

SEQUENCE LISTING

<110> Firmenich SA

<120> METHOD OF IDENTIFYING LAUNDRY MALODOR, MOLDY MALODOR AND/OR SWEAT MALODOR MODULATING COMPOUNDS

<130> 10510W0

<150> US 62/589,947

<151> 2017-11-22

<150> EP18157790.9

<151> 2018-02-21

<150> US 62/754,899

<151> 2018-11-02

<160> 75

<170> PatentIn version 3.5

 $\langle 210 \rangle$ 1

<211> 963

<212> DNA

<213> Homo sapiens_olfactory receptor OR2W1 (GI: 26692)

 $\langle 220 \rangle$

<221> CDS

<222> (1)..(963)

$\langle 400 \rangle$ 1

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Met Asp Gln Ser Asn Tyr Ser Ser Leu His Gly Phe Ile Leu Leu Gly
1 5 10 15

ttc tct aac cat cca aaa atg gag atg atc ctg tca gga gtt gtc gcc 96
Phe Ser Asn His Pro Lys Met Glu Met Ile Leu Ser Gly Val Val Ala
20 25 30

atc ttc tac tta att aca ttg gtg ggt aac aca gcc atc att ctt gca 144
Ile Phe Tyr Leu Ile Thr Leu Val Gly Asn Thr Ala Ile Ile Leu Ala
35 40 45

tct ctc ctg gat tcc cag ctt cat aca cca atg tac ttt ttc ctc aga 192
Ser Leu Leu Asp Ser Gln Leu His Thr Pro Met Tyr Phe Phe Leu Arg
50 55 60

aat tta tct ttc cta gat cta tgt ttc aca acc agc atc atc cct cag 240

Asn	Leu	Ser	Phe	Leu	Asp	Leu	Cys	Phe	Thr	Thr	Ser	Ile	Ile	Pro	Gln		
65					70					75					80		
gtg	ctg	gtc	aac	ttg	tgg	gga	cct	gat	aag	acc	atc	agc	tat	gtg	ggg		288
Val	Leu	Val	Asn	Leu	Trp	Gly	Pro	Asp	Lys	Thr	Ile	Ser	Tyr	Val	Gly		
				85					90					95			
tgt	atc	atc	caa	ctc	tat	gtt	tac	atg	tgg	ttg	ggc	tca	gtt	gag	tgc		336
Cys	Ile	Ile	Gln	Leu	Tyr	Val	Tyr	Met	Trp	Leu	Gly	Ser	Val	Glu	Cys		
			100					105					110				
ctt	ctc	ctg	gct	gtt	atg	tcc	tat	gat	cgt	ttt	aca	gct	ata	tgt	aag		384
Leu	Leu	Leu	Ala	Val	Met	Ser	Tyr	Asp	Arg	Phe	Thr	Ala	Ile	Cys	Lys		
			115				120					125					
ccc	ttg	cat	tat	ttt	gta	gtc	atg	aac	cca	cat	cta	tgt	cta	aag	atg		432
Pro	Leu	His	Tyr	Phe	Val	Val	Met	Asn	Pro	His	Leu	Cys	Leu	Lys	Met		
	130					135					140						
att	atc	atg	atc	tgg	agt	att	agt	ttg	gcc	aat	tct	gta	gta	tta	tgt		480
Ile	Ile	Met	Ile	Trp	Ser	Ile	Ser	Leu	Ala	Asn	Ser	Val	Val	Leu	Cys		
145					150				155						160		
aca	ctc	act	ctg	aat	ttg	ccc	aca	tgt	gga	aac	aac	att	ctg	gat	cat		528
Thr	Leu	Thr	Leu	Asn	Leu	Pro	Thr	Cys	Gly	Asn	Asn	Ile	Leu	Asp	His		
				165					170					175			
ttc	ttg	tgt	gag	ttg	cca	gct	ctg	gtc	aag	ata	gct	tgt	gta	gac	acc		576
Phe	Leu	Cys	Glu	Leu	Pro	Ala	Leu	Val	Lys	Ile	Ala	Cys	Val	Asp	Thr		
			180					185					190				
aca	aca	gtt	gaa	atg	tct	gtt	ttc	gct	tta	ggc	att	ata	att	gtc	ctc		624
Thr	Thr	Val	Glu	Met	Ser	Val	Phe	Ala	Leu	Gly	Ile	Ile	Ile	Val	Leu		
		195					200					205					
aca	cct	ctc	atc	ctt	att	ctt	ata	tcc	tat	ggc	tac	att	gcc	aaa	gct		672
Thr	Pro	Leu	Ile	Leu	Ile	Leu	Ile	Ser	Tyr	Gly	Tyr	Ile	Ala	Lys	Ala		
	210					215					220						
gtg	ctg	aga	acg	aag	tca	aaa	gca	agc	cag	cga	aaa	gca	atg	aat	acc		720
Val	Leu	Arg	Thr	Lys	Ser	Lys	Ala	Ser	Gln	Arg	Lys	Ala	Met	Asn	Thr		
225					230				235					240			
tgt	gga	tct	cat	ctt	act	gta	gtg	tct	atg	ttc	tat	gga	act	att	atc		768
Cys	Gly	Ser	His	Leu	Thr	Val	Val	Ser	Met	Phe	Tyr	Gly	Thr	Ile	Ile		
				245					250					255			
tac	atg	tac	ctg	caa	cca	ggg	aac	agg	gct	tcc	aaa	gac	cag	ggc	aag		816
Tyr	Met	Tyr	Leu	Gln	Pro	Gly	Asn	Arg	Ala	Ser	Lys	Asp	Gln	Gly	Lys		
			260					265					270				

ttc ctc acc ctc ttt tac act gtc atc act cca agt ctc aac ccg ctc	864
Phe Leu Thr Leu Phe Tyr Thr Val Ile Thr Pro Ser Leu Asn Pro Leu	
275 280 285	

att tac acc tta aga aat aag gac atg aag gat gcc ctg aag aaa ctg	912
Ile Tyr Thr Leu Arg Asn Lys Asp Met Lys Asp Ala Leu Lys Lys Leu	
290 295 300	

atg aga ttt cac cac aaa tct aca aaa ata aag agg aat tgc aag tca	960
Met Arg Phe His His Lys Ser Thr Lys Ile Lys Arg Asn Cys Lys Ser	
305 310 315 320	

tag	963
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<210> 2
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 <212> PRT
 <213> Homo sapiens_olfactory receptor OR2W1 (GI: 26692)
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Met Asp Gln Ser Asn Tyr Ser Ser Leu His Gly Phe Ile Leu Leu Gly
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Phe Ser Asn His Pro Lys Met Glu Met Ile Leu Ser Gly Val Val Ala
20 25 30

Ile Phe Tyr Leu Ile Thr Leu Val Gly Asn Thr Ala Ile Ile Leu Ala
35 40 45

Ser Leu Leu Asp Ser Gln Leu His Thr Pro Met Tyr Phe Phe Leu Arg
50 55 60

Asn Leu Ser Phe Leu Asp Leu Cys Phe Thr Thr Ser Ile Ile Pro Gln
65 70 75 80

Val Leu Val Asn Leu Trp Gly Pro Asp Lys Thr Ile Ser Tyr Val Gly
85 90 95

Cys Ile Ile Gln Leu Tyr Val Tyr Met Trp Leu Gly Ser Val Glu Cys
100 105 110

Leu Leu Leu Ala Val Met Ser Tyr Asp Arg Phe Thr Ala Ile Cys Lys
115 120 125

Pro Leu His Tyr Phe Val Val Met Asn Pro His Leu Cys Leu Lys Met
130 135 140

Ile Ile Met Ile Trp Ser Ile Ser Leu Ala Asn Ser Val Val Leu Cys
145 150 155 160

Thr Leu Thr Leu Asn Leu Pro Thr Cys Gly Asn Asn Ile Leu Asp His
165 170 175

Phe Leu Cys Glu Leu Pro Ala Leu Val Lys Ile Ala Cys Val Asp Thr
180 185 190

Thr Thr Val Glu Met Ser Val Phe Ala Leu Gly Ile Ile Ile Val Leu
195 200 205

Thr Pro Leu Ile Leu Ile Leu Ile Ser Tyr Gly Tyr Ile Ala Lys Ala
210 215 220

Val Leu Arg Thr Lys Ser Lys Ala Ser Gln Arg Lys Ala Met Asn Thr
225 230 235 240

Cys Gly Ser His Leu Thr Val Val Ser Met Phe Tyr Gly Thr Ile Ile
245 250 255

Tyr Met Tyr Leu Gln Pro Gly Asn Arg Ala Ser Lys Asp Gln Gly Lys
260 265 270

Phe Leu Thr Leu Phe Tyr Thr Val Ile Thr Pro Ser Leu Asn Pro Leu
275 280 285

Ile Tyr Thr Leu Arg Asn Lys Asp Met Lys Asp Ala Leu Lys Lys Leu
290 295 300

Met Arg Phe His His Lys Ser Thr Lys Ile Lys Arg Asn Cys Lys Ser

305 310 315 320

<210> 3
 <211> 930
 <212> DNA
 <213> Homo sapiens_olfactory receptor OR1A1 (GI:8383)

<220>
 <221> CDS
 <222> (1)..(930)

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 Met Arg Glu Asn Asn Gln Ser Ser Thr Leu Glu Phe Ile Leu Leu Gly
 1 5 10 15
 gtt act ggt cag cag gaa cag gaa gat ttc ttc tac atc ctc ttc ctg 96
 Val Thr Gly Gln Gln Glu Gln Glu Asp Phe Phe Tyr Ile Leu Phe Leu
 20 25 30
 ttc att tac ccc atc aca ttg att gga aac ctg ctc atc gtc cta gcc 144
 Phe Ile Tyr Pro Ile Thr Leu Ile Gly Asn Leu Leu Ile Val Leu Ala
 35 40 45
 att tgc tct gat gtt cgc ctt cac aac ccc atg tat ttt ctc ctt gcc 192
 Ile Cys Ser Asp Val Arg Leu His Asn Pro Met Tyr Phe Leu Leu Ala
 50 55 60
 aac ctc tcc ttg gtt gac atc ttc ttc tca tcg gta acc atc cct aag 240
 Asn Leu Ser Leu Val Asp Ile Phe Phe Ser Ser Val Thr Ile Pro Lys
 65 70 75 80
 atg ctg gcc aac cat ctc ttg ggc agc aaa tcc atc tct ttt ggg gga 288
 Met Leu Ala Asn His Leu Leu Gly Ser Lys Ser Ile Ser Phe Gly Gly
 85 90 95
 tgc cta acg cag atg tat ttc atg ata gcc ttg ggt aac aca gac agc 336
 Cys Leu Thr Gln Met Tyr Phe Met Ile Ala Leu Gly Asn Thr Asp Ser
 100 105 110
 tat att ttg gct gca atg gca tat gat cga gct gtg gcc atc agc cgc 384
 Tyr Ile Leu Ala Ala Met Ala Tyr Asp Arg Ala Val Ala Ile Ser Arg
 115 120 125
 cca ctt cac tac aca aca att atg agt cca cgg tct tgt atc tgg ctt 432
 Pro Leu His Tyr Thr Thr Ile Met Ser Pro Arg Ser Cys Ile Trp Leu
 130 135 140

att gct ggg tct tgg gtg att gga aat gcc aat gcc ctc ccc cac act	480
Ile Ala Gly Ser Trp Val Ile Gly Asn Ala Asn Ala Leu Pro His Thr	
145 150 155 160	
ctg ctc aca gct agt ctg tcc ttc tgt ggc aac cag gaa gtg gcc aac	528
Leu Leu Thr Ala Ser Leu Ser Phe Cys Gly Asn Gln Glu Val Ala Asn	
165 170 175	
ttc tac tgt gac att acc ccc ttg ctg aag tta tcc tgt tct gac atc	576
Phe Tyr Cys Asp Ile Thr Pro Leu Leu Lys Leu Ser Cys Ser Asp Ile	
180 185 190	
cac ttt cat gtg aag atg atg tac cta ggg gtt ggc att ttc tct gtg	624
His Phe His Val Lys Met Met Tyr Leu Gly Val Gly Ile Phe Ser Val	
195 200 205	
cca tta cta tgc atc att gtc tcc tat att cga gtc ttc tcc aca gtc	672
Pro Leu Leu Cys Ile Ile Val Ser Tyr Ile Arg Val Phe Ser Thr Val	
210 215 220	
ttc cag gtt cct tcc acc aag ggc gtg ctc aag gcc ttc tcc acc tgt	720
Phe Gln Val Pro Ser Thr Lys Gly Val Leu Lys Ala Phe Ser Thr Cys	
225 230 235 240	
ggt tcc cac ctc acg gtt gtc tct ttg tat tat ggt acg gtc atg ggc	768
Gly Ser His Leu Thr Val Val Ser Leu Tyr Tyr Gly Thr Val Met Gly	
245 250 255	
acg tat ttc cgc cct ttg acc aat tat agc cta aaa gac gca gtg atc	816
Thr Tyr Phe Arg Pro Leu Thr Asn Tyr Ser Leu Lys Asp Ala Val Ile	
260 265 270	
act gta atg tac acg gca gtg acc cca atg tta aat tct ttc atc tac	864
Thr Val Met Tyr Thr Ala Val Thr Pro Met Leu Asn Ser Phe Ile Tyr	
275 280 285	
agt ctg aga aat cgg gac atg aag gct gcc ctg cgg aaa ctc ttc aac	912
Ser Leu Arg Asn Arg Asp Met Lys Ala Ala Leu Arg Lys Leu Phe Asn	
290 295 300	
aag aga atc tcc tcg taa	930
Lys Arg Ile Ser Ser	
305	

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 <212> PRT
 <213> Homo sapiens_olfactory receptor OR1A1 (GI:8383)

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Met Arg Glu Asn Asn Gln Ser Ser Thr Leu Glu Phe Ile Leu Leu Gly
1 5 10 15

Val Thr Gly Gln Gln Glu Gln Glu Asp Phe Phe Tyr Ile Leu Phe Leu
20 25 30

Phe Ile Tyr Pro Ile Thr Leu Ile Gly Asn Leu Leu Ile Val Leu Ala
35 40 45

Ile Cys Ser Asp Val Arg Leu His Asn Pro Met Tyr Phe Leu Leu Ala
50 55 60

Asn Leu Ser Leu Val Asp Ile Phe Phe Ser Ser Val Thr Ile Pro Lys
65 70 75 80

Met Leu Ala Asn His Leu Leu Gly Ser Lys Ser Ile Ser Phe Gly Gly
85 90 95

Cys Leu Thr Gln Met Tyr Phe Met Ile Ala Leu Gly Asn Thr Asp Ser
100 105 110

Tyr Ile Leu Ala Ala Met Ala Tyr Asp Arg Ala Val Ala Ile Ser Arg
115 120 125

Pro Leu His Tyr Thr Thr Ile Met Ser Pro Arg Ser Cys Ile Trp Leu
130 135 140

Ile Ala Gly Ser Trp Val Ile Gly Asn Ala Asn Ala Leu Pro His Thr
145 150 155 160

Leu Leu Thr Ala Ser Leu Ser Phe Cys Gly Asn Gln Glu Val Ala Asn
165 170 175

Phe Tyr Cys Asp Ile Thr Pro Leu Leu Lys Leu Ser Cys Ser Asp Ile
180 185 190

His Phe His Val Lys Met Met Tyr Leu Gly Val Gly Ile Phe Ser Val
195 200 205

Pro Leu Leu Cys Ile Ile Val Ser Tyr Ile Arg Val Phe Ser Thr Val
210 215 220

Phe Gln Val Pro Ser Thr Lys Gly Val Leu Lys Ala Phe Ser Thr Cys
225 230 235 240

Gly Ser His Leu Thr Val Val Ser Leu Tyr Tyr Gly Thr Val Met Gly
245 250 255

Thr Tyr Phe Arg Pro Leu Thr Asn Tyr Ser Leu Lys Asp Ala Val Ile
260 265 270

Thr Val Met Tyr Thr Ala Val Thr Pro Met Leu Asn Ser Phe Ile Tyr
275 280 285

Ser Leu Arg Asn Arg Asp Met Lys Ala Ala Leu Arg Lys Leu Phe Asn
290 295 300

Lys Arg Ile Ser Ser
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<210> 5
<211> 936
<212> DNA
<213> Homo sapiens_olfactory receptor OR2J3 (GI: 442186)

<220>
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<222> (1)..(936)

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Met Asn Asp Asp Gly Lys Val Asn Ala Ser Ser Glu Gly Tyr Phe Ile
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tta gtt gga ttt tct aat tgg cct cat ctg gaa gta gtt atc ttt gtg 96
Leu Val Gly Phe Ser Asn Trp Pro His Leu Glu Val Val Ile Phe Val
20 25 30

gtt gtc ttg atc ttc tac ttg atg aca ctg ata gga aac ctg ttc atc Val Val Leu Ile Phe Tyr Leu Met Thr Leu Ile Gly Asn Leu Phe Ile 35 40 45	144
atc atc ctg tca tac ctg gac tcc cat ctg cac aca cca atg tac ttc Ile Ile Leu Ser Tyr Leu Asp Ser His Leu His Thr Pro Met Tyr Phe 50 55 60	192
ttc ctt tca aac ctc tca ttt ctg gat ctc tgc tac acc acc agc tct Phe Leu Ser Asn Leu Ser Phe Leu Asp Leu Cys Tyr Thr Thr Ser Ser 65 70 75 80	240
atc cct cag ttg ctg gtc aat ctc tgg ggc ccg gaa aag acc atc tct Ile Pro Gln Leu Leu Val Asn Leu Trp Gly Pro Glu Lys Thr Ile Ser 85 90 95	288
tat gct ggt tgc atg att caa ctt tac ttt gtt ctc gca ctg gga acc Tyr Ala Gly Cys Met Ile Gln Leu Tyr Phe Val Leu Ala Leu Gly Thr 100 105 110	336
gca gag tgt gtc cta ctg gtg gtg atg tcc tat gac cgt tat gca gct Ala Glu Cys Val Leu Leu Val Val Met Ser Tyr Asp Arg Tyr Ala Ala 115 120 125	384
gtg tgt aga cct ttg cat tac act gtc ctc atg cac cct cgt ttc tgc Val Cys Arg Pro Leu His Tyr Thr Val Leu Met His Pro Arg Phe Cys 130 135 140	432
cac ctg ctg gct gtg gct tct tgg gta agt ggt ttt acc aac tca gca His Leu Leu Ala Val Ala Ser Trp Val Ser Gly Phe Thr Asn Ser Ala 145 150 155 160	480
ctt cat tcc tcc ttc acc ttc tgg gta cct ctg tgt gga cac cgc caa Leu His Ser Ser Phe Thr Phe Trp Val Pro Leu Cys Gly His Arg Gln 165 170 175	528
gta gat cac ttt ttc tgt gaa gtt cca gca ctt ctg cga tta tcg tgt Val Asp His Phe Phe Cys Glu Val Pro Ala Leu Leu Arg Leu Ser Cys 180 185 190	576
gtt gat acc cat gtc aat gag ctg acc ctc atg atc aca agc tcc ata Val Asp Thr His Val Asn Glu Leu Thr Leu Met Ile Thr Ser Ser Ile 195 200 205	624
ttt gtt ctc ata cct ctc atc ctc att ctc act tct tat ggt gcc atc Phe Val Leu Ile Pro Leu Ile Leu Ile Leu Thr Ser Tyr Gly Ala Ile 210 215 220	672
gtc cga gct gta ctg agg atg cag tca acc act ggg ctt cag aaa gtg	720

Val	Arg	Ala	Val	Leu	Arg	Met	Gln	Ser	Thr	Thr	Gly	Leu	Gln	Lys	Val	
225					230					235					240	
ttt	gga	aca	tgt	gga	gct	cat	ctt	atg	gct	gta	tct	ctc	ttt	ttc	att	768
Phe	Gly	Thr	Cys	Gly	Ala	His	Leu	Met	Ala	Val	Ser	Leu	Phe	Phe	Ile	
				245					250					255		
ccg	gcc	atg	tgc	ata	tat	ctc	cag	cca	cca	tca	gga	aat	tct	caa	gat	816
Pro	Ala	Met	Cys	Ile	Tyr	Leu	Gln	Pro	Pro	Ser	Gly	Asn	Ser	Gln	Asp	
			260					265					270			
caa	ggc	aag	ttc	att	gcc	ctc	ttt	tat	act	gtt	gtc	aca	cct	agt	ctt	864
Gln	Gly	Lys	Phe	Ile	Ala	Leu	Phe	Tyr	Thr	Val	Val	Thr	Pro	Ser	Leu	
		275					280					285				
aac	cct	cta	atc	tac	acc	ctc	aga	aac	aaa	gtt	gta	aga	ggg	gca	gtg	912
Asn	Pro	Leu	Ile	Tyr	Thr	Leu	Arg	Asn	Lys	Val	Val	Arg	Gly	Ala	Val	
	290					295				300						
aag	aga	cta	atg	ggg	tgg	gaa	tga									936
Lys	Arg	Leu	Met	Gly	Trp	Glu										
305					310											

<210> 6
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 <212> PRT
 <213> Homo sapiens_olfactory receptor OR2J3 (GI: 442186)

<400> 6

Met	Asn	Asp	Asp	Gly	Lys	Val	Asn	Ala	Ser	Ser	Glu	Gly	Tyr	Phe	Ile	
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Leu	Val	Gly	Phe	Ser	Asn	Trp	Pro	His	Leu	Glu	Val	Val	Ile	Phe	Val	
		20					25						30			
Val	Val	Leu	Ile	Phe	Tyr	Leu	Met	Thr	Leu	Ile	Gly	Asn	Leu	Phe	Ile	
		35				40					45					
Ile	Ile	Leu	Ser	Tyr	Leu	Asp	Ser	His	Leu	His	Thr	Pro	Met	Tyr	Phe	
	50				55					60						
Phe	Leu	Ser	Asn	Leu	Ser	Phe	Leu	Asp	Leu	Cys	Tyr	Thr	Thr	Ser	Ser	
65				70					75					80		

