

# Molecular determinants of odorant receptor function in insects

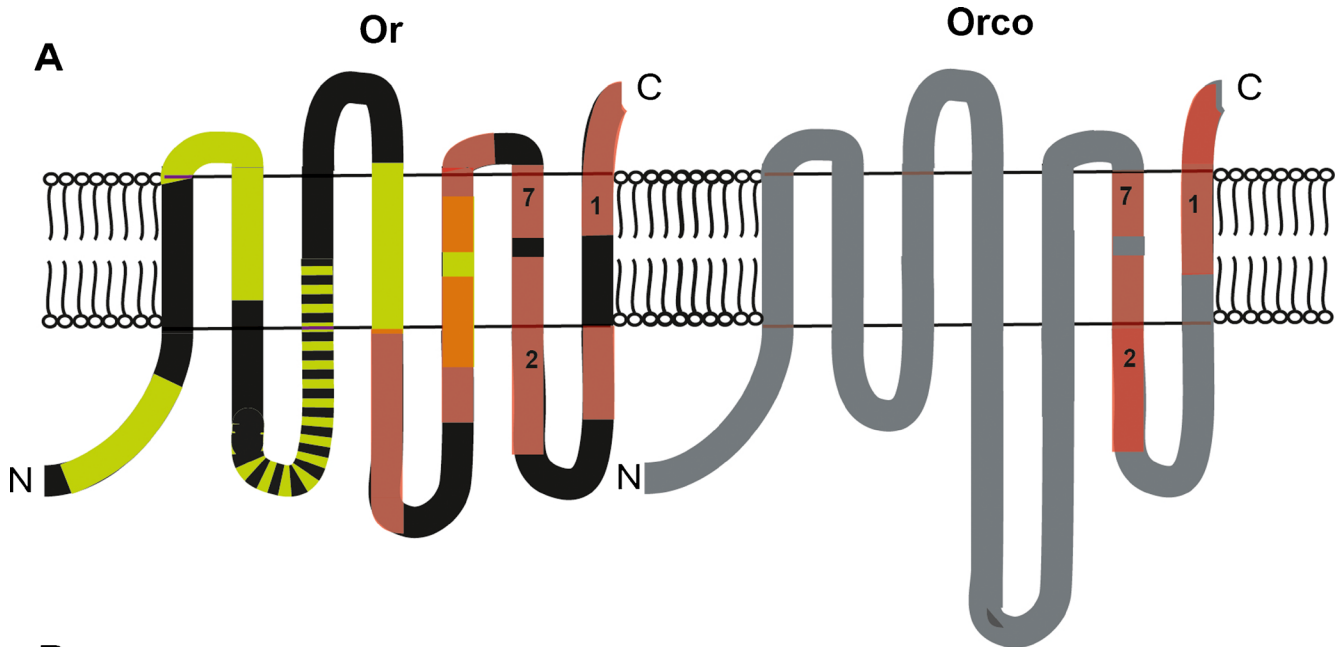
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## Supplementary material



**Supplementary figure 1.** Locations of motifs in the 11 *Drosophila* phenol odor receptors. Phenol-specific motifs are indicated in green, and family-wide motifs are indicated in red. Transmembrane domains are indicated as bars on top of sequence.



**B**

**Orco**

2

LENGTH = 486 amino acids

COMBINED P-VALUE = 2.10e-08

E-VALUE = 0.0003

POSITION OF MOTIFS: 335aa-[10]-33aa-[7]-[2]-33aa-[1]-1aa

[10 :335aa]

2.8e-05

QELRECIRYHQRIVDLTDECE

++ + ++++++++ ++

[7 :389aa]

4.3e-06

GFMKYVQYQAA

+++ + ++

326 LTKKQEMMVRSAIKYWVERHKHVRLVAAIGDTYGAALLLHMLTSTIKLTLAYQATKINGVNVYAFTVVGYLGY

[2 :410aa]

6.0e-10

MIWQIFLPCYYGNEVTEQSNDLCHAAYSTNW

++ +++ +++++ + ++++++ ++++++ +

[1 :464aa]

1.0e-05

LPTFTKTINCA

+++++++ +

401 ALAQVFHFCIFGNRLIESSVMEAAYSCHWYDGSEEAKTFVQIVCQCQKAMSISGAKFFTVSLDLFASVLGAV

YSFFALLKRV

+++ ++

476 VTYFMVLVQLK

**Supplementary figure 2.** Orco shares four motifs with the canonical odor receptors. (A) Position of motifs in a canonical odor receptor and Orco. (B) Higher resolution sequence map of the 4 motifs 1, 2, 7 and 10. Amino acids scored as similar are indicated with a '+'. P-values for each hit are indicated.