

Title: Supplementary Data 1.

Description: Differentially expressed genes in Olfr16 and Olfr151- transcribing populations after agonist exposure. Fold change of the strongly modulated genes. Selection criteria: adjusted p-value < 0.1 and $\log_2(\text{fold change}) < -0.5$ (=downregulated genes) or adjusted p-value < 0.1 and $\log_2(\text{fold change}) > 0.5$ (=upregulated genes). P-values: Wald test (two-tailed), BenjaminiHochberg adjusted.

Title: Supplementary Data 2.

Description: Differentially expressed genes between Olfr151- and Olfr16-transcribing populations at basal state. Gene expression fold differences of genes identified as being differentially expressed between Olfr151- and Olfr16-transcribing populations, at basal state. Selection criteria: Adjusted p-value < 0.1 and fold difference > 4. P-values: Wald test (two-tailed), BenjaminiHochberg adjusted.

Title: Supplementary Data 3.

Description: Genes that were strongly modulated after activation in one OSN population and not in the other. Gene expression fold change after ligand exposure, and OSN population specificity assessment. Selection criteria: Adjusted p-value < 0.1, $\log_2(\text{fold change}) < -2$ (=downregulated genes); adjusted p-value < 0.1, $\log_2(\text{fold change}) > 2$ (=upregulated genes) P-values: Wald test (two-tailed), BenjaminiHochberg adjusted. Specific to the population: gene that was not detected in the other population.