Ile Pro Gln Leu Leu Val Asn Leu Trp Gly Pro Glu Lys Thr Ile Ser
85 90 95

Tyr Ala Gly Cys Met Ile Gln Leu Tyr Phe Val Leu Ala Leu Gly Thr
100 105 110

Ala Glu Cys Val Leu Leu Val Val Met Ser Tyr Asp Arg Tyr Ala Ala
115 120 125

Val Cys Arg Pro Leu His Tyr Thr Val Leu Met His Pro Arg Phe Cys
130 135 140

His Leu Leu Ala Val Ala Ser Trp Val Ser Gly Phe Thr Asn Ser Ala
145 150 155 160

Leu His Ser Ser Phe Thr Phe Trp Val Pro Leu Cys Gly His Arg Gln
165 170 175

Val Asp His Phe Phe Cys Glu Val Pro Ala Leu Leu Arg Leu Ser Cys
180 185 190

Val Asp Thr His Val Asn Glu Leu Thr Leu Met Ile Thr Ser Ser Ile
195 200 205

Phe Val Leu Ile Pro Leu Ile Leu Ile Leu Thr Ser Tyr Gly Ala Ile
210 215 220

Val Arg Ala Val Leu Arg Met Gln Ser Thr Thr Gly Leu Gln Lys Val
225 230 235 240

Phe Gly Thr Cys Gly Ala His Leu Met Ala Val Ser Leu Phe Phe Ile
245 250 255

Pro Ala Met Cys Ile Tyr Leu Gln Pro Pro Ser Gly Asn Ser Gln Asp
260 265 270

Gln Gly Lys Phe Ile Ala Leu Phe Tyr Thr Val Val Thr Pro Ser Leu

275

280

285

Asn Pro Leu Ile Tyr Thr Leu Arg Asn Lys Val Val Arg Gly Ala Val
 290 295 300

Lys Arg Leu Met Gly Trp Glu
 305 310

<210> 7
 <211> 942
 <212> DNA
 <213> Homo sapiens_olfactory receptor OR4Q3 (GI:441669)

<220>
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 <222> (1)..(942)

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 Met Lys Lys Glu Gln Asp Ser Asn Val Thr Glu Phe Val Leu Leu Gly
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 cta tca tct tct tgg gag ctg cag cta ttt ctc ttc tta cta ttt ttg 96
 Leu Ser Ser Ser Trp Glu Leu Gln Leu Phe Leu Phe Leu Leu Phe Leu
 20 25 30
 ttt ttt tac att gct att gtc ctg gga aac ctc ttg ata gtg gta aca 144
 Phe Phe Tyr Ile Ala Ile Val Leu Gly Asn Leu Leu Ile Val Val Thr
 35 40 45
 gtg caa gcc cat gct cac ctg ctc caa tct cct atg tat tat ttt tta 192
 Val Gln Ala His Ala His Leu Leu Gln Ser Pro Met Tyr Tyr Phe Leu
 50 55 60
 ggt cat ctc tct ttc att gac cta tgc ctg agc tgt gtt act gtg cca 240
 Gly His Leu Ser Phe Ile Asp Leu Cys Leu Ser Cys Val Thr Val Pro
 65 70 75 80
 aag atg tta ggg gat ttc cta cag cag ggc aag agc atc tct ttt tca 288
 Lys Met Leu Gly Asp Phe Leu Gln Gln Gly Lys Ser Ile Ser Phe Ser
 85 90 95
 gga tgc ctg gcc cag atc tac ttc ctc cac ttt cta gga gcc agt gag 336
 Gly Cys Leu Ala Gln Ile Tyr Phe Leu His Phe Leu Gly Ala Ser Glu
 100 105 110

atg ttt ttg ctg aca gtc atg gcc tat gac agg tat gtt gcc atc tgt	384
Met Phe Leu Leu Thr Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys	
115 120 125	
aac cct ttg cgc tac ctt aca gtc atg aac ccc cag cta tgc ctt tgg	432
Asn Pro Leu Arg Tyr Leu Thr Val Met Asn Pro Gln Leu Cys Leu Trp	
130 135 140	
ttg gtt ctt gcc tgc tgg tgt ggg ggt ttt atc cac tct atc atg cag	480
Leu Val Leu Ala Cys Trp Cys Gly Gly Phe Ile His Ser Ile Met Gln	
145 150 155 160	
gtc ata cta gtc atc cag ctg cct ttc tgt ggg ccc aat gaa ctg gac	528
Val Ile Leu Val Ile Gln Leu Pro Phe Cys Gly Pro Asn Glu Leu Asp	
165 170 175	
aac ttc tac tgt gat gtc cca caa gtc atc aag ctg gcc tgc atg gac	576
Asn Phe Tyr Cys Asp Val Pro Gln Val Ile Lys Leu Ala Cys Met Asp	
180 185 190	
acc tat gtg gta gag gtg ctg gtg ata gcc aac agt ggt ctg ctg tct	624
Thr Tyr Val Val Glu Val Leu Val Ile Ala Asn Ser Gly Leu Leu Ser	
195 200 205	
ctt gtc tgc ttc ttg gtc tta cta ttc tct tat gct atc atc ctg atc	672
Leu Val Cys Phe Leu Val Leu Leu Phe Ser Tyr Ala Ile Ile Leu Ile	
210 215 220	
acc ctg aga aca cac ttc tgc cag ggc cag aac aag gtc ctc tct acc	720
Thr Leu Arg Thr His Phe Cys Gln Gly Gln Asn Lys Val Leu Ser Thr	
225 230 235 240	
tgt gct tct cac ctg aca gtg gtc agc ctg atc ttc gtg cca tgc gta	768
Cys Ala Ser His Leu Thr Val Val Ser Leu Ile Phe Val Pro Cys Val	
245 250 255	
ttc atc tat ttg agg cct ttc tgc agc ttc tct gtg gat aag ata ttc	816
Phe Ile Tyr Leu Arg Pro Phe Cys Ser Phe Ser Val Asp Lys Ile Phe	
260 265 270	
tcc ttg ttt tac aca gtg att aca cct atg ttg aac ccc ctc atc tac	864
Ser Leu Phe Tyr Thr Val Ile Thr Pro Met Leu Asn Pro Leu Ile Tyr	
275 280 285	
aca ctc aga aat act gat atg aag aca gct atg aag aag ctg agg ata	912
Thr Leu Arg Asn Thr Asp Met Lys Thr Ala Met Lys Lys Leu Arg Ile	
290 295 300	
aaa cca tgt ggc att cca ttg cct tgt taa	942
Lys Pro Cys Gly Ile Pro Leu Pro Cys	

305

310

<210> 8

<211> 313

<212> PRT

<213> Homo sapiens_olfactory receptor OR4Q3 (GI:441669)

<400> 8

Met Lys Lys Glu Gln Asp Ser Asn Val Thr Glu Phe Val Leu Leu Gly
1 5 10 15

Leu Ser Ser Ser Trp Glu Leu Gln Leu Phe Leu Phe Leu Leu Phe Leu
20 25 30

Phe Phe Tyr Ile Ala Ile Val Leu Gly Asn Leu Leu Ile Val Val Thr
35 40 45

Val Gln Ala His Ala His Leu Leu Gln Ser Pro Met Tyr Tyr Phe Leu
50 55 60

Gly His Leu Ser Phe Ile Asp Leu Cys Leu Ser Cys Val Thr Val Pro
65 70 75 80

Lys Met Leu Gly Asp Phe Leu Gln Gln Gly Lys Ser Ile Ser Phe Ser
85 90 95

Gly Cys Leu Ala Gln Ile Tyr Phe Leu His Phe Leu Gly Ala Ser Glu
100 105 110

Met Phe Leu Leu Thr Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys
115 120 125

Asn Pro Leu Arg Tyr Leu Thr Val Met Asn Pro Gln Leu Cys Leu Trp
130 135 140

Leu Val Leu Ala Cys Trp Cys Gly Gly Phe Ile His Ser Ile Met Gln
145 150 155 160

Val Ile Leu Val Ile Gln Leu Pro Phe Cys Gly Pro Asn Glu Leu Asp
165 170 175

Asn Phe Tyr Cys Asp Val Pro Gln Val Ile Lys Leu Ala Cys Met Asp
180 185 190

Thr Tyr Val Val Glu Val Leu Val Ile Ala Asn Ser Gly Leu Leu Ser
195 200 205

Leu Val Cys Phe Leu Val Leu Leu Phe Ser Tyr Ala Ile Ile Leu Ile
210 215 220

Thr Leu Arg Thr His Phe Cys Gln Gly Gln Asn Lys Val Leu Ser Thr
225 230 235 240

Cys Ala Ser His Leu Thr Val Val Ser Leu Ile Phe Val Pro Cys Val
245 250 255

Phe Ile Tyr Leu Arg Pro Phe Cys Ser Phe Ser Val Asp Lys Ile Phe
260 265 270

Ser Leu Phe Tyr Thr Val Ile Thr Pro Met Leu Asn Pro Leu Ile Tyr
275 280 285

Thr Leu Arg Asn Thr Asp Met Lys Thr Ala Met Lys Lys Leu Arg Ile
290 295 300

Lys Pro Cys Gly Ile Pro Leu Pro Cys
305 310

<210> 9
<211> 927
<212> DNA
<213> Homo sapiens_olfactory receptor OR5K1 (GI:26339)

<220>
<221> CDS
<222> (1)..(927)

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Met Ala Glu Glu Asn His Thr Met Lys Asn Glu Phe Ile Leu Thr Gly	
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ttt aca gat cac cct gag ctg aag act ctg ctg ttt gtg gtg ttc ttt	96
Phe Thr Asp His Pro Glu Leu Lys Thr Leu Leu Phe Val Val Phe Phe	
20 25 30	
gcc atc tat ctg atc acc gtg gtg ggg aat att agt ttg gtg gca ctg	144
Ala Ile Tyr Leu Ile Thr Val Val Gly Asn Ile Ser Leu Val Ala Leu	
35 40 45	
ata ttt aca cac cgt cgg ctt cac aca cca atg tac atc ttt ctg gga	192
Ile Phe Thr His Arg Arg Leu His Thr Pro Met Tyr Ile Phe Leu Gly	
50 55 60	
aat ctg gct ctt gtg gat tct tgc tgt gcc tgt gct att acc ccc aaa	240
Asn Leu Ala Leu Val Asp Ser Cys Cys Ala Cys Ala Ile Thr Pro Lys	
65 70 75 80	
atg tta gag aac ttc ttt tct gag aac aaa agg att tcc ctc tat gaa	288
Met Leu Glu Asn Phe Phe Ser Glu Asn Lys Arg Ile Ser Leu Tyr Glu	
85 90 95	
tgt gca gta cag ttt tat ttt ctt tgc act gtg gaa act gca gac tgc	336
Cys Ala Val Gln Phe Tyr Phe Leu Cys Thr Val Glu Thr Ala Asp Cys	
100 105 110	
ttt ctt ctg gca gca atg gcc tat gac cgc tat gtg gcc ata tgc aac	384
Phe Leu Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn	
115 120 125	
cca ctg cag tac cac atc atg atg tcc aag aaa ctc tgc att cag atg	432
Pro Leu Gln Tyr His Ile Met Met Ser Lys Lys Leu Cys Ile Gln Met	
130 135 140	
acc aca ggg gcc ttc ata gct gga aac ctg cat tcc atg att cat gta	480
Thr Thr Gly Ala Phe Ile Ala Gly Asn Leu His Ser Met Ile His Val	
145 150 155 160	
ggg ctt gta ttt agg tta gtt ttc tgt gga tcg aat cac atc aac cac	528
Gly Leu Val Phe Arg Leu Val Phe Cys Gly Ser Asn His Ile Asn His	
165 170 175	
ttt tac tgt gat att ctt ccc ttg tat aga ctc tct tgt gtt gat cct	576
Phe Tyr Cys Asp Ile Leu Pro Leu Tyr Arg Leu Ser Cys Val Asp Pro	
180 185 190	
tat atc aat gaa ctg gtt cta ttc atc ttc tca ggt tca gtt caa gtc	624

Tyr	Ile	Asn	Glu	Leu	Val	Leu	Phe	Ile	Phe	Ser	Gly	Ser	Val	Gln	Val		
		195					200					205					
ttt	acc	ata	ggt	agt	gtc	tta	ata	tct	tat	ctc	tat	att	ctt	ctt	act	672	
Phe	Thr	Ile	Gly	Ser	Val	Leu	Ile	Ser	Tyr	Leu	Tyr	Ile	Leu	Leu	Thr		
	210					215					220						
att	ttc	aaa	atg	aaa	tcc	aaa	gag	gga	agg	gcc	aaa	gct	ttt	tct	acc	720	
Ile	Phe	Lys	Met	Lys	Ser	Lys	Glu	Gly	Arg	Ala	Lys	Ala	Phe	Ser	Thr		
	225				230					235					240		
tgt	gca	tcc	cac	ttt	ttg	tca	ggt	tca	tta	ttc	tat	gga	tct	ctt	ttc	768	
Cys	Ala	Ser	His	Phe	Leu	Ser	Val	Ser	Leu	Phe	Tyr	Gly	Ser	Leu	Phe		
			245					250						255			
ttc	atg	tac	gtt	aga	cca	aat	ttg	ctt	gaa	gaa	ggg	gat	aaa	gat	ata	816	
Phe	Met	Tyr	Val	Arg	Pro	Asn	Leu	Leu	Glu	Glu	Gly	Asp	Lys	Asp	Ile		
			260					265					270				
cca	gct	gca	att	tta	ttt	aca	ata	gta	gtt	ccc	tta	cta	aat	cct	ttc	864	
Pro	Ala	Ala	Ile	Leu	Phe	Thr	Ile	Val	Val	Pro	Leu	Leu	Asn	Pro	Phe		
		275					280					285					
att	tat	agc	ctg	aga	aat	agg	gaa	gta	ata	agt	gtc	tta	aga	aaa	att	912	
Ile	Tyr	Ser	Leu	Arg	Asn	Arg	Glu	Val	Ile	Ser	Val	Leu	Arg	Lys	Ile		
	290				295						300						
ctg	atg	aag	aaa	taa												927	
Leu	Met	Lys	Lys														
	305																

<210> 10
 <211> 308
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 <213> Homo sapiens_olfactory receptor OR5K1 (GI:26339)

<400> 10

Met	Ala	Glu	Glu	Asn	His	Thr	Met	Lys	Asn	Glu	Phe	Ile	Leu	Thr	Gly
1				5					10					15	

Phe	Thr	Asp	His	Pro	Glu	Leu	Lys	Thr	Leu	Leu	Phe	Val	Val	Phe	Phe
		20						25					30		

Ala	Ile	Tyr	Leu	Ile	Thr	Val	Val	Gly	Asn	Ile	Ser	Leu	Val	Ala	Leu
		35					40					45			

Ile Phe Thr His Arg Arg Leu His Thr Pro Met Tyr Ile Phe Leu Gly
50 55 60

Asn Leu Ala Leu Val Asp Ser Cys Cys Ala Cys Ala Ile Thr Pro Lys
65 70 75 80

Met Leu Glu Asn Phe Phe Ser Glu Asn Lys Arg Ile Ser Leu Tyr Glu
85 90 95

Cys Ala Val Gln Phe Tyr Phe Leu Cys Thr Val Glu Thr Ala Asp Cys
100 105 110

Phe Leu Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn
115 120 125

Pro Leu Gln Tyr His Ile Met Met Ser Lys Lys Leu Cys Ile Gln Met
130 135 140

Thr Thr Gly Ala Phe Ile Ala Gly Asn Leu His Ser Met Ile His Val
145 150 155 160

Gly Leu Val Phe Arg Leu Val Phe Cys Gly Ser Asn His Ile Asn His
165 170 175

Phe Tyr Cys Asp Ile Leu Pro Leu Tyr Arg Leu Ser Cys Val Asp Pro
180 185 190

Tyr Ile Asn Glu Leu Val Leu Phe Ile Phe Ser Gly Ser Val Gln Val
195 200 205

Phe Thr Ile Gly Ser Val Leu Ile Ser Tyr Leu Tyr Ile Leu Leu Thr
210 215 220

Ile Phe Lys Met Lys Ser Lys Glu Gly Arg Ala Lys Ala Phe Ser Thr
225 230 235 240

Cys Ala Ser His Phe Leu Ser Val Ser Leu Phe Tyr Gly Ser Leu Phe

245

250

255

Phe Met Tyr Val Arg Pro Asn Leu Leu Glu Glu Gly Asp Lys Asp Ile
 260 265 270

Pro Ala Ala Ile Leu Phe Thr Ile Val Val Pro Leu Leu Asn Pro Phe
 275 280 285

Ile Tyr Ser Leu Arg Asn Arg Glu Val Ile Ser Val Leu Arg Lys Ile
 290 295 300

Leu Met Lys Lys
 305

<210> 11
 <211> 948
 <212> DNA
 <213> Homo sapiens_olfactory receptor OR11A1 (GI:26531)

<220>
 <221> CDS
 <222> (1)..(948)

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 Met Glu Ile Val Ser Thr Gly Asn Glu Thr Ile Thr Glu Phe Val Leu
 1 5 10 15
 ctt ggc ttc tat gac atc cct gaa ctg cat ttc ttg ttt ttt att gta 96
 Leu Gly Phe Tyr Asp Ile Pro Glu Leu His Phe Leu Phe Phe Ile Val
 20 25 30
 ttc act gct gtc tat gtc ttc atc atc ata ggg aat atg ctg att att 144
 Phe Thr Ala Val Tyr Val Phe Ile Ile Ile Gly Asn Met Leu Ile Ile
 35 40 45
 gta gca gtg gtt agc tcc cag agg ctc cac aaa ccc atg tat att ttc 192
 Val Ala Val Val Ser Ser Gln Arg Leu His Lys Pro Met Tyr Ile Phe
 50 55 60
 ttg gcg aat ctg tcc ttc ctg gat att ctc tac acc tcc gca gtg atg 240
 Leu Ala Asn Leu Ser Phe Leu Asp Ile Leu Tyr Thr Ser Ala Val Met
 65 70 75 80

cca aaa atg ctg gag ggc ttc ctg caa gaa gca act atc tct gtg gct	288
Pro Lys Met Leu Glu Gly Phe Leu Gln Glu Ala Thr Ile Ser Val Ala	
85 90 95	
ggt tgc ttg ctc cag ttc ttt atc ttc ggc tct cta gcc aca gct gaa	336
Gly Cys Leu Leu Gln Phe Phe Ile Phe Gly Ser Leu Ala Thr Ala Glu	
100 105 110	
tgc tta ctg ctg gct gtc atg gca tat gac cgc tac ctg gca att tgc	384
Cys Leu Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Leu Ala Ile Cys	
115 120 125	
tac cca ctc cac tac cca ctc ctg atg ggg ccc aga cgg tac atg ggg	432
Tyr Pro Leu His Tyr Pro Leu Leu Met Gly Pro Arg Arg Tyr Met Gly	
130 135 140	
ctg gtg gtc aca acc tgg ctc tct gga ttt gtg gta gat gga ctg gtt	480
Leu Val Val Thr Thr Trp Leu Ser Gly Phe Val Val Asp Gly Leu Val	
145 150 155 160	
gtg gcc ctg gtg gcc cag ctg agg ttc tgt ggc ccc aac cac att gac	528
Val Ala Leu Val Ala Gln Leu Arg Phe Cys Gly Pro Asn His Ile Asp	
165 170 175	
cag ttt tac tgt gac ttt atg ctt ttc gtg ggc ctg gct tgc tcg gat	576
Gln Phe Tyr Cys Asp Phe Met Leu Phe Val Gly Leu Ala Cys Ser Asp	
180 185 190	
ccc aga gtg gct cag gtg aca act ctc att ctg tct gtg ttc tgc ctc	624
Pro Arg Val Ala Gln Val Thr Thr Leu Ile Leu Ser Val Phe Cys Leu	
195 200 205	
act att cct ttt gga ctg att ctg aca tct tat gcc aga att gtg gtg	672
Thr Ile Pro Phe Gly Leu Ile Leu Thr Ser Tyr Ala Arg Ile Val Val	
210 215 220	
gca gtg ctg aga gtt cct gct ggg gca agc agg aga agg gct ttc tcc	720
Ala Val Leu Arg Val Pro Ala Gly Ala Ser Arg Arg Arg Ala Phe Ser	
225 230 235 240	
aca tgc tcc tcc cac cta gct gta gtg acc aca ttc tat gga acg ctc	768
Thr Cys Ser Ser His Leu Ala Val Val Thr Thr Phe Tyr Gly Thr Leu	
245 250 255	
atg atc ttt tat gtt gca ccc tct gct gtc cat tcc cag ctc ctc tcc	816
Met Ile Phe Tyr Val Ala Pro Ser Ala Val His Ser Gln Leu Leu Ser	
260 265 270	
aag gtc ttc tcc ctg ctc tac act gtg gtc acc cct ctc ttc aat cct	864
Lys Val Phe Ser Leu Leu Tyr Thr Val Val Thr Pro Leu Phe Asn Pro	

275	280	285	
gtg atc tat acc atg agg aac aag gag gtg cat cag gca ctt cgg aag			912
Val Ile Tyr Thr Met Arg Asn Lys Glu Val His Gln Ala Leu Arg Lys			
290	295	300	

att ctc tgt atc aaa caa act gaa aca ctt gat tga	948
Ile Leu Cys Ile Lys Gln Thr Glu Thr Leu Asp	
305	310 315

<210> 12
 <211> 315
 <212> PRT
 <213> Homo sapiens_olfactory receptor OR11A1 (GI:26531)
 <400> 12

Met Glu Ile Val Ser Thr Gly Asn Glu Thr Ile Thr Glu Phe Val Leu
1 5 10 15

Leu Gly Phe Tyr Asp Ile Pro Glu Leu His Phe Leu Phe Phe Ile Val
20 25 30

Phe Thr Ala Val Tyr Val Phe Ile Ile Ile Gly Asn Met Leu Ile Ile
35 40 45

Val Ala Val Val Ser Ser Gln Arg Leu His Lys Pro Met Tyr Ile Phe
50 55 60

Leu Ala Asn Leu Ser Phe Leu Asp Ile Leu Tyr Thr Ser Ala Val Met
65 70 75 80

Pro Lys Met Leu Glu Gly Phe Leu Gln Glu Ala Thr Ile Ser Val Ala
85 90 95

Gly Cys Leu Leu Gln Phe Phe Ile Phe Gly Ser Leu Ala Thr Ala Glu
100 105 110

Cys Leu Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Leu Ala Ile Cys
115 120 125

Tyr Pro Leu His Tyr Pro Leu Leu Met Gly Pro Arg Arg Tyr Met Gly
130 135 140

Leu Val Val Thr Thr Trp Leu Ser Gly Phe Val Val Asp Gly Leu Val
145 150 155 160

Val Ala Leu Val Ala Gln Leu Arg Phe Cys Gly Pro Asn His Ile Asp
165 170 175

Gln Phe Tyr Cys Asp Phe Met Leu Phe Val Gly Leu Ala Cys Ser Asp
180 185 190

Pro Arg Val Ala Gln Val Thr Thr Leu Ile Leu Ser Val Phe Cys Leu
195 200 205

Thr Ile Pro Phe Gly Leu Ile Leu Thr Ser Tyr Ala Arg Ile Val Val
210 215 220

Ala Val Leu Arg Val Pro Ala Gly Ala Ser Arg Arg Arg Ala Phe Ser
225 230 235 240

Thr Cys Ser Ser His Leu Ala Val Val Thr Thr Phe Tyr Gly Thr Leu
245 250 255

Met Ile Phe Tyr Val Ala Pro Ser Ala Val His Ser Gln Leu Leu Ser
260 265 270

Lys Val Phe Ser Leu Leu Tyr Thr Val Val Thr Pro Leu Phe Asn Pro
275 280 285

Val Ile Tyr Thr Met Arg Asn Lys Glu Val His Gln Ala Leu Arg Lys
290 295 300

Ile Leu Cys Ile Lys Gln Thr Glu Thr Leu Asp
305 310 315

<210> 13
<211> 939

<212> DNA
 <213> Homo sapiens_olfactory receptor OR2M3 (GI:127062)

