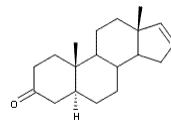
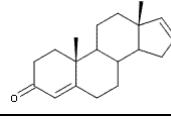
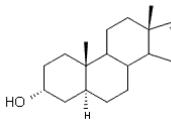
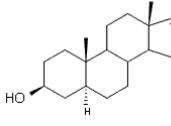
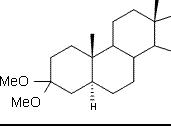
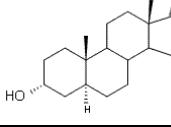
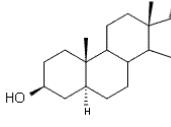
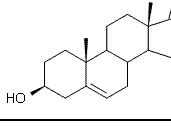
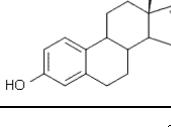
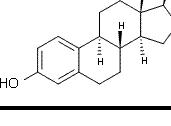


Table S1. List of odorants used in the functional analysis of OR7D4 and OR7D1 orthologs

A. List of sex-steroid derived odorants used

IUPAC name	Common name	Structure
5-alpha-Androst-16-en-3-one	androstenone	
Androsta-4,16-dien-3-one	androstadienone	
5-alpha-Androst-16-en-3-alpha-ol	androstenol	
5-alpha-Androst-16-en-3-beta-ol	3-epi-androstenol	
5-alpha-Androst-16-en-3-methyl ketal	androstenone methyl ketal	
3-alpha-Hydroxy-5-alpha-androstan-17-one	androsterone	
3-beta-Hydroxy-5-alpha-androstan-17-one	3-epi-androsterone	
3-beta-Hydroxyandrost-5-en-17-one	DHEA	
Estra-1,3,5(10),16-tetraen-3-ol	estratetraenol	
17-beta-Estradiol	estradiol	

B. List of 10 mixtures of 169 odorants used in a screen for OR7D1 ligands

Mixture	Odorant
1	(+)-Carvone (-)-Carvone Citral (1R)-(-)-Fenchone (+)-Fenchone (-)-Rose oxide (+)-Rose oxide D-Carvone (-)-Camphor (S)-(-)-Limonene (R)-(+)1-Phenylethanol (S)-(+)2-Phenylbutyric acid (R)-(-)2-Phenylbutyric acid 2-Hexanone 1-Pentanol (±)-2-Butanol 1-Propanol
2	1-Hexanol (-)-Menthol (R)-(-)-2-Heptanol (+)-Menthol 2-Methyl-2-heptanol (S)-(+)2-Octanol (S)-(+)2-Heptanol 1-Decanol (-)-beta-Citronellol (S)-(-)-1-Phenylethanol (R)-(-)-2-Butanol Propanal Undecanal Octanal trans-Cinnamaldehyde Nonanal
3	Heptaldehyde Decanal Hexanoic acid Heptanoic acid Valeric acid Propionic acid Butyric acid Nonanoic acid Methyl propionate Ethyl butyrate Butyl butyrate tert-Butyl propionate Methyl butyrate Propyl butyrate

	Pentyl acetate Isobutylamine Geraniol 2-Pentanone 2-Butanone
4	(1S)-(-)-alpha-Pinene 1,4-Cineole Phenetole (R)-(+)-Pulegone Benzyl alcohol Guaiacol Isopentylamine g-Caprolactone Allyl heptanoate a-Amylcinnamaldehyde Amyl hexanoate Amylbutyrate Anethole Anisaldehyde Benzophenone
5	Benzyl acetate Benzyl salicylate Butyl heptanoate (+)-Camphor Cedryl acetate Cinnamyl alcohol Cinnamaldehyde (R)-(+)-Citronellal (S)-(-)-Citronellal Citronellol Coumarin Cyclohexanone p-Cymene 5,5-Dimethyl-1,3-cyclohexanedione 3-Octanone Eucalyptol Heptyl isobutyrate Hexyl acetate a-Hexylcinnamaldehyde
6	Isobornyl acetate Linalool Lyral Hydroxycitronellal p-Tolyl isobutyrate o-Tolyl isobutyrate p-Tolyl phenylacetate 2-Methoxy-3-Methyl-pyrazine 2-Methoxypyrazine Methyl salicylate Myrcene

	w-Pentadecalactone Prenylacetate 2-Phenylethanol 2-Phenethyl acetate Piperonal Pyrazine Thymol Triethylamine
7	2-Heptanone Methyl eugenol Eugenol Eugenol methyl ether Butanal Hexanal 1-Hexanol 1-Pentanol Pentanal Nonanedioic acid Isovaleric acid Heptanoic acid Decanoic acid Valeric acid Vanillic acid Hexanoic acid Octanoic Acid
8	1-Octanol 4-Ethylphenol 1-Heptanol Heptaldehyde 1-Decanol 1-Nonanol Decanal Nonanal Ethyl vanillin Vanillin Acetophenone 2-Ethylphenol Guaiacol Allylbenzene Octanal 2-Bromophenol Benzaldehyde Piperonyl alcohol Piperonyl acetate 4-Hydroxycoumarin
9	4-Chromanone 2-Coumaranone Tetrahydrofuran Tetrahydropyran Benzaldehyde dimethyl acetal

(1S)-(-)-alpha-Pinene
Allyl phenylacetate
Dicyclohexyl disulfide
2-,3-,10-Mercaptopinane
1,4-Cineole
Butyl butyryllactate
1,3-Butanedithiol
Cyclopentanethiol
2-Acetyl-3,5(6)-dimethylpyrazine
2,2'-(Dithiodimethylene)difuran
Thioglycolic acid

10 d-Valerolactone
2-Furyl methyl ketone
Acetal
Tetrahydrofurfuryl acetate
2,3-Diethyl-5-methylpyrazine
Butyl formate
Pyridine
Pyrrole
Piperidine
2-Methyl-1-propanethiol
Ethyl salicylate
Ethyl pyruvate
