

**Table S10. Ligand-binding cavity residues of pig OR7D4.**

Amino acids	OR segment position
ASN42	TM1 19
ILE45	TM1 22
ILE63	TM2 3
LEU66	TM2 6
SER67	TM2 7
ASP70	TM2 10
PHE73	TM2 13
THR76	TM2 16
THR77	TM2 17
GLN100	TM3 3
VAL101	TM3 4
TYR102	TM3 5
PHE104	TM3 7
MET105	TM3 8
ALA106	TM3 9
PHE107	TM3 10
VAL108	TM3 11
GLY109	TM3 12
ASP111	TM3 14
ASP112	TM3 15
PHE113	TM3 16
LEU115	TM3 18
VAL151	TM4 11
VAL152	TM4 12
ILE155	TM4 15
SER156	TM4 16
PHE158	TM4 18
HIS159	TM4 19
ILE160	TM4 20
LEU162	ECL2 1
MET163	ECL2 2
LEU166	ECL2 5
PHE178	ECL2 17

**Table S10. Ligand-binding cavity residues of pig OR7D4 (extend).**

Amino acids	OR segment position
CYS179	ECL2 18
LEU181	ECL2 20
ALA182	ECL2 21
LEU185	ECL2 24
ASN195	ECL2 34
CYS198	TM5 1
LEU199	TM5 2
ALA202	TM5 5
THR203	TM5 6
LEU206	TM5 9
GLY207	TM5 10
PRO210	TM5 13
VAL247	TM6 7
LEU250	TM6 10
PHE251	TM6 11
TYR252	TM6 12
THR254	TM6 14
SER255	TM6 15
TYR278	TM7.8
THR279	TM7.9
THR282	TM7.12
PRO283	C' 1
ASN286	C' 4
PRO287	C' 7
TYR290	C' 10