<220>
 <221> CDS
 <222> (1)..(939)

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atg gca agg gag aat tcg acc ttc aac tcc gac ttc atc ctc ctg gga      48
Met Ala Arg Glu Asn Ser Thr Phe Asn Ser Asp Phe Ile Leu Leu Gly
1          5          10          15

atc ttc aat cac agc ccc acc cac acc ttc ctc ttc ttt ctg gtc ctg      96
Ile Phe Asn His Ser Pro Thr His Thr Phe Leu Phe Phe Leu Val Leu
          20          25          30

gcc atc ttt tca gtg gcc ttc atg gga aac tct gtc atg gtt ctc ctc      144
Ala Ile Phe Ser Val Ala Phe Met Gly Asn Ser Val Met Val Leu Leu
          35          40          45

atc tac ctg gac acc cag ctc cac acc ccc atg tac ctc ctc ctc agc      192
Ile Tyr Leu Asp Thr Gln Leu His Thr Pro Met Tyr Leu Leu Leu Ser
          50          55          60

caa ctg tcc ctc atg gac ctc atg ctc atc tgc acc acc gta ccc aag      240
Gln Leu Ser Leu Met Asp Leu Met Leu Ile Cys Thr Thr Val Pro Lys
65          70          75          80

atg gcc ttc aac tac ctg tct ggc agc aag tcc att tct atg gct ggt      288
Met Ala Phe Asn Tyr Leu Ser Gly Ser Lys Ser Ile Ser Met Ala Gly
          85          90          95

tgt gcc aca caa att ttc ttc tat aca tca ctg ctt ggc tct gaa tgc      336
Cys Ala Thr Gln Ile Phe Phe Tyr Thr Ser Leu Leu Gly Ser Glu Cys
          100          105          110

ttt ctt ttg gct gtt atg gct tat gac cgc tac act gcc att tgc cac      384
Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Thr Ala Ile Cys His
          115          120          125

cct cta aga tac acc aat ctc atg agc cct aaa att tgt gga ctt atg      432
Pro Leu Arg Tyr Thr Asn Leu Met Ser Pro Lys Ile Cys Gly Leu Met
          130          135          140

act gcc ttt tcc tgg atc ctg ggc tct acg gat gga att att gat gtt      480
Thr Ala Phe Ser Trp Ile Leu Gly Ser Thr Asp Gly Ile Ile Asp Val
145          150          155          160

gta gca aca ttt tcc ttc tcc tac tgt ggg tct cgg gaa ata gcc cac      528

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Val	Ala	Thr	Phe	Ser	Phe	Ser	Tyr	Cys	Gly	Ser	Arg	Glu	Ile	Ala	His	
				165					170					175		
ttc	ttc	tgt	gac	ttc	ccc	tcc	cta	cta	atc	ctc	tca	tgc	agt	gac	aca	576
Phe	Phe	Cys	Asp	Phe	Pro	Ser	Leu	Leu	Ile	Leu	Ser	Cys	Ser	Asp	Thr	
			180					185					190			
tca	ata	ttt	gaa	aag	att	ctt	ttc	atc	tgc	tgt	ata	gta	atg	att	gtt	624
Ser	Ile	Phe	Glu	Lys	Ile	Leu	Phe	Ile	Cys	Cys	Ile	Val	Met	Ile	Val	
		195					200					205				
ttc	cct	gtt	gca	atc	atc	att	gct	tcc	tat	gct	cga	gtt	atc	ctg	gct	672
Phe	Pro	Val	Ala	Ile	Ile	Ile	Ala	Ser	Tyr	Ala	Arg	Val	Ile	Leu	Ala	
	210					215				220						
gtc	att	cac	atg	gga	tct	gga	gag	ggc	cgt	cgc	aaa	gct	ttt	act	act	720
Val	Ile	His	Met	Gly	Ser	Gly	Glu	Gly	Arg	Arg	Lys	Ala	Phe	Thr	Thr	
225					230				235						240	
tgt	tcc	tct	cac	ctc	ttg	gtg	gtg	gga	atg	tac	tat	gga	gca	gct	ttg	768
Cys	Ser	Ser	His	Leu	Leu	Val	Val	Gly	Met	Tyr	Tyr	Gly	Ala	Ala	Leu	
				245					250					255		
ttc	atg	tac	ata	cgg	ccc	aca	tct	gat	cgc	tcc	cca	aca	cag	gac	aag	816
Phe	Met	Tyr	Ile	Arg	Pro	Thr	Ser	Asp	Arg	Ser	Pro	Thr	Gln	Asp	Lys	
			260					265					270			
atg	gtg	tct	gta	ttc	tac	acc	atc	ctc	act	ccc	atg	ttg	aat	ccc	ctc	864
Met	Val	Ser	Val	Phe	Tyr	Thr	Ile	Leu	Thr	Pro	Met	Leu	Asn	Pro	Leu	
		275					280					285				
atc	tac	agc	ctc	cgc	aac	aag	gag	gtg	acc	aga	gca	ttc	atg	aag	atc	912
Ile	Tyr	Ser	Leu	Arg	Asn	Lys	Glu	Val	Thr	Arg	Ala	Phe	Met	Lys	Ile	
	290					295					300					
tta	gga	aag	ggc	aag	tct	gga	gag	tga								939
Leu	Gly	Lys	Gly	Lys	Ser	Gly	Glu									
305					310											

<210> 14
 <211> 312
 <212> PRT
 <213> Homo sapiens_olfactory receptor OR2M3 (GI:127062)

<400> 14

Met	Ala	Arg	Glu	Asn	Ser	Thr	Phe	Asn	Ser	Asp	Phe	Ile	Leu	Leu	Gly
1				5				10					15		

Ile Phe Asn His Ser Pro Thr His Thr Phe Leu Phe Phe Leu Val Leu
20 25 30

Ala Ile Phe Ser Val Ala Phe Met Gly Asn Ser Val Met Val Leu Leu
35 40 45

Ile Tyr Leu Asp Thr Gln Leu His Thr Pro Met Tyr Leu Leu Leu Ser
50 55 60

Gln Leu Ser Leu Met Asp Leu Met Leu Ile Cys Thr Thr Val Pro Lys
65 70 75 80

Met Ala Phe Asn Tyr Leu Ser Gly Ser Lys Ser Ile Ser Met Ala Gly
85 90 95

Cys Ala Thr Gln Ile Phe Phe Tyr Thr Ser Leu Leu Gly Ser Glu Cys
100 105 110

Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Thr Ala Ile Cys His
115 120 125

Pro Leu Arg Tyr Thr Asn Leu Met Ser Pro Lys Ile Cys Gly Leu Met
130 135 140

Thr Ala Phe Ser Trp Ile Leu Gly Ser Thr Asp Gly Ile Ile Asp Val
145 150 155 160

Val Ala Thr Phe Ser Phe Ser Tyr Cys Gly Ser Arg Glu Ile Ala His
165 170 175

Phe Phe Cys Asp Phe Pro Ser Leu Leu Ile Leu Ser Cys Ser Asp Thr
180 185 190

Ser Ile Phe Glu Lys Ile Leu Phe Ile Cys Cys Ile Val Met Ile Val
195 200 205

Phe Pro Val Ala Ile Ile Ile Ala Ser Tyr Ala Arg Val Ile Leu Ala

210

215

220

Val Ile His Met Gly Ser Gly Glu Gly Arg Arg Lys Ala Phe Thr Thr
 225 230 235 240

Cys Ser Ser His Leu Leu Val Val Gly Met Tyr Tyr Gly Ala Ala Leu
 245 250 255

Phe Met Tyr Ile Arg Pro Thr Ser Asp Arg Ser Pro Thr Gln Asp Lys
 260 265 270

Met Val Ser Val Phe Tyr Thr Ile Leu Thr Pro Met Leu Asn Pro Leu
 275 280 285

Ile Tyr Ser Leu Arg Asn Lys Glu Val Thr Arg Ala Phe Met Lys Ile
 290 295 300

Leu Gly Lys Gly Lys Ser Gly Glu
 305 310

<210> 15

<211> 954

<212> DNA

<213> Homo sapiens_olfactory receptor OR51E1 (GI:14503)

<220>

<221> CDS

<222> (1)..(954)

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 Met Val Asp Pro Asn Gly Asn Glu Ser Ser Ala Thr Tyr Phe Ile Leu
 1 5 10 15

ata ggc ctc cct ggt tta gaa gag gct cag ttc tgg ttg gcc ttc cca 96
 Ile Gly Leu Pro Gly Leu Glu Glu Ala Gln Phe Trp Leu Ala Phe Pro
 20 25 30

ttg tgc tcc ctc tac ctt att gct gtg cta ggt aac ttg aca atc atc 144
 Leu Cys Ser Leu Tyr Leu Ile Ala Val Leu Gly Asn Leu Thr Ile Ile
 35 40 45

tac att gtg cgg act gag cac agc ctg cat gag ccc atg tat ata ttt	192
Tyr Ile Val Arg Thr Glu His Ser Leu His Glu Pro Met Tyr Ile Phe	
50 55 60	
ctt tgc atg ctt tca ggc att gac atc ctc atc tcc acc tca tcc atg	240
Leu Cys Met Leu Ser Gly Ile Asp Ile Leu Ile Ser Thr Ser Ser Met	
65 70 75 80	
ccc aaa atg ctg gcc atc ttc tgg ttc aat tcc act acc atc cag ttt	288
Pro Lys Met Leu Ala Ile Phe Trp Phe Asn Ser Thr Thr Ile Gln Phe	
85 90 95	
gat gct tgt ctg cta cag atg ttt gcc atc cac tcc tta tct ggc atg	336
Asp Ala Cys Leu Leu Gln Met Phe Ala Ile His Ser Leu Ser Gly Met	
100 105 110	
gaa tcc aca gtg ctg ctg gcc atg gct ttt gac cgc tat gtg gcc atc	384
Glu Ser Thr Val Leu Leu Ala Met Ala Phe Asp Arg Tyr Val Ala Ile	
115 120 125	
tgt cac cca ctg cgc cat gcc aca gta ctt acg ttg cct cgt gtc acc	432
Cys His Pro Leu Arg His Ala Thr Val Leu Thr Leu Pro Arg Val Thr	
130 135 140	
aaa att ggt gtg gct gct gtg gtg cgg ggg gct gca ctg atg gca ccc	480
Lys Ile Gly Val Ala Ala Val Val Arg Gly Ala Ala Leu Met Ala Pro	
145 150 155 160	
ctt cct gtc ttc atc aag cag ctg ccc ttc tgc cgc tcc aat atc ctt	528
Leu Pro Val Phe Ile Lys Gln Leu Pro Phe Cys Arg Ser Asn Ile Leu	
165 170 175	
tcc cat tcc tac tgc cta cac caa gat gtc atg aag ctg gcc tgt gat	576
Ser His Ser Tyr Cys Leu His Gln Asp Val Met Lys Leu Ala Cys Asp	
180 185 190	
gat atc cgg gtc aat gtc gtc tat ggc ctt atc gtc atc atc tcc gcc	624
Asp Ile Arg Val Asn Val Val Tyr Gly Leu Ile Val Ile Ile Ser Ala	
195 200 205	
att ggc ctg gac tca ctt ctc atc tcc ttc tca tat ctg ctt att ctt	672
Ile Gly Leu Asp Ser Leu Leu Ile Ser Phe Ser Tyr Leu Leu Ile Leu	
210 215 220	
aag act gtg ttg ggc ttg aca cgt gaa gcc cag gcc aag gca ttt ggc	720
Lys Thr Val Leu Gly Leu Thr Arg Glu Ala Gln Ala Lys Ala Phe Gly	
225 230 235 240	
act tgc gtc tct cat gtg tgt gct gtg ttc ata ttc tat gta cct ttc	768
Thr Cys Val Ser His Val Cys Ala Val Phe Ile Phe Tyr Val Pro Phe	

	245	250	255	
att gga ttg tcc atg gtg cat cgc ttt agc aag cgg cgt gac tct cca				816
Ile Gly Leu Ser Met Val His Arg Phe Ser Lys Arg Arg Asp Ser Pro				
	260	265	270	
ctg ccc gtc atc ttg gcc aat atc tat ctg ctg gtt cct cct gtg ctc				864
Leu Pro Val Ile Leu Ala Asn Ile Tyr Leu Leu Val Pro Pro Val Leu				
	275	280	285	
aac cca att gtc tat gga gtg aag aca agg gag att cga cag cgc atc				912
Asn Pro Ile Val Tyr Gly Val Lys Thr Arg Glu Ile Arg Gln Arg Ile				
	290	295	300	
ctt cga ctt ttc cat gtg gcc aca cac gct tca gag ccc tag				954
Leu Arg Leu Phe His Val Ala Thr His Ala Ser Glu Pro				
	305	310	315	

<210> 16
 <211> 317
 <212> PRT
 <213> Homo sapiens_olfactory receptor OR51E1 (GI:14503)

<400> 16

Met Val Asp Pro Asn Gly Asn Glu Ser Ser Ala Thr Tyr Phe Ile Leu
1 5 10 15

Ile Gly Leu Pro Gly Leu Glu Glu Ala Gln Phe Trp Leu Ala Phe Pro
20 25 30

Leu Cys Ser Leu Tyr Leu Ile Ala Val Leu Gly Asn Leu Thr Ile Ile
35 40 45

Tyr Ile Val Arg Thr Glu His Ser Leu His Glu Pro Met Tyr Ile Phe
50 55 60

Leu Cys Met Leu Ser Gly Ile Asp Ile Leu Ile Ser Thr Ser Ser Met
65 70 75 80

Pro Lys Met Leu Ala Ile Phe Trp Phe Asn Ser Thr Thr Ile Gln Phe
85 90 95

Asp Ala Cys Leu Leu Gln Met Phe Ala Ile His Ser Leu Ser Gly Met
100 105 110

Glu Ser Thr Val Leu Leu Ala Met Ala Phe Asp Arg Tyr Val Ala Ile
115 120 125

Cys His Pro Leu Arg His Ala Thr Val Leu Thr Leu Pro Arg Val Thr
130 135 140

Lys Ile Gly Val Ala Ala Val Val Arg Gly Ala Ala Leu Met Ala Pro
145 150 155 160

Leu Pro Val Phe Ile Lys Gln Leu Pro Phe Cys Arg Ser Asn Ile Leu
165 170 175

Ser His Ser Tyr Cys Leu His Gln Asp Val Met Lys Leu Ala Cys Asp
180 185 190

Asp Ile Arg Val Asn Val Val Tyr Gly Leu Ile Val Ile Ile Ser Ala
195 200 205

Ile Gly Leu Asp Ser Leu Leu Ile Ser Phe Ser Tyr Leu Leu Ile Leu
210 215 220

Lys Thr Val Leu Gly Leu Thr Arg Glu Ala Gln Ala Lys Ala Phe Gly
225 230 235 240

Thr Cys Val Ser His Val Cys Ala Val Phe Ile Phe Tyr Val Pro Phe
245 250 255

Ile Gly Leu Ser Met Val His Arg Phe Ser Lys Arg Arg Asp Ser Pro
260 265 270

Leu Pro Val Ile Leu Ala Asn Ile Tyr Leu Leu Val Pro Pro Val Leu
275 280 285

Asn Pro Ile Val Tyr Gly Val Lys Thr Arg Glu Ile Arg Gln Arg Ile
290 295 300

Leu Arg Leu Phe His Val Ala Thr His Ala Ser Glu Pro
 305 310 315

<210> 17
 <211> 936
 <212> DNA
 <213> Homo sapiens_olfactory receptor OR4S2 (GI: 219431)

<220>
 <221> CDS
 <222> (1)..(936)

<400> 17
 atg gaa aaa ata aac aac gta act gaa ttc att ttc tgg ggt ctt tct 48
 Met Glu Lys Ile Asn Asn Val Thr Glu Phe Ile Phe Trp Gly Leu Ser
 1 5 10 15
 cag agc cca gag att gag aaa gtt tgt ttt gtg gtg ttt tct ttc ttc 96
 Gln Ser Pro Glu Ile Glu Lys Val Cys Phe Val Val Phe Ser Phe Phe
 20 25 30
 tac ata atc att ctt ctg gga aat ctc ctc atc atg ctg aca gtt tgc 144
 Tyr Ile Ile Ile Leu Leu Gly Asn Leu Leu Ile Met Leu Thr Val Cys
 35 40 45
 ctg agc aac ctg ttt aag tca ccc atg tat ttc ttt ctc agc ttc ttg 192
 Leu Ser Asn Leu Phe Lys Ser Pro Met Tyr Phe Phe Leu Ser Phe Leu
 50 55 60
 tct ttt gtg gac att tgt tac tct tca gtc aca gct ccc aag atg att 240
 Ser Phe Val Asp Ile Cys Tyr Ser Ser Val Thr Ala Pro Lys Met Ile
 65 70 75 80
 gtt gac ctg tta gca aag gac aaa acc atc tcc tat gtg ggg tgc atg 288
 Val Asp Leu Leu Ala Lys Asp Lys Thr Ile Ser Tyr Val Gly Cys Met
 85 90 95
 ttg caa ctg ttt gga gta cat ttc ttt ggt tgc act gag atc ttc atc 336
 Leu Gln Leu Phe Gly Val His Phe Phe Gly Cys Thr Glu Ile Phe Ile
 100 105 110
 ctt act gta atg gcc tat gat cgt tat gtg gct atc tgt aaa ccc cta 384
 Leu Thr Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu
 115 120 125
 cat tat atg acc atc atg aac cgg gag aca tgc aat aaa atg tta tta 432

His	Tyr	Met	Thr	Ile	Met	Asn	Arg	Glu	Thr	Cys	Asn	Lys	Met	Leu	Leu		
130						135					140						
ggg	acg	tgg	gta	ggt	ggg	ttc	tta	cac	tcc	att	atc	caa	gtg	gct	ctg	480	
Gly	Thr	Trp	Val	Gly	Gly	Phe	Leu	His	Ser	Ile	Ile	Gln	Val	Ala	Leu		
145					150					155					160		
gta	gtc	caa	cta	ccc	ttt	tgt	gga	ccc	aat	gag	ata	gat	cac	tac	ttt	528	
Val	Val	Gln	Leu	Pro	Phe	Cys	Gly	Pro	Asn	Glu	Ile	Asp	His	Tyr	Phe		
				165					170					175			
tgt	gat	ggt	cac	cct	gtg	ttg	aaa	ctt	gcc	tgc	aca	gaa	aca	tac	att	576	
Cys	Asp	Val	His	Pro	Val	Leu	Lys	Leu	Ala	Cys	Thr	Glu	Thr	Tyr	Ile		
			180					185						190			
gtt	ggt	ggt	ggt	gtg	aca	gcc	aac	agt	ggt	acc	att	gct	ctg	ggg	agt	624	
Val	Gly	Val	Val	Val	Thr	Ala	Asn	Ser	Gly	Thr	Ile	Ala	Leu	Gly	Ser		
		195					200					205					
ttt	gtt	atc	ttg	cta	atc	tcc	tac	agc	atc	atc	cta	gtt	tcc	ctg	aga	672	
Phe	Val	Ile	Leu	Leu	Ile	Ser	Tyr	Ser	Ile	Ile	Leu	Val	Ser	Leu	Arg		
	210					215					220						
aag	cag	tca	gca	gaa	ggc	agg	cgc	aaa	gcc	ctc	tcc	acc	tgt	ggc	tcc	720	
Lys	Gln	Ser	Ala	Glu	Gly	Arg	Arg	Lys	Ala	Leu	Ser	Thr	Cys	Gly	Ser		
225					230					235					240		
cac	att	gcc	atg	gtc	gtt	atc	ttt	ttc	ggc	ccc	tgt	act	ttt	atg	tac	768	
His	Ile	Ala	Met	Val	Val	Ile	Phe	Phe	Gly	Pro	Cys	Thr	Phe	Met	Tyr		
				245					250					255			
atg	cgc	cct	gat	acg	acc	ttt	tca	gag	gat	aag	atg	gtg	gct	gta	ttt	816	
Met	Arg	Pro	Asp	Thr	Thr	Phe	Ser	Glu	Asp	Lys	Met	Val	Ala	Val	Phe		
			260					265						270			
tac	acc	att	atc	act	ccc	atg	tta	aat	cct	ctg	att	tat	aca	ctg	aga	864	
Tyr	Thr	Ile	Ile	Thr	Pro	Met	Leu	Asn	Pro	Leu	Ile	Tyr	Thr	Leu	Arg		
		275					280					285					
aat	gca	gaa	gta	aag	aat	gca	atg	aag	aaa	ctg	tgg	ggc	aga	aat	gtt	912	
Asn	Ala	Glu	Val	Lys	Asn	Ala	Met	Lys	Lys	Leu	Trp	Gly	Arg	Asn	Val		
	290					295				300							
ttc	ttg	gag	gct	aaa	ggg	aaa	tag									936	
Phe	Leu	Glu	Ala	Lys	Gly	Lys											
305					310												

<210> 18
<211> 311

<212> PRT

<213> Homo sapiens_olfactory receptor OR4S2 (GI: 219431)

<400> 18

Met Glu Lys Ile Asn Asn Val Thr Glu Phe Ile Phe Trp Gly Leu Ser
1 5 10 15

Gln Ser Pro Glu Ile Glu Lys Val Cys Phe Val Val Phe Ser Phe Phe
20 25 30

Tyr Ile Ile Ile Leu Leu Gly Asn Leu Leu Ile Met Leu Thr Val Cys
35 40 45

Leu Ser Asn Leu Phe Lys Ser Pro Met Tyr Phe Phe Leu Ser Phe Leu
50 55 60

Ser Phe Val Asp Ile Cys Tyr Ser Ser Val Thr Ala Pro Lys Met Ile
65 70 75 80

Val Asp Leu Leu Ala Lys Asp Lys Thr Ile Ser Tyr Val Gly Cys Met
85 90 95

Leu Gln Leu Phe Gly Val His Phe Phe Gly Cys Thr Glu Ile Phe Ile
100 105 110

Leu Thr Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu
115 120 125

His Tyr Met Thr Ile Met Asn Arg Glu Thr Cys Asn Lys Met Leu Leu
130 135 140

Gly Thr Trp Val Gly Gly Phe Leu His Ser Ile Ile Gln Val Ala Leu
145 150 155 160

Val Val Gln Leu Pro Phe Cys Gly Pro Asn Glu Ile Asp His Tyr Phe
165 170 175

Cys Asp Val His Pro Val Leu Lys Leu Ala Cys Thr Glu Thr Tyr Ile

180	185	190
Val Gly Val Val Val Thr Ala Asn Ser Gly Thr Ile Ala Leu Gly Ser		
195	200	205
Phe Val Ile Leu Leu Ile Ser Tyr Ser Ile Ile Leu Val Ser Leu Arg		
210	215	220
Lys Gln Ser Ala Glu Gly Arg Arg Lys Ala Leu Ser Thr Cys Gly Ser		
225	230	235
His Ile Ala Met Val Val Ile Phe Phe Gly Pro Cys Thr Phe Met Tyr		
245	250	255
Met Arg Pro Asp Thr Thr Phe Ser Glu Asp Lys Met Val Ala Val Phe		
260	265	270
Tyr Thr Ile Ile Thr Pro Met Leu Asn Pro Leu Ile Tyr Thr Leu Arg		
275	280	285
Asn Ala Glu Val Lys Asn Ala Met Lys Lys Leu Trp Gly Arg Asn Val		
290	295	300
Phe Leu Glu Ala Lys Gly Lys		
305	310	

