pm$ 3	18 $\pm$ 8	60 $\pm$ 6
<b>OLC2</b>	2 $\pm$ 1	0	0	0	9 $\pm$ 2
<b>OLC3</b>	100	100	100	100	100
<b>OLC4</b>	4 $\pm$ 1	0	0	0	4 $\pm$ 2
<b>OLC5</b>	4 $\pm$ 1	0	16 $\pm$ 2	0	4 $\pm$ 2
<b>OLC6</b>	0	0	0	4 $\pm$ 2	0
<b>OLC7</b>	4 $\pm$ 1	0	4 $\pm$ 1	4 $\pm$ 2	0
<b>OLC8</b>	0	0	0	5 $\pm$ 3	0
<b>OLC9</b>	5 $\pm$ 2	0	0	0	3 $\pm$ 1
<b>OLC10</b>	25 $\pm$ 7	0	27 $\pm$ 16	0	nt
<b>OLC11</b>	13 $\pm$ 2	0	13 $\pm$ 3	0	nt
<b>OLC12</b>	300 $\pm$ 41	318 $\pm$ 12	289 $\pm$ 41	636 $\pm$ 78	306 $\pm$ 33
<b>OLC13</b>	0	0	0	0	nt
<b>OLC14</b>	2 $\pm$ 1	0	12 $\pm$ 2	0	nt
<b>OLC15</b>	0	0	0	0	nt
<b>OLC16</b>	0	0	0	3 $\pm$ 2	nt
<b>OLC17</b>	0	0	0	3 $\pm$ 2	nt
<b>OLC18</b>	0	0	0	0	nt
<b>OLC19</b>	0	0	0	3 $\pm$ 2	nt
<b>OLC20</b>	0	0	11 $\pm$ 4	0	nt
<b>OLC21</b>	0	0	0	0	nt
<b>OLC22</b>	0	0	0	0	nt
<b>OLC23</b>	0	0	8 $\pm$ 3	0	nt