<210> 19
 <211> 939
 <212> DNA
 <213> Homo sapiens_olfactory receptor OR51I2 (GI: 507078)

<220>
 <221> CDS
 <222> (1)..(939)

<400> 19
 atg ggg ttg ttc aat gtc act cac cct gca ttc ttc ctc ctg act ggt
 Met Gly Leu Phe Asn Val Thr His Pro Ala Phe Phe Leu Leu Thr Gly
 1 5 10 15

48

atc cct ggt ctg gag agc tct cac tcc tgg ctg tca ggg ccc ctc tgc	96
Ile Pro Gly Leu Glu Ser Ser His Ser Trp Leu Ser Gly Pro Leu Cys	
20 25 30	
gtg atg tat gct gtg gcc ctt ggg gga aat aca gtg atc ctg cag gct	144
Val Met Tyr Ala Val Ala Leu Gly Gly Asn Thr Val Ile Leu Gln Ala	
35 40 45	
gtg cga gtg gag ccc agc ctc cat gag ccc atg tac tac ttc ctg tcc	192
Val Arg Val Glu Pro Ser Leu His Glu Pro Met Tyr Tyr Phe Leu Ser	
50 55 60	
atg ttg tcc ttc agt gat gtg gcc ata tcc atg gcc aca ctg ccc act	240
Met Leu Ser Phe Ser Asp Val Ala Ile Ser Met Ala Thr Leu Pro Thr	
65 70 75 80	
gta ctc cga acc ttc tgc ctc aat gcc cgc aac atc act ttt gat gcc	288
Val Leu Arg Thr Phe Cys Leu Asn Ala Arg Asn Ile Thr Phe Asp Ala	
85 90 95	
tgt cta att cag atg ttt ctt att cac ttc ttc tcc atg atg gaa tca	336
Cys Leu Ile Gln Met Phe Leu Ile His Phe Phe Ser Met Met Glu Ser	
100 105 110	
ggc att ctg ctg gcc atg agt ttt gac cgc tat gtg gcc att tgt gac	384
Gly Ile Leu Leu Ala Met Ser Phe Asp Arg Tyr Val Ala Ile Cys Asp	
115 120 125	
ccc ttg cgc tat gca act gtg ctc acc act gaa gtc att gct gca atg	432
Pro Leu Arg Tyr Ala Thr Val Leu Thr Thr Glu Val Ile Ala Ala Met	
130 135 140	
ggc tta ggt gca gct gct cga agc ttc atc acc ctt ttc cct ctt ccc	480
Gly Leu Gly Ala Ala Arg Ser Phe Ile Thr Leu Phe Pro Leu Pro	
145 150 155 160	
ttt ctt att aag agg ctg cct atc tgc aga tcc aat gtt ctt tct cac	528
Phe Leu Ile Lys Arg Leu Pro Ile Cys Arg Ser Asn Val Leu Ser His	
165 170 175	
tcc tac tgc ctg cac cca gac atg atg agg ctt gcc tgt gct gat atc	576
Ser Tyr Cys Leu His Pro Asp Met Met Arg Leu Ala Cys Ala Asp Ile	
180 185 190	
agt atc aac agc atc tat gga ctc ttt gtt ctt gta tcc acc ttt ggc	624
Ser Ile Asn Ser Ile Tyr Gly Leu Phe Val Leu Val Ser Thr Phe Gly	
195 200 205	
atg gac ctg ttt ttt atc ttc ctc tcc tat gtg ctc att ctg cgt tct	672
Met Asp Leu Phe Phe Ile Phe Leu Ser Tyr Val Leu Ile Leu Arg Ser	

210	215	220	
gtc atg gcc act gct tcc cgt gag gaa cgc ctc aaa gct ctc aac aca			720
Val Met Ala Thr Ala Ser Arg Glu Glu Arg Leu Lys Ala Leu Asn Thr			
225	230	235	240
tgt gtg tca cat atc ctg gct gta ctt gca ttt tat gtg cca atg att			768
Cys Val Ser His Ile Leu Ala Val Leu Ala Phe Tyr Val Pro Met Ile			
	245	250	255
ggg gtc tcc aca gtg cac cgc ttt ggg aag cat gtc cca tgc tac ata			816
Gly Val Ser Thr Val His Arg Phe Gly Lys His Val Pro Cys Tyr Ile			
	260	265	270
cat gtc ctc atg tca aat gtg tac cta ttt gtg cct cct gtg ctc aac			864
His Val Leu Met Ser Asn Val Tyr Leu Phe Val Pro Pro Val Leu Asn			
	275	280	285
cct ctc att tat agc gcc aag aca aag gaa atc cgc cga gcc att ttc			912
Pro Leu Ile Tyr Ser Ala Lys Thr Lys Glu Ile Arg Arg Ala Ile Phe			
	290	295	300
cgc atg ttt cac cac atc aaa ata tga			939
Arg Met Phe His His Ile Lys Ile			
305	310		

<210> 20
 <211> 312
 <212> PRT
 <213> Homo sapiens_olfactory receptor OR51I2 (GI: 507078)

<400> 20

Met Gly Leu Phe Asn Val Thr His Pro Ala Phe Phe Leu Leu Thr Gly
1 5 10 15

Ile Pro Gly Leu Glu Ser Ser His Ser Trp Leu Ser Gly Pro Leu Cys
20 25 30

Val Met Tyr Ala Val Ala Leu Gly Gly Asn Thr Val Ile Leu Gln Ala
35 40 45

Val Arg Val Glu Pro Ser Leu His Glu Pro Met Tyr Tyr Phe Leu Ser
50 55 60

Met Leu Ser Phe Ser Asp Val Ala Ile Ser Met Ala Thr Leu Pro Thr
65 70 75 80

Val Leu Arg Thr Phe Cys Leu Asn Ala Arg Asn Ile Thr Phe Asp Ala
85 90 95

Cys Leu Ile Gln Met Phe Leu Ile His Phe Phe Ser Met Met Glu Ser
100 105 110

Gly Ile Leu Leu Ala Met Ser Phe Asp Arg Tyr Val Ala Ile Cys Asp
115 120 125

Pro Leu Arg Tyr Ala Thr Val Leu Thr Thr Glu Val Ile Ala Ala Met
130 135 140

Gly Leu Gly Ala Ala Ala Arg Ser Phe Ile Thr Leu Phe Pro Leu Pro
145 150 155 160

Phe Leu Ile Lys Arg Leu Pro Ile Cys Arg Ser Asn Val Leu Ser His
165 170 175

Ser Tyr Cys Leu His Pro Asp Met Met Arg Leu Ala Cys Ala Asp Ile
180 185 190

Ser Ile Asn Ser Ile Tyr Gly Leu Phe Val Leu Val Ser Thr Phe Gly
195 200 205

Met Asp Leu Phe Phe Ile Phe Leu Ser Tyr Val Leu Ile Leu Arg Ser
210 215 220

Val Met Ala Thr Ala Ser Arg Glu Glu Arg Leu Lys Ala Leu Asn Thr
225 230 235 240

Cys Val Ser His Ile Leu Ala Val Leu Ala Phe Tyr Val Pro Met Ile
245 250 255

Gly Val Ser Thr Val His Arg Phe Gly Lys His Val Pro Cys Tyr Ile
260 265 270

His Val Leu Met Ser Asn Val Tyr Leu Phe Val Pro Pro Val Leu Asn
275 280 285

Pro Leu Ile Tyr Ser Ala Lys Thr Lys Glu Ile Arg Arg Ala Ile Phe
290 295 300

Arg Met Phe His His Ile Lys Ile
305 310

<210> 21
<211> 954
<212> DNA
<213> Mus musculus_olfactory receptor Olfr263 (GI:18341)

<220>
<221> CDS
<222> (1)..(954)

<400> 21
atg gac cca agc aat tac agt act ttg cat gtt ttt atc ctg ctt gga 48
Met Asp Pro Ser Asn Tyr Ser Thr Leu His Val Phe Ile Leu Leu Gly
1 5 10 15
ttc tct gac cac cct cac ctg gaa atg atc ctc tct gga gtt gtc acc 96
Phe Ser Asp His Pro His Leu Glu Met Ile Leu Ser Gly Val Val Thr
20 25 30
ttc ttt tac att att aca ctg gtg ggt aac act gct ata att ctt gca 144
Phe Phe Tyr Ile Ile Thr Leu Val Gly Asn Thr Ala Ile Ile Leu Ala
35 40 45
tcc ctc ctg gat ccc cat ctc cat aca cca atg tac ttt ttc ctc agg 192
Ser Leu Leu Asp Pro His Leu His Thr Pro Met Tyr Phe Phe Leu Arg
50 55 60
aat cta tct ttc ctg gat ttg tgt ttc aca aca agc att gtc cct cag 240
Asn Leu Ser Phe Leu Asp Leu Cys Phe Thr Thr Ser Ile Val Pro Gln
65 70 75 80
atg ctg gtt aac ttg tgg gga ccc gaa aag acc att agc tct gtg ggc 288
Met Leu Val Asn Leu Trp Gly Pro Glu Lys Thr Ile Ser Ser Val Gly
85 90 95
tgt att gtt cag ctc tat gtg tat atg tgg ctg ggc tcc att gag tgt 336

Cys	Ile	Val	Gln	Leu	Tyr	Val	Tyr	Met	Trp	Leu	Gly	Ser	Ile	Glu	Cys		
			100					105					110				
ctg	ctc	cta	gct	gtc	atg	tcc	tat	gat	cgt	ttc	aca	gct	att	tgt	aag		384
Leu	Leu	Leu	Ala	Val	Met	Ser	Tyr	Asp	Arg	Phe	Thr	Ala	Ile	Cys	Lys		
			115				120					125					
ccc	ttg	cat	tac	ttt	gta	atc	atg	aat	cca	cgt	cta	tgc	gtc	aag	atg		432
Pro	Leu	His	Tyr	Phe	Val	Ile	Met	Asn	Pro	Arg	Leu	Cys	Val	Lys	Met		
			130				135					140					
ata	gtc	atg	gtc	tgg	ggc	att	agt	ttg	gcc	aac	tct	gta	ata	tta	tgc		480
Ile	Val	Met	Val	Trp	Gly	Ile	Ser	Leu	Ala	Asn	Ser	Val	Ile	Leu	Cys		
					150					155					160		
aca	ctc	act	gtg	aat	ttg	cct	cga	tgt	gga	cac	aac	atc	ctg	gac	cac		528
Thr	Leu	Thr	Val	Asn	Leu	Pro	Arg	Cys	Gly	His	Asn	Ile	Leu	Asp	His		
				165					170					175			
ttc	ctg	tgt	gag	ttg	cca	gcc	atg	gtc	agg	ata	gct	tgt	gta	gac	acg		576
Phe	Leu	Cys	Glu	Leu	Pro	Ala	Met	Val	Arg	Ile	Ala	Cys	Val	Asp	Thr		
			180					185					190				
aca	aca	gtt	gaa	ttg	tct	gtt	ttt	gct	cta	ggc	att	gtc	att	gtc	ctt		624
Thr	Thr	Val	Glu	Leu	Ser	Val	Phe	Ala	Leu	Gly	Ile	Val	Ile	Val	Leu		
			195				200					205					
aca	cct	ctc	atc	ctt	att	ctt	att	tcc	tat	ggc	tac	ata	gcc	aaa	act		672
Thr	Pro	Leu	Ile	Leu	Ile	Leu	Ile	Ser	Tyr	Gly	Tyr	Ile	Ala	Lys	Thr		
			210				215					220					
gtg	ctc	aac	atg	aag	tca	aag	gca	ggg	caa	caa	aaa	gca	atg	aat	acc		720
Val	Leu	Asn	Met	Lys	Ser	Lys	Ala	Gly	Gln	Gln	Lys	Ala	Met	Asn	Thr		
					230					235					240		
tgt	gga	tcc	cat	ctc	act	gtg	gtc	tcc	ata	ttc	tat	gga	act	atc	atc		768
Cys	Gly	Ser	His	Leu	Thr	Val	Val	Ser	Ile	Phe	Tyr	Gly	Thr	Ile	Ile		
				245					250					255			
tac	atg	tat	cta	caa	ccc	ggc	aac	agg	gcc	tct	aag	gac	cag	ggc	aag		816
Tyr	Met	Tyr	Leu	Gln	Pro	Gly	Asn	Arg	Ala	Ser	Lys	Asp	Gln	Gly	Lys		
			260					265					270				
ttc	ctc	acc	ctc	ttt	tac	acc	atc	atc	act	cca	agt	ctc	aac	ccc	ctc		864
Phe	Leu	Thr	Leu	Phe	Tyr	Thr	Ile	Ile	Thr	Pro	Ser	Leu	Asn	Pro	Leu		
			275				280					285					
att	tac	acc	cta	agg	aac	aga	gac	atg	aaa	gat	gca	ctg	aaa	aaa	ctc		912
Ile	Tyr	Thr	Leu	Arg	Asn	Arg	Asp	Met	Lys	Asp	Ala	Leu	Lys	Lys	Leu		
			290			295					300						

atg agg ttt tac cac aga ttt gcc gaa gta agg aga aac tag
 Met Arg Phe Tyr His Arg Phe Ala Glu Val Arg Arg Asn
 305 310 315

954

<210> 22
 <211> 317
 <212> PRT
 <213> Mus musculus_olfactory receptor Olfr263 (GI:18341)

<400> 22

Met Asp Pro Ser Asn Tyr Ser Thr Leu His Val Phe Ile Leu Leu Gly
 1 5 10 15

Phe Ser Asp His Pro His Leu Glu Met Ile Leu Ser Gly Val Val Thr
 20 25 30

Phe Phe Tyr Ile Ile Thr Leu Val Gly Asn Thr Ala Ile Ile Leu Ala
 35 40 45

Ser Leu Leu Asp Pro His Leu His Thr Pro Met Tyr Phe Phe Leu Arg
 50 55 60

Asn Leu Ser Phe Leu Asp Leu Cys Phe Thr Thr Ser Ile Val Pro Gln
 65 70 75 80

Met Leu Val Asn Leu Trp Gly Pro Glu Lys Thr Ile Ser Ser Val Gly
 85 90 95

Cys Ile Val Gln Leu Tyr Val Tyr Met Trp Leu Gly Ser Ile Glu Cys
 100 105 110

Leu Leu Leu Ala Val Met Ser Tyr Asp Arg Phe Thr Ala Ile Cys Lys
 115 120 125

Pro Leu His Tyr Phe Val Ile Met Asn Pro Arg Leu Cys Val Lys Met
 130 135 140

Ile Val Met Val Trp Gly Ile Ser Leu Ala Asn Ser Val Ile Leu Cys

<221> CDS

<222> (1)..(942)

<400> 23

atg	aga	gaa	gaa	aat	gag	tct	tct	acc	ata	gat	ttc	act	ctc	ctg	gga	48
Met	Arg	Glu	Glu	Asn	Glu	Ser	Ser	Thr	Ile	Asp	Phe	Thr	Leu	Leu	Gly	
1				5					10					15		

gtt	aca	agg	cag	cgg	gag	cag	gaa	tat	ttc	ttc	ttc	atc	ctc	ttc	ctg	96
Val	Thr	Arg	Gln	Arg	Glu	Gln	Glu	Tyr	Phe	Phe	Phe	Ile	Leu	Phe	Leu	
			20					25					30			

ttc	att	tac	ccc	atc	aca	gtg	ttt	ggg	aac	atg	ctc	atc	atc	cta	gcc	144
Phe	Ile	Tyr	Pro	Ile	Thr	Val	Phe	Gly	Asn	Met	Leu	Ile	Ile	Leu	Ala	
		35					40					45				

att	cac	tct	gac	act	cgc	ctc	cat	aac	cct	atg	tac	ttt	ttc	ctg	gcc	192
Ile	His	Ser	Asp	Thr	Arg	Leu	His	Asn	Pro	Met	Tyr	Phe	Phe	Leu	Ala	
	50					55					60					

aac	ctc	tcc	ctt	gtt	gac	atc	ttc	ttc	tcc	tct	gta	act	att	ccc	aag	240
Asn	Leu	Ser	Leu	Val	Asp	Ile	Phe	Phe	Ser	Ser	Val	Thr	Ile	Pro	Lys	
65					70					75					80	

atg	ctg	gcc	aac	cat	ctc	cta	ggg	agc	aag	gcc	atc	tcc	ttt	ggg	gga	288
Met	Leu	Ala	Asn	His	Leu	Leu	Gly	Ser	Lys	Ala	Ile	Ser	Phe	Gly	Gly	
				85					90					95		

tgt	atg	gca	cag	atg	tac	ttc	atg	ata	tca	ttg	gga	aac	aca	gac	agt	336
Cys	Met	Ala	Gln	Met	Tyr	Phe	Met	Ile	Ser	Leu	Gly	Asn	Thr	Asp	Ser	
			100					105						110		

tat	ata	cta	gct	gca	atg	gca	tat	gac	cga	gct	gtg	gct	atc	agt	cgc	384
Tyr	Ile	Leu	Ala	Ala	Met	Ala	Tyr	Asp	Arg	Ala	Val	Ala	Ile	Ser	Arg	
		115					120					125				

ccg	ctt	cat	tat	gca	aca	att	atg	agt	cca	caa	ctt	tgt	gtc	ctg	ctg	432
Pro	Leu	His	Tyr	Ala	Thr	Ile	Met	Ser	Pro	Gln	Leu	Cys	Val	Leu	Leu	
	130						135					140				

gtt	gct	ggg	tcc	tgg	gtg	att	gca	aat	gct	aat	gca	ctg	ccc	cac	acc	480
Val	Ala	Gly	Ser	Trp	Val	Ile	Ala	Asn	Ala	Asn	Ala	Leu	Pro	His	Thr	
145					150				155						160	

cta	ctc	aca	gct	aga	ttg	tcc	ttc	tgt	ggc	aat	aag	gat	gtg	gcc	aac	528
Leu	Leu	Thr	Ala	Arg	Leu	Ser	Phe	Cys	Gly	Asn	Lys	Asp	Val	Ala	Asn	
				165					170					175		

ttc	tac	tgt	gac	att	aca	cct	ttg	ctc	cag	ctg	tcc	tgt	tct	gac	atc	576
Phe	Tyr	Cys	Asp	Ile	Thr	Pro	Leu	Leu	Gln	Leu	Ser	Cys	Ser	Asp	Ile	

180	185	190	
cgc ttc aat gtg aag atg atg tac ctt ggg gtg ggg gtc ttc tct gtg			624
Arg Phe Asn Val Lys Met Met Tyr Leu Gly Val Gly Val Phe Ser Val			
195	200	205	
cca ctg ctg tgc atc atc atc tcc tat gtc cgg gtc ttt tcc aca gtc			672
Pro Leu Leu Cys Ile Ile Ile Ser Tyr Val Arg Val Phe Ser Thr Val			
210	215	220	
ttg cgg gtt cca tct acc aag ggc ttc ctg aag gcc ttg tcc acc tgt			720
Leu Arg Val Pro Ser Thr Lys Gly Phe Leu Lys Ala Leu Ser Thr Cys			
225	230	235	240
ggc tct cac ctg aca gtg gtg tcc ttg tat tat ggg aca gtc atg ggc			768
Gly Ser His Leu Thr Val Val Ser Leu Tyr Tyr Gly Thr Val Met Gly			
245	250	255	
atg tat ttc cgg ccc ctg acc agt tac agt ctg aag cat gca ttg ata			816
Met Tyr Phe Arg Pro Leu Thr Ser Tyr Ser Leu Lys His Ala Leu Ile			
260	265	270	
act gtg atg tac acg gca gtg acc cca atg ctg aac cct ttc atc tac			864
Thr Val Met Tyr Thr Ala Val Thr Pro Met Leu Asn Pro Phe Ile Tyr			
275	280	285	
agc ctg agg aac cgg gac atg aag gct gct ctg aag aaa ctc ttc cac			912
Ser Leu Arg Asn Arg Asp Met Lys Ala Ala Leu Lys Lys Leu Phe His			
290	295	300	
tgc cac tct tcc tct tct tcc ctc atg tga			942
Cys His Ser Ser Ser Ser Ser Leu Met			
305	310		

<210> 24
 <211> 313
 <212> PRT
 <213> Mus musculus_olfactory receptor Olfr403 (GI:404316)

<400> 24

Met Arg Glu Glu Asn Glu Ser Ser Thr Ile Asp Phe Thr Leu Leu Gly
1 5 10 15

Val Thr Arg Gln Arg Glu Gln Glu Tyr Phe Phe Phe Ile Leu Phe Leu
20 25 30

Phe Ile Tyr Pro Ile Thr Val Phe Gly Asn Met Leu Ile Ile Leu Ala
35 40 45

Ile His Ser Asp Thr Arg Leu His Asn Pro Met Tyr Phe Phe Leu Ala
50 55 60

Asn Leu Ser Leu Val Asp Ile Phe Phe Ser Ser Val Thr Ile Pro Lys
65 70 75 80

Met Leu Ala Asn His Leu Leu Gly Ser Lys Ala Ile Ser Phe Gly Gly
85 90 95

Cys Met Ala Gln Met Tyr Phe Met Ile Ser Leu Gly Asn Thr Asp Ser
100 105 110

Tyr Ile Leu Ala Ala Met Ala Tyr Asp Arg Ala Val Ala Ile Ser Arg
115 120 125

Pro Leu His Tyr Ala Thr Ile Met Ser Pro Gln Leu Cys Val Leu Leu
130 135 140

Val Ala Gly Ser Trp Val Ile Ala Asn Ala Asn Ala Leu Pro His Thr
145 150 155 160

Leu Leu Thr Ala Arg Leu Ser Phe Cys Gly Asn Lys Asp Val Ala Asn
165 170 175

Phe Tyr Cys Asp Ile Thr Pro Leu Leu Gln Leu Ser Cys Ser Asp Ile
180 185 190

Arg Phe Asn Val Lys Met Met Tyr Leu Gly Val Gly Val Phe Ser Val
195 200 205

Pro Leu Leu Cys Ile Ile Ile Ser Tyr Val Arg Val Phe Ser Thr Val
210 215 220

Leu Arg Val Pro Ser Thr Lys Gly Phe Leu Lys Ala Leu Ser Thr Cys
225 230 235 240

Gly Ser His Leu Thr Val Val Ser Leu Tyr Tyr Gly Thr Val Met Gly
245 250 255

Met Tyr Phe Arg Pro Leu Thr Ser Tyr Ser Leu Lys His Ala Leu Ile
260 265 270

Thr Val Met Tyr Thr Ala Val Thr Pro Met Leu Asn Pro Phe Ile Tyr
275 280 285

Ser Leu Arg Asn Arg Asp Met Lys Ala Ala Leu Lys Lys Leu Phe His
290 295 300

Cys His Ser Ser Ser Ser Ser Leu Met
305 310

<210> 25
<211> 1065
<212> DNA
<213> Mus musculus_olfactory receptor Olfr735 (GI:257909)

<220>
<221> CDS
<222> (1)..(1065)

<400> 25
atg gta cac gca gac aag caa gaa gta ctt tct cat aat ttt tca ttt 48
Met Val His Ala Asp Lys Gln Glu Val Leu Ser His Asn Phe Ser Phe
1 5 10 15

ttg ttt aat tta acc tac tta gtc cag ttt aat ttt tct tcc act agg 96
Leu Phe Asn Leu Thr Tyr Leu Val Gln Phe Asn Phe Ser Ser Thr Arg
20 25 30

tcg ctt gat act ctt ggc ttg gag aaa aac aaa aac agc tct gat gtg 144
Ser Leu Asp Thr Leu Gly Leu Glu Lys Asn Lys Asn Ser Ser Asp Val
35 40 45

tca cga ttt gtg ctt ctg ggc ctg tcg tct tcc tgg gag ctc cag ttg 192
Ser Arg Phe Val Leu Leu Gly Leu Ser Ser Ser Trp Glu Leu Gln Leu
50 55 60

ttt ctc ttc ttc aca ttt ttg ttg att tac ctg gtt att gtc ctg gga 240

Phe	Leu	Phe	Phe	Thr	Phe	Leu	Leu	Ile	Tyr	Leu	Val	Ile	Val	Leu	Gly		
65					70					75					80		
aac	ctt	ttg	ata	gtg	atg	gtc	gtc	caa	gct	gat	gct	cac	ctg	ttc	cag		288
Asn	Leu	Leu	Ile	Val	Met	Val	Val	Gln	Ala	Asp	Ala	His	Leu	Phe	Gln		
				85					90					95			
tca	ccc	atg	tac	tat	ttt	cta	agc	cat	ctg	tct	ttc	att	gac	ctt	tgc		336
Ser	Pro	Met	Tyr	Tyr	Phe	Leu	Ser	His	Leu	Ser	Phe	Ile	Asp	Leu	Cys		
			100					105					110				
ctg	agc	tgt	gtg	gct	gta	ccc	aaa	atg	cta	gga	gat	ttc	cta	cag	aag		384
Leu	Ser	Cys	Val	Ala	Val	Pro	Lys	Met	Leu	Gly	Asp	Phe	Leu	Gln	Lys		
		115					120					125					
gag	aag	aca	ata	tct	ttt	tca	gga	tgc	ctg	gcc	cag	gta	ttc	ttt	ctt		432
Glu	Lys	Thr	Ile	Ser	Phe	Ser	Gly	Cys	Leu	Ala	Gln	Val	Phe	Phe	Leu		
	130					135					140						
cac	ttt	ctt	gga	gcc	agt	gag	atg	ttc	ctg	ttg	act	gtt	atg	gcc	tat		480
His	Phe	Leu	Gly	Ala	Ser	Glu	Met	Phe	Leu	Leu	Thr	Val	Met	Ala	Tyr		
145					150					155					160		
gat	agg	tat	gtt	gcc	ata	tgc	aac	cct	ttg	cac	tac	ctg	acg	gtc	atg		528
Asp	Arg	Tyr	Val	Ala	Ile	Cys	Asn	Pro	Leu	His	Tyr	Leu	Thr	Val	Met		
				165				170						175			
aat	aac	cac	ctg	cga	ctt	cgg	ttg	gtg	ttt	ggc	tgc	tgg	tgt	gga	ggt		576
Asn	Asn	His	Leu	Arg	Leu	Arg	Leu	Val	Phe	Gly	Cys	Trp	Cys	Gly	Gly		
			180					185					190				
ttc	att	cac	tct	atc	aca	cag	gtc	atg	att	gtc	att	cag	ctg	cct	ttt		624
Phe	Ile	His	Ser	Ile	Thr	Gln	Val	Met	Ile	Val	Ile	Gln	Leu	Pro	Phe		
			195				200					205					
tgt	ggt	ccc	aat	gaa	ctg	gac	aac	ttc	tac	tgt	gat	gtc	ccc	cag	gtt		672
Cys	Gly	Pro	Asn	Glu	Leu	Asp	Asn	Phe	Tyr	Cys	Asp	Val	Pro	Gln	Val		
	210					215					220						
gtc	aag	ctg	gcc	tgc	atg	gac	act	tac	ttg	gtt	gag	gtg	ctg	atg	gtc		720
Val	Lys	Leu	Ala	Cys	Met	Asp	Thr	Tyr	Leu	Val	Glu	Val	Leu	Met	Val		
225					230					235					240		
tct	aac	agt	ggc	ata	ctg	tct	ctt	gtc	tgc	ttc	ttg	gtc	ctg	ctc	ttc		768
Ser	Asn	Ser	Gly	Ile	Leu	Ser	Leu	Val	Cys	Phe	Leu	Val	Leu	Leu	Phe		
				245					250					255			
tcc	tat	gct	ctc	atc	ttg	att	act	ctg	aga	act	cac	ctc	cac	cgg	ggc		816
Ser	Tyr	Ala	Leu	Ile	Leu	Ile	Thr	Leu	Arg	Thr	His	Leu	His	Arg	Gly		
			260					265					270				

cag agc aag gca ctg tcc acc tgt gct tct cac ttg acg gtg gtc agc	864
Gln Ser Lys Ala Leu Ser Thr Cys Ala Ser His Leu Thr Val Val Ser	
275 280 285	
ctg atc ttt gta ccc tgt gta ttc att tac ttg agg cct ttc tgt acc	912
Leu Ile Phe Val Pro Cys Val Phe Ile Tyr Leu Arg Pro Phe Cys Thr	
290 295 300	
ttc tct gtg gat aaa gta gtc tct gtg ttt tac aca gtg atc aca cct	960
Phe Ser Val Asp Lys Val Val Ser Val Phe Tyr Thr Val Ile Thr Pro	
305 310 315 320	
atg ctg aac ccc ctc atc tat aca ctc aga aat gca gac atg aag caa	1008
Met Leu Asn Pro Leu Ile Tyr Thr Leu Arg Asn Ala Asp Met Lys Gln	
325 330 335	
gcc ata gaa aag ctg aga aag aag caa gtg gca tcc cac tgc ttt gct	1056
Ala Ile Glu Lys Leu Arg Lys Lys Gln Val Ala Ser His Cys Phe Ala	
340 345 350	
aaa gga tga	1065
Lys Gly	

<210> 26
 <211> 354
 <212> PRT
 <213> Mus musculus_olfactory receptor Olfr735 (GI:257909)

<400> 26

Met Val His Ala Asp Lys Gln Glu Val Leu Ser His Asn Phe Ser Phe
1 5 10 15

Leu Phe Asn Leu Thr Tyr Leu Val Gln Phe Asn Phe Ser Ser Thr Arg
20 25 30

Ser Leu Asp Thr Leu Gly Leu Glu Lys Asn Lys Asn Ser Ser Asp Val
35 40 45

Ser Arg Phe Val Leu Leu Gly Leu Ser Ser Ser Trp Glu Leu Gln Leu
50 55 60

Phe Leu Phe Phe Thr Phe Leu Leu Ile Tyr Leu Val Ile Val Leu Gly

65		70		75		80									
Asn	Leu	Leu	Ile	Val	Met	Val	Val	Gln	Ala	Asp	Ala	His	Leu	Phe	Gln
			85					90						95	
Ser	Pro	Met	Tyr	Tyr	Phe	Leu	Ser	His	Leu	Ser	Phe	Ile	Asp	Leu	Cys
			100					105					110		
Leu	Ser	Cys	Val	Ala	Val	Pro	Lys	Met	Leu	Gly	Asp	Phe	Leu	Gln	Lys
		115					120					125			
Glu	Lys	Thr	Ile	Ser	Phe	Ser	Gly	Cys	Leu	Ala	Gln	Val	Phe	Phe	Leu
	130						135				140				
His	Phe	Leu	Gly	Ala	Ser	Glu	Met	Phe	Leu	Leu	Thr	Val	Met	Ala	Tyr
145					150					155					160
Asp	Arg	Tyr	Val	Ala	Ile	Cys	Asn	Pro	Leu	His	Tyr	Leu	Thr	Val	Met
			165						170					175	
Asn	Asn	His	Leu	Arg	Leu	Arg	Leu	Val	Phe	Gly	Cys	Trp	Cys	Gly	Gly
			180					185					190		
Phe	Ile	His	Ser	Ile	Thr	Gln	Val	Met	Ile	Val	Ile	Gln	Leu	Pro	Phe
		195					200					205			
Cys	Gly	Pro	Asn	Glu	Leu	Asp	Asn	Phe	Tyr	Cys	Asp	Val	Pro	Gln	Val
	210					215					220				
Val	Lys	Leu	Ala	Cys	Met	Asp	Thr	Tyr	Leu	Val	Glu	Val	Leu	Met	Val
225					230					235				240	
Ser	Asn	Ser	Gly	Ile	Leu	Ser	Leu	Val	Cys	Phe	Leu	Val	Leu	Leu	Phe
			245						250					255	
Ser	Tyr	Ala	Leu	Ile	Leu	Ile	Thr	Leu	Arg	Thr	His	Leu	His	Arg	Gly
		260						265					270		

Gln Ser Lys Ala Leu Ser Thr Cys Ala Ser His Leu Thr Val Val Ser
 275 280 285

Leu Ile Phe Val Pro Cys Val Phe Ile Tyr Leu Arg Pro Phe Cys Thr
 290 295 300

Phe Ser Val Asp Lys Val Val Ser Val Phe Tyr Thr Val Ile Thr Pro
 305 310 315 320

Met Leu Asn Pro Leu Ile Tyr Thr Leu Arg Asn Ala Asp Met Lys Gln
 325 330 335

Ala Ile Glu Lys Leu Arg Lys Lys Gln Val Ala Ser His Cys Phe Ala
 340 345 350

Lys Gly

<210> 27
 <211> 942
 <212> DNA
 <213> Mus musculus_olfactory receptor Olfr96 (GI:258507)

<220>
 <221> CDS
 <222> (1)..(942)

<400> 27
 atg gga atc ctt tcc aca gga aat caa act gtc act gag ttt gta ctt 48
 Met Gly Ile Leu Ser Thr Gly Asn Gln Thr Val Thr Glu Phe Val Leu
 1 5 10 15
 ctt ggt ttc cat gaa gtc cct ggg ctg cac ctc ctg ttt ttt tct gtg 96
 Leu Gly Phe His Glu Val Pro Gly Leu His Leu Leu Phe Phe Ser Val
 20 25 30
 ttc acc atc ctc tat gcc tcc atc atc aca ggg aac atg ctc att gca 144
 Phe Thr Ile Leu Tyr Ala Ser Ile Ile Thr Gly Asn Met Leu Ile Ala
 35 40 45
 gtg gtg gtg gtg agc tcc cag agg ctt cac aca ccc atg tat ttc ttt 192
 Val Val Val Val Ser Ser Gln Arg Leu His Thr Pro Met Tyr Phe Phe

50	55	60	
ctg gtg aat ctg tcc ttc ata gag att gtc tat acc tcc aca gtg gtg Leu Val Asn Leu Ser Phe Ile Glu Ile Val Tyr Thr Ser Thr Val Val 65 70 75 80			240
ccc aaa atg ctg gaa ggc ttc tta cag gag gcc acc ata tct gtg gct Pro Lys Met Leu Glu Gly Phe Leu Gln Glu Ala Thr Ile Ser Val Ala 85 90 95			288
ggc tgc ttg ctc cag ttc ttt gtt ttt ggc tct ctg gcc aca gat gag Gly Cys Leu Leu Gln Phe Phe Val Phe Gly Ser Leu Ala Thr Asp Glu 100 105 110			336
tgt ttt ctg ctg gct gtg atg gca tat gat cga tat ctc gca att tgt Cys Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Leu Ala Ile Cys 115 120 125			384
cac cct cta cga tac cca cac ctc atg ggg cct caa tgg tgc ctg ggg His Pro Leu Arg Tyr Pro His Leu Met Gly Pro Gln Trp Cys Leu Gly 130 135 140			432
ttg gtg ctc aca gtc tgg ctg tct ggc ttc atg gta gat gga cta gtt Leu Val Leu Thr Val Trp Leu Ser Gly Phe Met Val Asp Gly Leu Val 145 150 155 160			480
gtt gct ctg atg gcc cag ttg aga ttc tgt ggc ccc aac tta gtt gat Val Ala Leu Met Ala Gln Leu Arg Phe Cys Gly Pro Asn Leu Val Asp 165 170 175			528
cac ttt tac tgt gat ttt tca cct ttg atg gtc ctg gct tgc tca gat His Phe Tyr Cys Asp Phe Ser Pro Leu Met Val Leu Ala Cys Ser Asp 180 185 190			576
acc caa gtg gcc cag gtg act aca ttt gtt ctc tct gtg gtc ttc ctg Thr Gln Val Ala Gln Val Thr Thr Phe Val Leu Ser Val Val Phe Leu 195 200 205			624
act gtc ccc ttt ggg ctg gtt ctg atc tcc tat gct cag att gta gtg Thr Val Pro Phe Gly Leu Val Leu Ile Ser Tyr Ala Gln Ile Val Val 210 215 220			672
act gtg ctg aga gtt cct tct ggg acc aga aga acc aag gcc ttc tcc Thr Val Leu Arg Val Pro Ser Gly Thr Arg Arg Thr Lys Ala Phe Ser 225 230 235 240			720
aca tgc tcc tct cac ctg gct gtg gtg tcc acg ttc tat gga aca ctc Thr Cys Ser Ser His Leu Ala Val Val Ser Thr Phe Tyr Gly Thr Leu 245 250 255			768

atg gta ttg tac att gtg ccc tct gct gtt cat tct cag ctc ctc tcc	816
Met Val Leu Tyr Ile Val Pro Ser Ala Val His Ser Gln Leu Leu Ser	
260 265 270	

aag gtc att gcc ctg ctc tac aca gtg gtc act ccc atc ttc aac cct	864
Lys Val Ile Ala Leu Leu Tyr Thr Val Val Thr Pro Ile Phe Asn Pro	
275 280 285	

gtc atc tac acc ttg agg aac cag gag gtg cag cag gca cta aga agg	912
Val Ile Tyr Thr Leu Arg Asn Gln Glu Val Gln Gln Ala Leu Arg Arg	
290 295 300	

ctt ctc tac tgc aaa cca act gaa atg tga	942
Leu Leu Tyr Cys Lys Pro Thr Glu Met	
305 310	

<210> 28
 <211> 313
 <212> PRT
 <213> Mus musculus_olfactory receptor Olfr96 (GI:258507)

<400> 28

Met Gly Ile Leu Ser Thr Gly Asn Gln Thr Val Thr Glu Phe Val Leu
1 5 10 15

Leu Gly Phe His Glu Val Pro Gly Leu His Leu Leu Phe Phe Ser Val
20 25 30

Phe Thr Ile Leu Tyr Ala Ser Ile Ile Thr Gly Asn Met Leu Ile Ala
35 40 45

Val Val Val Val Ser Ser Gln Arg Leu His Thr Pro Met Tyr Phe Phe
50 55 60

Leu Val Asn Leu Ser Phe Ile Glu Ile Val Tyr Thr Ser Thr Val Val
65 70 75 80

Pro Lys Met Leu Glu Gly Phe Leu Gln Glu Ala Thr Ile Ser Val Ala
85 90 95

Gly Cys Leu Leu Gln Phe Phe Val Phe Gly Ser Leu Ala Thr Asp Glu
100 105 110

Cys Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Leu Ala Ile Cys
115 120 125

His Pro Leu Arg Tyr Pro His Leu Met Gly Pro Gln Trp Cys Leu Gly
130 135 140

Leu Val Leu Thr Val Trp Leu Ser Gly Phe Met Val Asp Gly Leu Val
145 150 155 160

Val Ala Leu Met Ala Gln Leu Arg Phe Cys Gly Pro Asn Leu Val Asp
165 170 175

His Phe Tyr Cys Asp Phe Ser Pro Leu Met Val Leu Ala Cys Ser Asp
180 185 190

Thr Gln Val Ala Gln Val Thr Thr Phe Val Leu Ser Val Val Phe Leu
195 200 205

Thr Val Pro Phe Gly Leu Val Leu Ile Ser Tyr Ala Gln Ile Val Val
210 215 220

Thr Val Leu Arg Val Pro Ser Gly Thr Arg Arg Thr Lys Ala Phe Ser
225 230 235 240

Thr Cys Ser Ser His Leu Ala Val Val Ser Thr Phe Tyr Gly Thr Leu
245 250 255

Met Val Leu Tyr Ile Val Pro Ser Ala Val His Ser Gln Leu Leu Ser
260 265 270

Lys Val Ile Ala Leu Leu Tyr Thr Val Val Thr Pro Ile Phe Asn Pro
275 280 285

Val Ile Tyr Thr Leu Arg Asn Gln Glu Val Gln Gln Ala Leu Arg Arg
290 295 300

Leu Leu Tyr Cys Lys Pro Thr Glu Met
305 310

<210> 29
<211> 954
<212> DNA
<213> Mus musculus_olfactory receptor Olfr558 (GI:259097)

<220>
<221> CDS
<222> (1)..(954)

<400> 29
atg gtg ggc ttc aat agc aat gaa tcc agt gcc aca tat ttc atc tta 48
Met Val Gly Phe Asn Ser Asn Glu Ser Ser Ala Thr Tyr Phe Ile Leu
1 5 10 15

ata ggc ctt cca gga ttg gaa gag gtt cag ttt tgg ctg gct ttc cct 96
Ile Gly Leu Pro Gly Leu Glu Glu Val Gln Phe Trp Leu Ala Phe Pro
20 25 30

ttg tgt tcc ctc tac ctt att gct gtg cta ggt aac ttg aca atc atc 144
Leu Cys Ser Leu Tyr Leu Ile Ala Val Leu Gly Asn Leu Thr Ile Ile
35 40 45

tac att gtg agg aca gag cac agc ctg cat gag ccc atg tat atc ttt 192
Tyr Ile Val Arg Thr Glu His Ser Leu His Glu Pro Met Tyr Ile Phe
50 55 60

ctt tgc atg ctt tct ggc cta gac atc ctc att tcc acc tca tcc atg 240
Leu Cys Met Leu Ser Gly Leu Asp Ile Leu Ile Ser Thr Ser Ser Met
65 70 75 80

cca aaa atg atg gcc atc ttt tgg ttc aat tcc act acc atc cag ttt 288
Pro Lys Met Met Ala Ile Phe Trp Phe Asn Ser Thr Thr Ile Gln Phe
85 90 95

gat gct tgt ctg gta cag atg ttt gcc atc cat tcc ttg tct ggc atg 336
Asp Ala Cys Leu Val Gln Met Phe Ala Ile His Ser Leu Ser Gly Met
100 105 110

gag tcc aca gtg ctg ctg gcc atg gcc ttt gac cgc tat gtg gcc att 384
Glu Ser Thr Val Leu Leu Ala Met Ala Phe Asp Arg Tyr Val Ala Ile
115 120 125

tgc cat cct cta cgg cat gcc act gtg ctg aca ttg cct cgt gtt gcc 432
Cys His Pro Leu Arg His Ala Thr Val Leu Thr Leu Pro Arg Val Ala
130 135 140

aag att ggc atg gct gct gtg gtc agg ggt gca gta cta atg gca ccc Lys Ile Gly Met Ala Ala Val Val Arg Gly Ala Val Leu Met Ala Pro 145 150 155 160	480
tta cct gtc ttc atc aaa agg ttg cct ttc tgt cgt tcc aac atc ctt Leu Pro Val Phe Ile Lys Arg Leu Pro Phe Cys Arg Ser Asn Ile Leu 165 170 175	528
tct cat tcc tac tgc cta cac caa gat gtc atg aag ctg gcc tgt gct Ser His Ser Tyr Cys Leu His Gln Asp Val Met Lys Leu Ala Cys Ala 180 185 190	576
gac atc cgt gtc aat atc att tat gga ctc att gtc atc atc tca gcc Asp Ile Arg Val Asn Ile Ile Tyr Gly Leu Ile Val Ile Ile Ser Ala 195 200 205	624
att ggt ttg gac tca ctt ctc att tcc ttc tca tat ttg ctc atc ctc Ile Gly Leu Asp Ser Leu Leu Ile Ser Phe Ser Tyr Leu Leu Ile Leu 210 215 220	672
aag act gtg ttg ggc ttg aca cgt gaa gcc cag gca aaa gcg ttt ggc Lys Thr Val Leu Gly Leu Thr Arg Glu Ala Gln Ala Lys Ala Phe Gly 225 230 235 240	720
act tgt gtt tca cat gtg tgt gct gtt ttc atc ttc tat gtg cct ttc Thr Cys Val Ser His Val Cys Ala Val Phe Ile Phe Tyr Val Pro Phe 245 250 255	768
att gga ttg tcg atg gtg cac cgt ttc agc aag agg cgt gac tct ctc Ile Gly Leu Ser Met Val His Arg Phe Ser Lys Arg Arg Asp Ser Leu 260 265 270	816
ctg cct gtc att atg gct aac atc tat ctg cta gtt cct cct gtg ctc Leu Pro Val Ile Met Ala Asn Ile Tyr Leu Leu Val Pro Pro Val Leu 275 280 285	864
aac ccc att gtc tat gga gta aag aca aag gag atc cgg cag cgc att Asn Pro Ile Val Tyr Gly Val Lys Thr Lys Glu Ile Arg Gln Arg Ile 290 295 300	912
ctt cgt ctt ttc ctc gtg acc aca cac act tca gat cac tag Leu Arg Leu Phe Leu Val Thr Thr His Thr Ser Asp His 305 310 315	954

<210> 30

<211> 317

<212> PRT

<213> Mus musculus_olfactory receptor Olfr558 (GI:259097)

<400> 30

Met Val Gly Phe Asn Ser Asn Glu Ser Ser Ala Thr Tyr Phe Ile Leu
1 5 10 15

Ile Gly Leu Pro Gly Leu Glu Glu Val Gln Phe Trp Leu Ala Phe Pro
20 25 30

Leu Cys Ser Leu Tyr Leu Ile Ala Val Leu Gly Asn Leu Thr Ile Ile
35 40 45

Tyr Ile Val Arg Thr Glu His Ser Leu His Glu Pro Met Tyr Ile Phe
50 55 60

Leu Cys Met Leu Ser Gly Leu Asp Ile Leu Ile Ser Thr Ser Ser Met
65 70 75 80

Pro Lys Met Met Ala Ile Phe Trp Phe Asn Ser Thr Thr Ile Gln Phe
85 90 95

Asp Ala Cys Leu Val Gln Met Phe Ala Ile His Ser Leu Ser Gly Met
100 105 110

Glu Ser Thr Val Leu Leu Ala Met Ala Phe Asp Arg Tyr Val Ala Ile
115 120 125

Cys His Pro Leu Arg His Ala Thr Val Leu Thr Leu Pro Arg Val Ala
130 135 140

Lys Ile Gly Met Ala Ala Val Val Arg Gly Ala Val Leu Met Ala Pro
145 150 155 160

Leu Pro Val Phe Ile Lys Arg Leu Pro Phe Cys Arg Ser Asn Ile Leu
165 170 175

Ser His Ser Tyr Cys Leu His Gln Asp Val Met Lys Leu Ala Cys Ala
180 185 190

Asp Ile Arg Val Asn Ile Ile Tyr Gly Leu Ile Val Ile Ile Ser Ala
195 200 205

Ile Gly Leu Asp Ser Leu Leu Ile Ser Phe Ser Tyr Leu Leu Ile Leu
210 215 220

Lys Thr Val Leu Gly Leu Thr Arg Glu Ala Gln Ala Lys Ala Phe Gly
225 230 235 240

Thr Cys Val Ser His Val Cys Ala Val Phe Ile Phe Tyr Val Pro Phe
245 250 255

Ile Gly Leu Ser Met Val His Arg Phe Ser Lys Arg Arg Asp Ser Leu
260 265 270

Leu Pro Val Ile Met Ala Asn Ile Tyr Leu Leu Val Pro Pro Val Leu
275 280 285

Asn Pro Ile Val Tyr Gly Val Lys Thr Lys Glu Ile Arg Gln Arg Ile
290 295 300

Leu Arg Leu Phe Leu Val Thr Thr His Thr Ser Asp His
305 310 315

<210> 31
<211> 957
<212> DNA
<213> Mus musculus_olfactory receptor Olfr1193 (GI:329460)

<220>
<221> CDS
<222> (1)..(957)

<400> 31
atg gcc tca agg act tat tcc atg gaa gaa gta aat aat gtc act gaa 48
Met Ala Ser Arg Thr Tyr Ser Met Glu Glu Val Asn Asn Val Thr Glu
1 5 10 15

ttc att ttc ttg ggt ctt tct cag aac cct gag gtt gaa aaa gtg tgc 96
Phe Ile Phe Leu Gly Leu Ser Gln Asn Pro Glu Val Glu Lys Val Cys

20	25	30	
ttt gtg gtg ttc tcc ttc ttt tac atg gtc att ctg cta gga aac ctc Phe Val Val Phe Ser Phe Phe Tyr Met Val Ile Leu Leu Gly Asn Leu 35 40 45			144
ctc atc atg ttg aca gtt tgc agt ggc aat ctt ttc aag ttt ccc atg Leu Ile Met Leu Thr Val Cys Ser Gly Asn Leu Phe Lys Phe Pro Met 50 55 60			192
tat ttt ttc ctc aac ttt ctg tct ttt gtg gac att tgc tac tcc tca Tyr Phe Phe Leu Asn Phe Leu Ser Phe Val Asp Ile Cys Tyr Ser Ser 65 70 75 80			240
gtc aca gca ccc aag atg att att gac ctg tta gtg aag aaa aag act Val Thr Ala Pro Lys Met Ile Ile Asp Leu Leu Val Lys Lys Lys Thr 85 90 95			288
ata tcc tat gtg ggg tgc atg tta caa ctc ttt gtg gtt cat ttc ttt Ile Ser Tyr Val Gly Cys Met Leu Gln Leu Phe Val Val His Phe Phe 100 105 110			336
ggt tgc act gag atc ttc att ctt act gtc atg gcc tat gat aga tat Gly Cys Thr Glu Ile Phe Ile Leu Thr Val Met Ala Tyr Asp Arg Tyr 115 120 125			384
gtg gcc att tgt aaa cct ctc cac tat atg act atg atg gac cgg gaa Val Ala Ile Cys Lys Pro Leu His Tyr Met Thr Met Met Asp Arg Glu 130 135 140			432
aga tgc aat aag atg ttg ctc gga aca tgg atc ggt ggc ttc tta cat Arg Cys Asn Lys Met Leu Leu Gly Thr Trp Ile Gly Gly Phe Leu His 145 150 155 160			480
tct att atc caa gtg gct ctt gtg gtc cag ctc ccc ttt tgt gga ccg Ser Ile Ile Gln Val Ala Leu Val Val Gln Leu Pro Phe Cys Gly Pro 165 170 175			528
aat gag att gat cac tat ttc tgt gat gta cat cct gta ctg aaa ctt Asn Glu Ile Asp His Tyr Phe Cys Asp Val His Pro Val Leu Lys Leu 180 185 190			576
gcc tgc act gac act tac att gtt ggt att ttt gtg aca gca aac agt Ala Cys Thr Asp Thr Tyr Ile Val Gly Ile Phe Val Thr Ala Asn Ser 195 200 205			624
ggc acc att gca ttg gga agt ttt gtc atc ttg ctg atc tca tac aca Gly Thr Ile Ala Leu Gly Ser Phe Val Ile Leu Leu Ile Ser Tyr Thr 210 215 220			672

Val Thr Ala Pro Lys Met Ile Ile Asp Leu Leu Val Lys Lys Lys Thr
85 90 95

Ile Ser Tyr Val Gly Cys Met Leu Gln Leu Phe Val Val His Phe Phe
100 105 110

Gly Cys Thr Glu Ile Phe Ile Leu Thr Val Met Ala Tyr Asp Arg Tyr
115 120 125

Val Ala Ile Cys Lys Pro Leu His Tyr Met Thr Met Met Asp Arg Glu
130 135 140

Arg Cys Asn Lys Met Leu Leu Gly Thr Trp Ile Gly Gly Phe Leu His
145 150 155 160

Ser Ile Ile Gln Val Ala Leu Val Val Gln Leu Pro Phe Cys Gly Pro
165 170 175

Asn Glu Ile Asp His Tyr Phe Cys Asp Val His Pro Val Leu Lys Leu
180 185 190

Ala Cys Thr Asp Thr Tyr Ile Val Gly Ile Phe Val Thr Ala Asn Ser
195 200 205

Gly Thr Ile Ala Leu Gly Ser Phe Val Ile Leu Leu Ile Ser Tyr Thr
210 215 220

Val Ile Leu Met Ser Leu Arg Lys Gln Ser Ser Glu Gly Arg Arg Lys
225 230 235 240

Ala Leu Ser Thr Cys Gly Ser His Ile Ala Val Val Ile Ile Phe Phe
245 250 255

Gly Pro Cys Thr Phe Met Tyr Met Arg Pro Asp Thr Thr Phe Ser Glu
260 265 270

Asp Lys Met Val Ala Ile Phe Tyr Thr Ile Ile Thr Pro Met Leu Asn
 275 280 285

Pro Leu Ile Tyr Thr Leu Arg Asn Ala Glu Val Lys Asn Ala Met Arg
 290 295 300

Lys Leu Trp Ala Arg Lys Phe Ser Trp Glu Thr Thr Gly Lys
 305 310 315

<210> 33
 <211> 939
 <212> DNA
 <213> Mus musculus_olfactory receptor Olfr641 (GI: 25075)

<220>
 <221> CDS
 <222> (1)..(939)

<400> 33
 atg gcg ctg ttc aat gtc act cac cct gcc tcc ttt ctc ctg act ggt 48
 Met Ala Leu Phe Asn Val Thr His Pro Ala Ser Phe Leu Leu Thr Gly
 1 5 10 15
 atc cct ggt ctg gag agc ctc cac ccc tgg ctg gca gga ccc ctt tgt 96
 Ile Pro Gly Leu Glu Ser Leu His Pro Trp Leu Ala Gly Pro Leu Cys
 20 25 30
 gtg atg tat gcc gtg gcc ctc ggg gca aat act gtg att ctg cag gct 144
 Val Met Tyr Ala Val Ala Leu Gly Ala Asn Thr Val Ile Leu Gln Ala
 35 40 45
 gtg aga gtg gag ccc atc ctc cat gct ccc atg tac tat ttc ctg tcc 192
 Val Arg Val Glu Pro Ile Leu His Ala Pro Met Tyr Tyr Phe Leu Ser
 50 55 60
 atg ttg tct ttc agt gat gtg gcc atg tca atg gcc aca ctg ccc acc 240
 Met Leu Ser Phe Ser Asp Val Ala Met Ser Met Ala Thr Leu Pro Thr
 65 70 75 80
 gtg ctg aga acc ttc tgc ttt gat gcc cgc agc att gct ttt gac gcc 288
 Val Leu Arg Thr Phe Cys Phe Asp Ala Arg Ser Ile Ala Phe Asp Ala
 85 90 95
 tgt cta gtc cag atg ttc ctc att cat tct ttc tcg atg atg gag tca 336
 Cys Leu Val Gln Met Phe Leu Ile His Ser Phe Ser Met Met Glu Ser
 100 105 110

ggg att ctg ctg gct atg agt ttt gac cgc tat gtg gcc ata tgc aat Gly Ile Leu Leu Ala Met Ser Phe Asp Arg Tyr Val Ala Ile Cys Asn 115 120 125	384
ccc ttg cat tat gcc act gtc ctc acc aat gaa ttc att gct ggg atg Pro Leu His Tyr Ala Thr Val Leu Thr Asn Glu Phe Ile Ala Gly Met 130 135 140	432
ggc tta gct gtg act gct cga agc ttc atc acc ctt ttc cct ctg ccc Gly Leu Ala Val Thr Ala Arg Ser Phe Ile Thr Leu Phe Pro Leu Pro 145 150 155 160	480
ttc ctc atc aaa agg cta cct atc tgc aaa tcc aat gtt ctt tcc cac Phe Leu Ile Lys Arg Leu Pro Ile Cys Lys Ser Asn Val Leu Ser His 165 170 175	528
tcc tac tgc ctg cac cca gac atg atg aag ctt gcc tgt gct gac atc Ser Tyr Cys Leu His Pro Asp Met Met Lys Leu Ala Cys Ala Asp Ile 180 185 190	576
acc atc aac agt att tat gga ctc ttt gtt ctt gtg tct acc ttt ggc Thr Ile Asn Ser Ile Tyr Gly Leu Phe Val Leu Val Ser Thr Phe Gly 195 200 205	624
atg gac ctg ctt ttt att ttc ctc tcc tat gtg ctc att ctg cgt tct Met Asp Leu Leu Phe Ile Phe Leu Ser Tyr Val Leu Ile Leu Arg Ser 210 215 220	672
gtt atg gcc att gct tct cat gag gaa cgc ctt aaa gct ctc aac aca Val Met Ala Ile Ala Ser His Glu Glu Arg Leu Lys Ala Leu Asn Thr 225 230 235 240	720
tgt gta tca cat atc ttg gct gtg ctt gca ttt tat gtg cca atg ata Cys Val Ser His Ile Leu Ala Val Leu Phe Tyr Val Pro Met Ile 245 250 255	768
ggg gtc tct aca gtt cac cgt ttt ggg aag cat gcc cca cga tac ata Gly Val Ser Thr Val His Arg Phe Gly Lys His Ala Pro Arg Tyr Ile 260 265 270	816
cat gtc ctc atg tcc aat gtc tac ctc ttt gtg cct cct gtt ctc aac His Val Leu Met Ser Asn Val Tyr Leu Phe Val Pro Pro Val Leu Asn 275 280 285	864
cct ctc att tac agt gcc aag aca aag gag atc cgc cgt gcc ata ttc Pro Leu Ile Tyr Ser Ala Lys Thr Lys Glu Ile Arg Arg Ala Ile Phe 290 295 300	912
cgc atg ttt cgc cgt atc aaa ctg tga	939

Arg Met Phe Arg Arg Ile Lys Leu
305 310

<210> 34

<211> 312

<212> PRT

<213> Mus musculus_olfactory receptor Olfr641 (GI: 25075)

<400> 34

Met Ala Leu Phe Asn Val Thr His Pro Ala Ser Phe Leu Leu Thr Gly
1 5 10 15

Ile Pro Gly Leu Glu Ser Leu His Pro Trp Leu Ala Gly Pro Leu Cys
20 25 30

Val Met Tyr Ala Val Ala Leu Gly Ala Asn Thr Val Ile Leu Gln Ala
35 40 45

Val Arg Val Glu Pro Ile Leu His Ala Pro Met Tyr Tyr Phe Leu Ser
50 55 60

Met Leu Ser Phe Ser Asp Val Ala Met Ser Met Ala Thr Leu Pro Thr
65 70 75 80

Val Leu Arg Thr Phe Cys Phe Asp Ala Arg Ser Ile Ala Phe Asp Ala
85 90 95

Cys Leu Val Gln Met Phe Leu Ile His Ser Phe Ser Met Met Glu Ser
100 105 110

Gly Ile Leu Leu Ala Met Ser Phe Asp Arg Tyr Val Ala Ile Cys Asn
115 120 125

Pro Leu His Tyr Ala Thr Val Leu Thr Asn Glu Phe Ile Ala Gly Met
130 135 140

Gly Leu Ala Val Thr Ala Arg Ser Phe Ile Thr Leu Phe Pro Leu Pro
145 150 155 160

Phe Leu Ile Lys Arg Leu Pro Ile Cys Lys Ser Asn Val Leu Ser His
165 170 175

Ser Tyr Cys Leu His Pro Asp Met Met Lys Leu Ala Cys Ala Asp Ile
180 185 190

Thr Ile Asn Ser Ile Tyr Gly Leu Phe Val Leu Val Ser Thr Phe Gly
195 200 205

Met Asp Leu Leu Phe Ile Phe Leu Ser Tyr Val Leu Ile Leu Arg Ser
210 215 220

Val Met Ala Ile Ala Ser His Glu Glu Arg Leu Lys Ala Leu Asn Thr
225 230 235 240

Cys Val Ser His Ile Leu Ala Val Leu Ala Phe Tyr Val Pro Met Ile
245 250 255

Gly Val Ser Thr Val His Arg Phe Gly Lys His Ala Pro Arg Tyr Ile
260 265 270

His Val Leu Met Ser Asn Val Tyr Leu Phe Val Pro Pro Val Leu Asn
275 280 285

Pro Leu Ile Tyr Ser Ala Lys Thr Lys Glu Ile Arg Arg Ala Ile Phe
290 295 300

Arg Met Phe Arg Arg Ile Lys Leu
305 310

<210> 35

<211> 939

<212> DNA

<213> Mus musculus_olfactory receptor Olfr137 (GI: 258481)

<220>

<221> CDS

<222> (1)..(939)

<400> 35
atg gtg gaa aat ttc aat gca agt tgg gaa ggg tac ttt att ttt ctg 48
Met Val Glu Asn Phe Asn Ala Ser Trp Glu Gly Tyr Phe Ile Phe Leu
1 5 10 15

ggt ttt tct aaa tgg cct cat ctg gaa gtt gtt ctc ttt gtg gtg ata 96
Gly Phe Ser Lys Trp Pro His Leu Glu Val Val Leu Phe Val Val Ile
20 25 30

ttg ata ttc tac atg atg aca ctg atg ggc aat ctc ttc atc ata att 144
Leu Ile Phe Tyr Met Met Thr Leu Met Gly Asn Leu Phe Ile Ile Ile
35 40 45

ttg tca cac cta gat tcc cac ctg cat acc cct atg tac ttc ttc ctc 192
Leu Ser His Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu
50 55 60

tca aat ctc tct gct ttg gat ctc tgt tat acc act agc tct gtc ccc 240
Ser Asn Leu Ser Ala Leu Asp Leu Cys Tyr Thr Thr Ser Ser Val Pro
65 70 75 80

cag ctg cta ttt aac ctc tgg ggc cca aag aaa aca ata tct tat gct 288
Gln Leu Leu Phe Asn Leu Trp Gly Pro Lys Lys Thr Ile Ser Tyr Ala
85 90 95

ggt tgc atg ctt cag ctc tat ttt gtc ctt gct ctg ggt acc aca gag 336
Gly Cys Met Leu Gln Leu Tyr Phe Val Leu Ala Leu Gly Thr Thr Glu
100 105 110

tgt gtt ctg ttg gtg gtg atg tcc tat gac cgc tat gta gct gtg tgt 384
Cys Val Leu Leu Val Val Met Ser Tyr Asp Arg Tyr Val Ala Val Cys
115 120 125

aaa ccc ttg cat tac tct gta ctt atg aat cct cgt ttt tgc caa ctg 432
Lys Pro Leu His Tyr Ser Val Leu Met Asn Pro Arg Phe Cys Gln Leu
130 135 140

ctg gct gca gca tcc tgg gta tgt ggc ttt acc act tca gcc ctt cac 480
Leu Ala Ala Ala Ser Trp Val Cys Gly Phe Thr Thr Ser Ala Leu His
145 150 155 160

tct tcc ttt acc ttc tgg gta ccc ctg tgt ggc cat cgc aaa gta gac 528
Ser Ser Phe Thr Phe Trp Val Pro Leu Cys Gly His Arg Lys Val Asp
165 170 175

cac ttc ttc tgt gaa gtg cct gca ctg ttg cag ttg tcc tgt gtt gat 576
His Phe Phe Cys Glu Val Pro Ala Leu Leu Gln Leu Ser Cys Val Asp
180 185 190

atc cat gca aat gag atg act ctc atg gtc atg agt gct att ttt gtt	624
Ile His Ala Asn Glu Met Thr Leu Met Val Met Ser Ala Ile Phe Val	
195 200 205	
gtc ata cca ctt att ctc atc ctg agc tcc tat gct gcc att gca tgg	672
Val Ile Pro Leu Ile Leu Ile Leu Ser Ser Tyr Ala Ala Ile Ala Trp	
210 215 220	
act gtc ctg gaa atg caa tca acc act cga ctt cag aaa gtt ttc ggg	720
Thr Val Leu Glu Met Gln Ser Thr Thr Arg Leu Gln Lys Val Phe Gly	
225 230 235 240	
acc tgt gga gcc cat ctt act gtt gtt tct ctc ttt ttc att cca atc	768
Thr Cys Gly Ala His Leu Thr Val Val Ser Leu Phe Phe Ile Pro Ile	
245 250 255	
atg tgc att tat ctt cag cct tca aca aaa agt tct caa gat cat gcc	816
Met Cys Ile Tyr Leu Gln Pro Ser Thr Lys Ser Ser Gln Asp His Ala	
260 265 270	
aag ttc att gct ctc ttc tac acc gtt gtc aca cct agc ctc aac cct	864
Lys Phe Ile Ala Leu Phe Tyr Thr Val Val Thr Pro Ser Leu Asn Pro	
275 280 285	
ctc att tat act cta aga aac aaa gat gtg aga ggg gca ata agg agg	912
Leu Ile Tyr Thr Leu Arg Asn Lys Asp Val Arg Gly Ala Ile Arg Arg	
290 295 300	
ctg agt agg tat gag agg gag aaa tga	939
Leu Ser Arg Tyr Glu Arg Glu Lys	
305 310	

<210> 36
 <211> 312
 <212> PRT
 <213> Mus musculus_olfactory receptor Olfr137 (GI: 258481)

<400> 36

Met Val Glu Asn Phe Asn Ala Ser Trp Glu Gly Tyr Phe Ile Phe Leu
1 5 10 15

Gly Phe Ser Lys Trp Pro His Leu Glu Val Val Leu Phe Val Val Ile
20 25 30

Leu Ile Phe Tyr Met Met Thr Leu Met Gly Asn Leu Phe Ile Ile Ile
35 40 45

Leu Ser His Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu
50 55 60

Ser Asn Leu Ser Ala Leu Asp Leu Cys Tyr Thr Thr Ser Ser Val Pro
65 70 75 80

Gln Leu Leu Phe Asn Leu Trp Gly Pro Lys Lys Thr Ile Ser Tyr Ala
85 90 95

Gly Cys Met Leu Gln Leu Tyr Phe Val Leu Ala Leu Gly Thr Thr Glu
100 105 110

Cys Val Leu Leu Val Val Met Ser Tyr Asp Arg Tyr Val Ala Val Cys
115 120 125

Lys Pro Leu His Tyr Ser Val Leu Met Asn Pro Arg Phe Cys Gln Leu
130 135 140

Leu Ala Ala Ala Ser Trp Val Cys Gly Phe Thr Thr Ser Ala Leu His
145 150 155 160

Ser Ser Phe Thr Phe Trp Val Pro Leu Cys Gly His Arg Lys Val Asp
165 170 175

His Phe Phe Cys Glu Val Pro Ala Leu Leu Gln Leu Ser Cys Val Asp
180 185 190

Ile His Ala Asn Glu Met Thr Leu Met Val Met Ser Ala Ile Phe Val
195 200 205

Val Ile Pro Leu Ile Leu Ile Leu Ser Ser Tyr Ala Ala Ile Ala Trp
210 215 220

Thr Val Leu Glu Met Gln Ser Thr Thr Arg Leu Gln Lys Val Phe Gly
225 230 235 240

Thr Cys Gly Ala His Leu Thr Val Val Ser Leu Phe Phe Ile Pro Ile
245 250 255

Met Cys Ile Tyr Leu Gln Pro Ser Thr Lys Ser Ser Gln Asp His Ala
260 265 270

Lys Phe Ile Ala Leu Phe Tyr Thr Val Val Thr Pro Ser Leu Asn Pro
275 280 285

Leu Ile Tyr Thr Leu Arg Asn Lys Asp Val Arg Gly Ala Ile Arg Arg
290 295 300

Leu Ser Arg Tyr Glu Arg Glu Lys
305 310

<210> 37
<211> 966
<212> DNA
<213> Mus musculus_olfactory receptor Olfr173 (GI: 259002)

<220>
<221> CDS
<222> (1)..(966)

<400> 37
atg gtt gaa gaa aac cac acc atg aaa cgt gag ttt gtc ctc aca gga 48
Met Val Glu Glu Asn His Thr Met Lys Arg Glu Phe Val Leu Thr Gly
1 5 10 15

ttt aca gac cac cct gaa atg aag ggc ctt ctg ttt gca gta ttc ttt 96
Phe Thr Asp His Pro Glu Met Lys Gly Leu Leu Phe Ala Val Phe Phe
20 25 30

ttc atc tat ctg att acc atg ata ggg aat atg ggt ctg gtg att ctg 144
Phe Ile Tyr Leu Ile Thr Met Ile Gly Asn Met Gly Leu Val Ile Leu
35 40 45

att tcc aaa gaa cgt tct ctt cac acc cca atg tac atc ttt ctg ggc 192
Ile Ser Lys Glu Arg Ser Leu His Thr Pro Met Tyr Ile Phe Leu Gly
50 55 60

aac ctg gct ttt ata gat tct tgt tgt gcc tgt gct att acc cct aaa 240
Asn Leu Ala Phe Ile Asp Ser Cys Cys Ala Cys Ala Ile Thr Pro Lys
65 70 75 80

atg ttg gag aac ttt ttc tct gag gac aga ata atc tct ctg tat gaa	288
Met Leu Glu Asn Phe Phe Ser Glu Asp Arg Ile Ile Ser Leu Tyr Glu	
85 90 95	
tgt atg gca cag ttt tat ttt ctg tgc act gtt gaa act gca gac tgc	336
Cys Met Ala Gln Phe Tyr Phe Leu Cys Thr Val Glu Thr Ala Asp Cys	
100 105 110	
ttt ctt ctg tca gca atg gcc tat gac cgc tat gtg gcc ata tgc aac	384
Phe Leu Leu Ser Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn	
115 120 125	
cca ctg cag tac cac acc acg atg tcc aag aag ctc tgc ctt cag atg	432
Pro Leu Gln Tyr His Thr Thr Met Ser Lys Lys Leu Cys Leu Gln Met	
130 135 140	
acg acg gga gct ttc ata gct gga aac ctg cat tct atg gtt cat gtg	480
Thr Thr Gly Ala Phe Ile Ala Gly Asn Leu His Ser Met Val His Val	
145 150 155 160	
ggg cta tta ttt aga cta gca ttc tgt ggg tct aat caa atc aac cac	528
Gly Leu Leu Phe Arg Leu Ala Phe Cys Gly Ser Asn Gln Ile Asn His	
165 170 175	
ttt tat tgt gat att ctt cct ttg tac aga ctc tcc tgt gtt gac ccc	576
Phe Tyr Cys Asp Ile Leu Pro Leu Tyr Arg Leu Ser Cys Val Asp Pro	
180 185 190	
tat atc aac gag ctt gta tta ttt gtc ttt tca ggc tca atc caa gtc	624
Tyr Ile Asn Glu Leu Val Leu Phe Val Phe Ser Gly Ser Ile Gln Val	
195 200 205	
ttc aca ata ggt tgt gtc ctc ata tct tac ctt ttc att gtt tat aca	672
Phe Thr Ile Gly Cys Val Leu Ile Ser Tyr Leu Phe Ile Val Tyr Thr	
210 215 220	
att ttc caa atg aaa tcc aaa gag gga agg atc aaa gcc ttc tcc acc	720
Ile Phe Gln Met Lys Ser Lys Glu Gly Arg Ile Lys Ala Phe Ser Thr	
225 230 235 240	
tgt gca tcc cac ttt ctg tct gtt tca cta ttc tat gga tct ctt ttg	768
Cys Ala Ser His Phe Leu Ser Val Ser Leu Phe Tyr Gly Ser Leu Leu	
245 250 255	
ttt atg tac att aga cca aat ttg cta gaa gaa ggt gat aag gac atg	816
Phe Met Tyr Ile Arg Pro Asn Leu Leu Glu Glu Gly Asp Lys Asp Met	
260 265 270	
cca gct gct att ttg ttt aca ata gtg gtt ccc tta cta aac cca ttt	864

Pro	Ala	Ala	Ile	Leu	Phe	Thr	Ile	Val	Val	Pro	Leu	Leu	Asn	Pro	Phe		
	275						280					285					
att	tat	agc	ttg	aga	aat	aaa	gaa	gta	aag	aat	gtc	ttg	cag	aaa	att		912
Ile	Tyr	Ser	Leu	Arg	Asn	Lys	Glu	Val	Lys	Asn	Val	Leu	Gln	Lys	Ile		
	290					295					300						
ctg	cag	aaa	aaa	ata	att	tca	aaa	aat	ttt	aaa	caa	gca	tct	att	att		960
Leu	Gln	Lys	Lys	Ile	Ile	Ser	Lys	Asn	Phe	Lys	Gln	Ala	Ser	Ile	Ile		
305					310					315					320		
gtg	taa																966
Val																	

<210> 38
 <211> 321
 <212> PRT
 <213> Mus musculus_olfactory receptor Olfr173 (GI: 259002)
 <400> 38

Met	Val	Glu	Glu	Asn	His	Thr	Met	Lys	Arg	Glu	Phe	Val	Leu	Thr	Gly		
1				5					10					15			
Phe	Thr	Asp	His	Pro	Glu	Met	Lys	Gly	Leu	Leu	Phe	Ala	Val	Phe	Phe		
		20						25					30				
Phe	Ile	Tyr	Leu	Ile	Thr	Met	Ile	Gly	Asn	Met	Gly	Leu	Val	Ile	Leu		
	35						40					45					
Ile	Ser	Lys	Glu	Arg	Ser	Leu	His	Thr	Pro	Met	Tyr	Ile	Phe	Leu	Gly		
	50					55					60						
Asn	Leu	Ala	Phe	Ile	Asp	Ser	Cys	Cys	Ala	Cys	Ala	Ile	Thr	Pro	Lys		
65					70				75						80		
Met	Leu	Glu	Asn	Phe	Phe	Ser	Glu	Asp	Arg	Ile	Ile	Ser	Leu	Tyr	Glu		
			85						90					95			
Cys	Met	Ala	Gln	Phe	Tyr	Phe	Leu	Cys	Thr	Val	Glu	Thr	Ala	Asp	Cys		
		100						105						110			

Phe Leu Leu Ser Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn
115 120 125

Pro Leu Gln Tyr His Thr Thr Met Ser Lys Lys Leu Cys Leu Gln Met
130 135 140

Thr Thr Gly Ala Phe Ile Ala Gly Asn Leu His Ser Met Val His Val
145 150 155 160

Gly Leu Leu Phe Arg Leu Ala Phe Cys Gly Ser Asn Gln Ile Asn His
165 170 175

Phe Tyr Cys Asp Ile Leu Pro Leu Tyr Arg Leu Ser Cys Val Asp Pro
180 185 190

Tyr Ile Asn Glu Leu Val Leu Phe Val Phe Ser Gly Ser Ile Gln Val
195 200 205

Phe Thr Ile Gly Cys Val Leu Ile Ser Tyr Leu Phe Ile Val Tyr Thr
210 215 220

Ile Phe Gln Met Lys Ser Lys Glu Gly Arg Ile Lys Ala Phe Ser Thr
225 230 235 240

Cys Ala Ser His Phe Leu Ser Val Ser Leu Phe Tyr Gly Ser Leu Leu
245 250 255

Phe Met Tyr Ile Arg Pro Asn Leu Leu Glu Glu Gly Asp Lys Asp Met
260 265 270

Pro Ala Ala Ile Leu Phe Thr Ile Val Val Pro Leu Leu Asn Pro Phe
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Asn Val Leu Gln Lys Ile
290 295 300

Leu Gln Lys Lys Ile Ile Ser Lys Asn Phe Lys Gln Ala Ser Ile Ile

305

310

315

320

Val

<210> 39

<211> 942

<212> DNA

<213> Mus musculus_olfactory receptor Olfr164 (GI: 258443)

<220>

<221> CDS

<222> (1)..(942)

<400> 39

atg	ata	caa	tgg	aac	aac	tgg	acc	agg	aac	tct	gat	ttc	atc	cta	cta	48
Met	Ile	Gln	Trp	Asn	Asn	Trp	Thr	Arg	Asn	Ser	Asp	Phe	Ile	Leu	Leu	
1				5					10					15		

gga	tta	ttt	gat	cac	agt	cct	ctt	cat	act	ttt	ttc	ttt	tcc	cta	att	96
Gly	Leu	Phe	Asp	His	Ser	Pro	Leu	His	Thr	Phe	Phe	Phe	Ser	Leu	Ile	
			20					25					30			

ctg	ggt	atc	ttc	ttc	atg	gcc	ttc	ata	gga	aat	tct	atc	atg	gtg	att	144
Leu	Gly	Ile	Phe	Phe	Met	Ala	Phe	Ile	Gly	Asn	Ser	Ile	Met	Val	Ile	
		35					40					45				

ctc	atc	tac	ttg	gat	gct	cat	ctc	cac	acc	ccc	atg	tac	atc	ctt	ctc	192
Leu	Ile	Tyr	Leu	Asp	Ala	His	Leu	His	Thr	Pro	Met	Tyr	Ile	Leu	Leu	
	50					55					60					

agc	caa	ctt	tct	ctc	atg	gat	ctc	atg	ctc	atc	tgt	act	aca	gta	ccc	240
Ser	Gln	Leu	Ser	Leu	Met	Asp	Leu	Met	Leu	Ile	Cys	Thr	Thr	Val	Pro	
65					70					75				80		

caa	atg	gcc	ttc	aac	ttc	ctt	tct	gga	aac	aag	tcc	atc	tcc	atg	gtt	288
Gln	Met	Ala	Phe	Asn	Phe	Leu	Ser	Gly	Asn	Lys	Ser	Ile	Ser	Met	Val	
				85					90					95		

ggc	tgt	gga	atc	cag	ata	ttc	ttc	tat	gta	tct	cta	ctt	gga	gct	gag	336
Gly	Cys	Gly	Ile	Gln	Ile	Phe	Phe	Tyr	Val	Ser	Leu	Leu	Gly	Ala	Glu	
			100					105					110			

tgt	ttt	ttg	ttg	gcc	gca	atg	gct	tat	gac	cgt	tat	gta	gct	att	tgc	384
Cys	Phe	Leu	Leu	Ala	Ala	Met	Ala	Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Cys	
		115					120					125				

tac cca tta agg tac cct att ctc atg agt gac aaa ata tgt ggc ctc Tyr Pro Leu Arg Tyr Pro Ile Leu Met Ser Asp Lys Ile Cys Gly Leu 130 135 140	432
atg gct gcc tcc tct tgg gtt ctt ggc tct ctt gat ggt ata ata gaa Met Ala Ala Ser Ser Trp Val Leu Gly Ser Leu Asp Gly Ile Ile Glu 145 150 155 160	480
gtt gca gct gca ttg tct ttt tca tat tgt ggt gcc aga gaa ata cct Val Ala Ala Ala Leu Ser Phe Ser Tyr Cys Gly Ala Arg Glu Ile Pro 165 170 175	528
cat ttt ttc tgt gat gtt cct gcc tta ctc aca ctt tca tgt agt aat His Phe Phe Cys Asp Val Pro Ala Leu Leu Thr Leu Ser Cys Ser Asn 180 185 190	576
acc ttg ata ttt gaa aga att ata ttt ttc tgc tgt gta att atg ctt Thr Leu Ile Phe Glu Arg Ile Ile Phe Phe Cys Cys Val Ile Met Leu 195 200 205	624
act tta cct gta gca atc att att gct tcc tat act cgt gtg att ctg Thr Leu Pro Val Ala Ile Ile Ile Ala Ser Tyr Thr Arg Val Ile Leu 210 215 220	672
acc gtt ctt cat atg agc tca gct gag agt cgc cac aaa gct ttt gcc Thr Val Leu His Met Ser Ser Ala Glu Ser Arg His Lys Ala Phe Ala 225 230 235 240	720
acc tgt tcc tct cac ctc atg gtg gtg gga atg tac tat ggg gca gcc Thr Cys Ser Ser His Leu Met Val Val Gly Met Tyr Tyr Gly Ala Ala 245 250 255	768
atg ttc ata tac atg cgg cct tct tct ggt cgt tct ccc acc cag gac Met Phe Ile Tyr Met Arg Pro Ser Ser Gly Arg Ser Pro Thr Gln Asp 260 265 270	816
aaa ata gtg tca gct ttc tac act atc ctt acg cca atg ttg aac ccc Lys Ile Val Ser Ala Phe Tyr Thr Ile Leu Thr Pro Met Leu Asn Pro 275 280 285	864
ctc att tat agt ctc cgg aac aaa gaa gta gcc aga gca ttc atg aaa Leu Ile Tyr Ser Leu Arg Asn Lys Glu Val Ala Arg Ala Phe Met Lys 290 295 300	912
gtg tta ggg att gat aag gca gca gca tga Val Leu Gly Ile Asp Lys Ala Ala Ala 305 310	942

<210> 40

<211> 313
 <212> PRT
 <213> Mus musculus_olfactory receptor Olfr164 (GI: 258443)

<400> 40

Met Ile Gln Trp Asn Asn Trp Thr Arg Asn Ser Asp Phe Ile Leu Leu
 1 5 10 15

Gly Leu Phe Asp His Ser Pro Leu His Thr Phe Phe Phe Ser Leu Ile
 20 25 30

Leu Gly Ile Phe Phe Met Ala Phe Ile Gly Asn Ser Ile Met Val Ile
 35 40 45

Leu Ile Tyr Leu Asp Ala His Leu His Thr Pro Met Tyr Ile Leu Leu
 50 55 60

Ser Gln Leu Ser Leu Met Asp Leu Met Leu Ile Cys Thr Thr Val Pro
 65 70 75 80

Gln Met Ala Phe Asn Phe Leu Ser Gly Asn Lys Ser Ile Ser Met Val
 85 90 95

Gly Cys Gly Ile Gln Ile Phe Phe Tyr Val Ser Leu Leu Gly Ala Glu
 100 105 110

Cys Phe Leu Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys
 115 120 125

Tyr Pro Leu Arg Tyr Pro Ile Leu Met Ser Asp Lys Ile Cys Gly Leu
 130 135 140

Met Ala Ala Ser Ser Trp Val Leu Gly Ser Leu Asp Gly Ile Ile Glu
 145 150 155 160

Val Ala Ala Ala Leu Ser Phe Ser Tyr Cys Gly Ala Arg Glu Ile Pro
 165 170 175

His Phe Phe Cys Asp Val Pro Ala Leu Leu Thr Leu Ser Cys Ser Asn
 180 185 190

Thr Leu Ile Phe Glu Arg Ile Ile Phe Phe Cys Cys Val Ile Met Leu
 195 200 205

Thr Leu Pro Val Ala Ile Ile Ile Ala Ser Tyr Thr Arg Val Ile Leu
 210 215 220

Thr Val Leu His Met Ser Ser Ala Glu Ser Arg His Lys Ala Phe Ala
 225 230 235 240

Thr Cys Ser Ser His Leu Met Val Val Gly Met Tyr Tyr Gly Ala Ala
 245 250 255

Met Phe Ile Tyr Met Arg Pro Ser Ser Gly Arg Ser Pro Thr Gln Asp
 260 265 270

Lys Ile Val Ser Ala Phe Tyr Thr Ile Leu Thr Pro Met Leu Asn Pro
 275 280 285

Leu Ile Tyr Ser Leu Arg Asn Lys Glu Val Ala Arg Ala Phe Met Lys
 290 295 300

Val Leu Gly Ile Asp Lys Ala Ala Ala
 305 310

<210> 41
 <211> 948
 <212> DNA
 <213> Mus Musculus_olfactory receptor Olfr1487 (GI: 258629)

<220>
 <221> CDS
 <222> (1)..(948)

<400> 41
 atg att cag aat att tca gaa ttg tct gaa ttt att ctt gtt ggg tta
 Met Ile Gln Asn Ile Ser Glu Leu Ser Glu Phe Ile Leu Val Gly Leu
 1 5 10 15

48

aca gat gca cca ttc ctg caa att cct tta ttt atc atc ttt act ctc Thr Asp Ala Pro Phe Leu Gln Ile Pro Leu Phe Ile Ile Phe Thr Leu 20 25 30	96
att tat ttg aca aca ttg ttt ggg aat ctt ggg atg att ttg ctg att Ile Tyr Leu Thr Thr Leu Phe Gly Asn Leu Gly Met Ile Leu Leu Ile 35 40 45	144
ctg ctg gac tcc aga ctc cac act ccc atg tac ttt ttc ctc agt aac Leu Leu Asp Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Ser Asn 50 55 60	192
ctc tct ctg gtg gac tgt gtt tat gcc tca gct gtc act ccc aag gtg Leu Ser Leu Val Asp Cys Val Tyr Ala Ser Ala Val Thr Pro Lys Val 65 70 75 80	240
atg gaa ggg ttt ctc aca gga aat aag atc ata tcc tac aat gca tgt Met Glu Gly Phe Leu Thr Gly Asn Lys Ile Ile Ser Tyr Asn Ala Cys 85 90 95	288
gct gcc cag atg ttc ttc ttt gca gcc ttt gct act gtt gaa agt ttc Ala Ala Gln Met Phe Phe Phe Ala Ala Phe Ala Thr Val Glu Ser Phe 100 105 110	336
atg ctg gcc tca atg gcc tat gac cgt cat gca gca gtg tgc aaa ccc Met Leu Ala Ser Met Ala Tyr Asp Arg His Ala Ala Val Cys Lys Pro 115 120 125	384
ttg cat tac tcc act act atg aca act acg ata tgt gtc ctg ctt ctt Leu His Tyr Ser Thr Thr Met Thr Thr Thr Ile Cys Val Leu Leu Leu 130 135 140	432
gct gga tct tat gtc agt gga ctc tta caa tct tcc att cat gtt tcc Ala Gly Ser Tyr Val Ser Gly Leu Leu Gln Ser Ser Ile His Val Ser 145 150 155 160	480
ttc aca ttt caa ctc tcc ttc tgc cat tct aat gta gtc aat cac ttt Phe Thr Phe Gln Leu Ser Phe Cys His Ser Asn Val Val Asn His Phe 165 170 175	528
ttc tgt gat atc cca cca cta tta gcc ctt tct tgc tcc agt att cac Phe Cys Asp Ile Pro Pro Leu Leu Ala Leu Ser Cys Ser Ser Ile His 180 185 190	576
aca aat gaa att ata ctc ttt atg ttg gca gca ttc aat gtt gct ttt Thr Asn Glu Ile Ile Leu Phe Met Leu Ala Ala Phe Asn Val Ala Phe 195 200 205	624
act cta tta gtt ata ttg tcc tct tac tta cta att ttt gtt gca att	672

Thr	Leu	Leu	Val	Ile	Leu	Ser	Ser	Tyr	Leu	Leu	Ile	Phe	Val	Ala	Ile		
210						215					220						
ctg	aga	atg	cgc	tct	gct	gag	agc	agg	aag	aag	gcc	att	tcc	acc	tgt		720
Leu	Arg	Met	Arg	Ser	Ala	Glu	Ser	Arg	Lys	Lys	Ala	Ile	Ser	Thr	Cys		
225					230					235					240		
gca	tcc	cac	ctt	acc	act	gtt	tcc	atc	ttc	tat	ggc	aca	att	atc	ttc		768
Ala	Ser	His	Leu	Thr	Thr	Val	Ser	Ile	Phe	Tyr	Gly	Thr	Ile	Ile	Phe		
				245					250					255			
atg	tac	tta	cag	ccc	agc	tcc	aat	cac	tcc	atg	gat	act	gac	aag	atg		816
Met	Tyr	Leu	Gln	Pro	Ser	Ser	Asn	His	Ser	Met	Asp	Thr	Asp	Lys	Met		
			260					265					270				
gca	tct	gtt	ttc	tac	acc	atg	gtc	att	ccc	atg	ctg	aac	cct	ctt	gta		864
Ala	Ser	Val	Phe	Tyr	Thr	Met	Val	Ile	Pro	Met	Leu	Asn	Pro	Leu	Val		
		275					280					285					
tat	agc	ctg	aga	aat	aaa	gaa	gtc	aag	aat	gca	ttc	aag	aag	gtt	gct		912
Tyr	Ser	Leu	Arg	Asn	Lys	Glu	Val	Lys	Asn	Ala	Phe	Lys	Lys	Val	Ala		
	290					295					300						
gga	aaa	gca	gtg	ctt	tca	ctg	gga	tta	gtc	aat	taa						948
Gly	Lys	Ala	Val	Leu	Ser	Leu	Gly	Leu	Val	Asn							
305					310				315								

<210> 42
 <211> 315
 <212> PRT
 <213> Mus Musculus_olfactory receptor Olfr1487 (GI: 258629)

<400> 42

Met	Ile	Gln	Asn	Ile	Ser	Glu	Leu	Ser	Glu	Phe	Ile	Leu	Val	Gly	Leu		
1				5					10					15			
Thr	Asp	Ala	Pro	Phe	Leu	Gln	Ile	Pro	Leu	Phe	Ile	Ile	Phe	Thr	Leu		
			20					25					30				
Ile	Tyr	Leu	Thr	Thr	Leu	Phe	Gly	Asn	Leu	Gly	Met	Ile	Leu	Leu	Ile		
		35					40				45						
Leu	Leu	Asp	Ser	Arg	Leu	His	Thr	Pro	Met	Tyr	Phe	Phe	Leu	Ser	Asn		
	50					55					60						

Leu Ser Leu Val Asp Cys Val Tyr Ala Ser Ala Val Thr Pro Lys Val
65 70 75 80

Met Glu Gly Phe Leu Thr Gly Asn Lys Ile Ile Ser Tyr Asn Ala Cys
85 90 95

Ala Ala Gln Met Phe Phe Phe Ala Ala Phe Ala Thr Val Glu Ser Phe
100 105 110

Met Leu Ala Ser Met Ala Tyr Asp Arg His Ala Ala Val Cys Lys Pro
115 120 125

Leu His Tyr Ser Thr Thr Met Thr Thr Thr Ile Cys Val Leu Leu Leu
130 135 140

Ala Gly Ser Tyr Val Ser Gly Leu Leu Gln Ser Ser Ile His Val Ser
145 150 155 160

Phe Thr Phe Gln Leu Ser Phe Cys His Ser Asn Val Val Asn His Phe
165 170 175

Phe Cys Asp Ile Pro Pro Leu Leu Ala Leu Ser Cys Ser Ser Ile His
180 185 190

Thr Asn Glu Ile Ile Leu Phe Met Leu Ala Ala Phe Asn Val Ala Phe
195 200 205

Thr Leu Leu Val Ile Leu Ser Ser Tyr Leu Leu Ile Phe Val Ala Ile
210 215 220

Leu Arg Met Arg Ser Ala Glu Ser Arg Lys Lys Ala Ile Ser Thr Cys
225 230 235 240

Ala Ser His Leu Thr Thr Val Ser Ile Phe Tyr Gly Thr Ile Ile Phe
245 250 255

Met Tyr Leu Gln Pro Ser Ser Asn His Ser Met Asp Thr Asp Lys Met

260

265

270

Ala Ser Val Phe Tyr Thr Met Val Ile Pro Met Leu Asn Pro Leu Val
 275 280 285

Tyr Ser Leu Arg Asn Lys Glu Val Lys Asn Ala Phe Lys Lys Val Ala
 290 295 300

Gly Lys Ala Val Leu Ser Leu Gly Leu Val Asn
 305 310 315

<210> 43

<211> 930

<212> DNA

<213> Mus musculus_olfactory receptor Olfr339 (GI:258951)

<220>

<221> CDS

<222> (1)..(930)

<400> 43

atg agg atg gat aat gac agc gct ctg tct gag ttc atc ctc ctg ggg 48
 Met Arg Met Asp Asn Asp Ser Ala Leu Ser Glu Phe Ile Leu Leu Gly
 1 5 10 15

ctc ccc att cga gca gaa gac caa gct ttg tac tct gtc ctg atc ctg 96
 Leu Pro Ile Arg Ala Glu Asp Gln Ala Leu Tyr Ser Val Leu Ile Leu
 20 25 30

gcc atg tac ctg aca act gtg ctg ggg aac ctg ctc atc atc cta ctc 144
 Ala Met Tyr Leu Thr Thr Val Leu Gly Asn Leu Leu Ile Ile Leu Leu
 35 40 45

atc agg ctg gac tct cac ctc cac acc ccc atg tac ttc ttc ctc agc 192
 Ile Arg Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Ser
 50 55 60

cac ttg gcc ttc aca gac atc tct ttt tca tca gtc aca gct cct aag 240
 His Leu Ala Phe Thr Asp Ile Ser Phe Ser Ser Val Thr Ala Pro Lys
 65 70 75 80

atg ctc gtg aat atg ctg aca cac agt aag tcc atc cca tat aca ggg 288
 Met Leu Val Asn Met Leu Thr His Ser Lys Ser Ile Pro Tyr Thr Gly
 85 90 95

tgt gtt tcc cag gtg tat ttt ttc act gtt ttt gca agc att gat agc	336
Cys Val Ser Gln Val Tyr Phe Phe Thr Val Phe Ala Ser Ile Asp Ser	
100 105 110	
ttt ctt cta aca tcc atg gca tat gac agg tat gtg gcc atc tgc cat	384
Phe Leu Leu Thr Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His	
115 120 125	
cct ctg cat tat aac atc atc atg aat ctg agg ctc tgt gtt ctt cta	432
Pro Leu His Tyr Asn Ile Ile Met Asn Leu Arg Leu Cys Val Leu Leu	
130 135 140	
gta gta ata tca tgg gcc tta tct tta acc aat gct ctt gcg cac acc	480
Val Val Ile Ser Trp Ala Leu Ser Leu Thr Asn Ala Leu Ala His Thr	
145 150 155 160	
ctt ctc ttg gct cgc cta tct cac ttt aga aac aat acc atc ccc cac	528
Leu Leu Leu Ala Arg Leu Ser His Phe Arg Asn Asn Thr Ile Pro His	
165 170 175	
tat ttc tgt gac ctc tct acc ttg ctg aag ctg tct agc tca gac acc	576
Tyr Phe Cys Asp Leu Ser Thr Leu Leu Lys Leu Ser Ser Ser Asp Thr	
180 185 190	
acc atc aat gag ctg gtc atc ttt gtt tta ggt aat gtg gtc att acc	624
Thr Ile Asn Glu Leu Val Ile Phe Val Leu Gly Asn Val Val Ile Thr	
195 200 205	
ctg cca ttc ata tgc att ctg gtt tct tat ggc tac att ggt gtc acc	672
Leu Pro Phe Ile Cys Ile Leu Val Ser Tyr Gly Tyr Ile Gly Val Thr	
210 215 220	
att ctg aaa act ccc tcc atc aag gga atc cac aaa gcc ttg tcc acg	720
Ile Leu Lys Thr Pro Ser Ile Lys Gly Ile His Lys Ala Leu Ser Thr	
225 230 235 240	
tgt ggc tct cac ctc tgt gtg gta tcc ttg tac tat ggg gcc atc att	768
Cys Gly Ser His Leu Cys Val Val Ser Leu Tyr Tyr Gly Ala Ile Ile	
245 250 255	
gga cta tat ttt gtc ccc tca tct aat aac act aat gac aaa gat gtc	816
Gly Leu Tyr Phe Val Pro Ser Ser Asn Asn Thr Asn Asp Lys Asp Val	
260 265 270	
att gtg gct gtg atg tac act gtg gtc ata ccc atg ctg aat ccc ttt	864
Ile Val Ala Val Met Tyr Thr Val Val Ile Pro Met Leu Asn Pro Phe	
275 280 285	
att tat agt ctg agg aat cgg gat atg aaa aga aca ctg aga aat atc	912
Ile Tyr Ser Leu Arg Asn Arg Asp Met Lys Arg Thr Leu Arg Asn Ile	

Val Val Ile Ser Trp Ala Leu Ser Leu Thr Asn Ala Leu Ala His Thr
 145 150 155 160

Leu Leu Leu Ala Arg Leu Ser His Phe Arg Asn Asn Thr Ile Pro His
 165 170 175

Tyr Phe Cys Asp Leu Ser Thr Leu Leu Lys Leu Ser Ser Ser Asp Thr
 180 185 190

Thr Ile Asn Glu Leu Val Ile Phe Val Leu Gly Asn Val Val Ile Thr
 195 200 205

Leu Pro Phe Ile Cys Ile Leu Val Ser Tyr Gly Tyr Ile Gly Val Thr
 210 215 220

Ile Leu Lys Thr Pro Ser Ile Lys Gly Ile His Lys Ala Leu Ser Thr
 225 230 235 240

Cys Gly Ser His Leu Cys Val Val Ser Leu Tyr Tyr Gly Ala Ile Ile
 245 250 255

Gly Leu Tyr Phe Val Pro Ser Ser Asn Asn Thr Asn Asp Lys Asp Val
 260 265 270

Ile Val Ala Val Met Tyr Thr Val Val Ile Pro Met Leu Asn Pro Phe
 275 280 285

Ile Tyr Ser Leu Arg Asn Arg Asp Met Lys Arg Thr Leu Arg Asn Ile
 290 295 300

Leu Ser Arg Thr Lys
 305

<210> 45
 <211> 945
 <212> DNA
 <213> Mus musculus_olfactory receptor Olfr1126 (GI:258834)

<220>

<221> CDS

<222> (1)..(945)

<400> 45

atg	aaa	ttc	aca	gaa	atc	agg	gca	gag	gac	aat	gct	tcc	act	gtg	aca	48
Met	Lys	Phe	Thr	Glu	Ile	Arg	Ala	Glu	Asp	Asn	Ala	Ser	Thr	Val	Thr	
1				5				10						15		

gag	ttt	ctc	ctc	ctg	gga	ttt	tct	gac	ctt	cct	aac	tta	caa	ggg	att	96
Glu	Phe	Leu	Leu	Leu	Gly	Phe	Ser	Asp	Leu	Pro	Asn	Leu	Gln	Gly	Ile	
			20					25					30			

ttg	ttt	ggg	ttg	ttc	tcc	ata	att	tac	ttg	atc	ata	ttg	att	gga	aat	144
Leu	Phe	Gly	Leu	Phe	Ser	Ile	Ile	Tyr	Leu	Ile	Ile	Leu	Ile	Gly	Asn	
		35					40					45				

agt	ttc	ata	att	gtg	ata	act	aga	att	gat	cct	gca	cta	cag	aag	ccc	192
Ser	Phe	Ile	Ile	Val	Ile	Thr	Arg	Ile	Asp	Pro	Ala	Leu	Gln	Lys	Pro	
	50					55					60					

atg	tat	ttt	ttc	ctg	gca	aat	ttt	tct	tct	ctg	gaa	atc	tgt	tat	gta	240
Met	Tyr	Phe	Phe	Leu	Ala	Asn	Phe	Ser	Ser	Leu	Glu	Ile	Cys	Tyr	Val	
65				70						75				80		

tca	gtc	act	ctc	cct	agg	att	ctg	ttt	aac	att	gct	act	caa	gac	aga	288
Ser	Val	Thr	Leu	Pro	Arg	Ile	Leu	Phe	Asn	Ile	Ala	Thr	Gln	Asp	Arg	
				85					90					95		

agc	att	tct	gtg	gtg	agc	tgt	gcc	aca	caa	atg	tgt	ttc	ttc	ctt	atg	336
Ser	Ile	Ser	Val	Val	Ser	Cys	Ala	Thr	Gln	Met	Cys	Phe	Phe	Leu	Met	
			100					105					110			

ctg	gga	gct	act	gag	tgt	ttc	ctg	ctg	gct	gtg	atg	tcc	tat	gat	cgc	384
Leu	Gly	Ala	Thr	Glu	Cys	Phe	Leu	Leu	Ala	Val	Met	Ser	Tyr	Asp	Arg	
		115					120					125				

tat	gtg	gcc	atc	tgc	aat	cct	ctg	cac	tat	cct	ctg	gtc	atg	aac	cca	432
Tyr	Val	Ala	Ile	Cys	Asn	Pro	Leu	His	Tyr	Pro	Leu	Val	Met	Asn	Pro	
	130					135					140					

aca	aag	tgc	act	cag	ctg	gca	gca	gcc	tcc	tgg	ctt	gga	ggc	atc	cct	480
Thr	Lys	Cys	Thr	Gln	Leu	Ala	Ala	Ala	Ser	Trp	Leu	Gly	Gly	Ile	Pro	
145					150					155					160	

gtc	cag	ata	gga	caa	acc	tgt	cag	ata	ttt	tct	cta	cat	ttc	tgc	aat	528
Val	Gln	Ile	Gly	Gln	Thr	Cys	Gln	Ile	Phe	Ser	Leu	His	Phe	Cys	Asn	
				165					170					175		

tct	aac	caa	ata	gat	cac	ttc	ttt	tgt	gac	tta	cct	ccc	att	ctc	aag	576
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Ser	Asn	Gln	Ile	Asp	His	Phe	Phe	Cys	Asp	Leu	Pro	Pro	Ile	Leu	Lys	
			180					185					190			
ctg	gcc	tgt	gga	gat	act	tca	ata	cac	gag	ttg	tct	gtc	tac	tta	gta	624
Leu	Ala	Cys	Gly	Asp	Thr	Ser	Ile	His	Glu	Leu	Ser	Val	Tyr	Leu	Val	
		195					200					205				
gct	atg	ctg	ttt	gtt	gca	ttc	cct	ttc	ttg	ttg	ata	ctt	gcc	tct	tat	672
Ala	Met	Leu	Phe	Val	Ala	Phe	Pro	Phe	Leu	Leu	Ile	Leu	Ala	Ser	Tyr	
	210					215					220					
acc	aaa	atc	att	gcc	acc	att	ctg	aag	ttg	cca	aca	gcc	aca	gga	cgg	720
Thr	Lys	Ile	Ile	Ala	Thr	Ile	Leu	Lys	Leu	Pro	Thr	Ala	Thr	Gly	Arg	
225					230					235					240	
gca	aaa	gcc	ttc	tca	aca	tgt	tct	tcc	cat	ttg	ctt	gtg	gtg	ttt	ttg	768
Ala	Lys	Ala	Phe	Ser	Thr	Cys	Ser	Ser	His	Leu	Leu	Val	Val	Phe	Leu	
			245						250					255		
ttt	ttt	gga	tca	gct	act	att	acc	tac	ttg	agg	cca	aag	tcc	acc	cat	816
Phe	Phe	Gly	Ser	Ala	Thr	Ile	Thr	Tyr	Leu	Arg	Pro	Lys	Ser	Thr	His	
		260						265					270			
tct	cca	gga	act	gat	aaa	cta	ctc	tct	ttg	ttt	tac	acc	att	gtg	act	864
Ser	Pro	Gly	Thr	Asp	Lys	Leu	Leu	Ser	Leu	Phe	Tyr	Thr	Ile	Val	Thr	
		275					280					285				
ccc	atg	ttc	aat	cct	ctg	ata	tac	agt	ctt	aga	aat	aag	gag	gtg	att	912
Pro	Met	Phe	Asn	Pro	Leu	Ile	Tyr	Ser	Leu	Arg	Asn	Lys	Glu	Val	Ile	
	290					295				300						
gct	gca	ctg	aga	aaa	ctg	tta	cat	atc	aag	tag						945
Ala	Ala	Leu	Arg	Lys	Leu	Leu	His	Ile	Lys							
305					310											

<210> 46
 <211> 314
 <212> PRT
 <213> Mus musculus_olfactory receptor Olfr1126 (GI:258834)

<400> 46

Met	Lys	Phe	Thr	Glu	Ile	Arg	Ala	Glu	Asp	Asn	Ala	Ser	Thr	Val	Thr
1				5				10					15		

Glu	Phe	Leu	Leu	Leu	Gly	Phe	Ser	Asp	Leu	Pro	Asn	Leu	Gln	Gly	Ile
		20						25					30		

Leu Phe Gly Leu Phe Ser Ile Ile Tyr Leu Ile Ile Leu Ile Gly Asn
35 40 45

Ser Phe Ile Ile Val Ile Thr Arg Ile Asp Pro Ala Leu Gln Lys Pro
50 55 60

Met Tyr Phe Phe Leu Ala Asn Phe Ser Ser Leu Glu Ile Cys Tyr Val
65 70 75 80

Ser Val Thr Leu Pro Arg Ile Leu Phe Asn Ile Ala Thr Gln Asp Arg
85 90 95

Ser Ile Ser Val Val Ser Cys Ala Thr Gln Met Cys Phe Phe Leu Met
100 105 110

Leu Gly Ala Thr Glu Cys Phe Leu Leu Ala Val Met Ser Tyr Asp Arg
115 120 125

Tyr Val Ala Ile Cys Asn Pro Leu His Tyr Pro Leu Val Met Asn Pro
130 135 140

Thr Lys Cys Thr Gln Leu Ala Ala Ala Ser Trp Leu Gly Gly Ile Pro
145 150 155 160

Val Gln Ile Gly Gln Thr Cys Gln Ile Phe Ser Leu His Phe Cys Asn
165 170 175

Ser Asn Gln Ile Asp His Phe Phe Cys Asp Leu Pro Pro Ile Leu Lys
180 185 190

Leu Ala Cys Gly Asp Thr Ser Ile His Glu Leu Ser Val Tyr Leu Val
195 200 205

Ala Met Leu Phe Val Ala Phe Pro Phe Leu Leu Ile Leu Ala Ser Tyr
210 215 220

Thr Lys Ile Ile Ala Thr Ile Leu Lys Leu Pro Thr Ala Thr Gly Arg

225 230 235 240

Ala Lys Ala Phe Ser Thr Cys Ser Ser His Leu Leu Val Val Phe Leu
245 250 255

Phe Phe Gly Ser Ala Thr Ile Thr Tyr Leu Arg Pro Lys Ser Thr His
260 265 270

Ser Pro Gly Thr Asp Lys Leu Leu Ser Leu Phe Tyr Thr Ile Val Thr
275 280 285

Pro Met Phe Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Glu Val Ile
290 295 300

Ala Ala Leu Arg Lys Leu Leu His Ile Lys
305 310

<210> 47
<211> 24
<212> DNA
<213> FLAG tag

<220>
<221> CDS
<222> (1)..(24)

<400> 47
gat tac aag gac gac gac gat aag
Asp Tyr Lys Asp Asp Asp Asp Lys
1 5

24

<210> 48
<211> 8
<212> PRT
<213> FLAG tag

<400> 48

Asp Tyr Lys Asp Asp Asp Asp Lys
1 5

<210> 49
 <211> 60
 <212> DNA
 <213> Rho tag

<220>
 <221> CDS
 <222> (1)..(60)

<400> 49
 atg aac ggg acc gag ggc cca aac ttc tac gtg cct ttc tcc aac aag 48
 Met Asn Gly Thr Glu Gly Pro Asn Phe Tyr Val Pro Phe Ser Asn Lys
 1 5 10 15

acg ggc gtg gtg 60
 Thr Gly Val Val
 20

<210> 50
 <211> 20
 <212> PRT
 <213> Rho tag

<400> 50

Met Asn Gly Thr Glu Gly Pro Asn Phe Tyr Val Pro Phe Ser Asn Lys
 1 5 10 15

Thr Gly Val Val
 20

<210> 51
 <211> 51
 <212> DNA
 <213> Lucy tag

<220>
 <221> CDS
 <222> (1)..(51)

<400> 51
 atg aga ccc cag atc ctg ctg ctc ctg gcc ctg ctg acc cta ggc ctg 48
 Met Arg Pro Gln Ile Leu Leu Leu Leu Ala Leu Leu Thr Leu Gly Leu
 1 5 10 15

gct
Ala

51

<210> 52
<211> 17
<212> PRT
<213> Lucy tag

<400> 52

Met Arg Pro Gln Ile Leu Leu Leu Leu Ala Leu Leu Thr Leu Gly Leu
1 5 10 15

Ala

<210> 53
<211> 10
<212> PRT
<213> Sequence motif

<400> 53

Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys
1 5 10

<210> 54
<211> 7
<212> PRT
<213> Sequence motif

<400> 54

Phe Ser Thr Cys Ser Ser His
1 5

<210> 55
<211> 8
<212> PRT
<213> Sequence motif

<400> 55

Pro Met Leu Asn Pro Phe Ile Tyr

1

5

<210> 56
 <211> 951
 <212> DNA
 <213> Homo sapiens_OR2H1 olfactory receptor (GI: 937628050)

<400> 56
 atgggtaacc aaagctcccc catgggcttc ctcttcttgg gcttctctga acacccagca 60
 ctggaaagga ctctctttgt ggttgtcttc acttcctacc tcttgaccct ggtgggcaac 120
 acactcatca tcctgctgtc tgtactgtac cccaggctcc actctccaat gtactttttc 180
 ctctctgacc tctccttctt ggacctctgc tttaccacaa gttgtgtccc ccagatgctg 240
 gtcaacctct ggggccccaa gaagaccatc agcttcctgg gatgctctgt ccagctcttc 300
 atcttcctgt ccctggggac cactgagtgc atcctcctga cagtgatggc ctttgaccga 360
 tacgtggctg tctgccagcc cctccactat gccaccatca tccacccccg cctgtgctgg 420
 cagctggcat ctgtggcctg gggttatgagt ctgggttcaat cgatagtcca gacaccatcc 480
 accctccact tgcccttctg tccccaccag cagatagatg actttttatg tgagggtcca 540
 tctctgattc gactctcctg tggagatacc tcctacaatg aaatccagtt ggctgtgtcc 600
 agtgtcatct tcgtggttgt gcctctcagc ctcatccttg cctcttatgg agccactgcc 660
 caggcagtg tgcaggattaa ctctgccaca gcatggagaa aggcccttgg gacctgctcc 720
 tcccatctca ctgtggtcac cctcttctac agctcagtca ttgctgtcta cctccagccc 780
 aaaaatccgt atgccaagg gaggggcaag ttctttggtc tcttctatgc agtgggcact 840
 ccttcactta accctctcgt atacaccctg aggaacaagg agataaagcg agcactcagg 900
 aggttactag ggaaggaaag agactccagg gaaagctgga gagctgctta a 951

<210> 57
 <211> 316
 <212> PRT
 <213> Homo sapiens_OR2H1 olfactory receptor (GI: 937628050)

<400> 57

Met Val Asn Gln Ser Ser Pro Met Gly Phe Leu Leu Leu Gly Phe Ser
1 5 10 15

Glu His Pro Ala Leu Glu Arg Thr Leu Phe Val Val Val Phe Thr Ser
20 25 30

Tyr Leu Leu Thr Leu Val Gly Asn Thr Leu Ile Ile Leu Leu Ser Val
35 40 45

Leu Tyr Pro Arg Leu His Ser Pro Met Tyr Phe Phe Leu Ser Asp Leu
50 55 60

Ser Phe Leu Asp Leu Cys Phe Thr Thr Ser Cys Val Pro Gln Met Leu
65 70 75 80

Val Asn Leu Trp Gly Pro Lys Lys Thr Ile Ser Phe Leu Gly Cys Ser
85 90 95

Val Gln Leu Phe Ile Phe Leu Ser Leu Gly Thr Thr Glu Cys Ile Leu
100 105 110

Leu Thr Val Met Ala Phe Asp Arg Tyr Val Ala Val Cys Gln Pro Leu
115 120 125

His Tyr Ala Thr Ile Ile His Pro Arg Leu Cys Trp Gln Leu Ala Ser
130 135 140

Val Ala Trp Val Met Ser Leu Val Gln Ser Ile Val Gln Thr Pro Ser
145 150 155 160

Thr Leu His Leu Pro Phe Cys Pro His Gln Gln Ile Asp Asp Phe Leu
165 170 175

Cys Glu Val Pro Ser Leu Ile Arg Leu Ser Cys Gly Asp Thr Ser Tyr
180 185 190

Asn Glu Ile Gln Leu Ala Val Ser Ser Val Ile Phe Val Val Val Pro
195 200 205

Leu Ser Leu Ile Leu Ala Ser Tyr Gly Ala Thr Ala Gln Ala Val Leu
 210 215 220

Arg Ile Asn Ser Ala Thr Ala Trp Arg Lys Ala Phe Gly Thr Cys Ser
 225 230 235 240

Ser His Leu Thr Val Val Thr Leu Phe Tyr Ser Ser Val Ile Ala Val
 245 250 255

Tyr Leu Gln Pro Lys Asn Pro Tyr Ala Gln Gly Arg Gly Lys Phe Phe
 260 265 270

Gly Leu Phe Tyr Ala Val Gly Thr Pro Ser Leu Asn Pro Leu Val Tyr
 275 280 285

Thr Leu Arg Asn Lys Glu Ile Lys Arg Ala Leu Arg Arg Leu Leu Gly
 290 295 300

Lys Glu Arg Asp Ser Arg Glu Ser Trp Arg Ala Ala
 305 310 315

<210> 58
 <211> 945
 <212> DNA
 <213> Homo sapiens_OR2W3 olfactory receptor (GI: 937628231)

<400> 58
 atggatggaa ccaatggcag cacccaaacc catttcatcc tactgggatt ctctgaccga 60
 ccccatctgg agaggatcct ctttgtgggtc atcctgatcg cgtacctcct gaccctcgta 120
 ggcaacacca ccatcatcct ggtgtcccgg ctggaccccc acctccacac ccccatgtac 180
 ttcttcctcg cccacctttc cttcctggac ctcagtttca ccaccagctc catccccag 240
 ctgctctaca accttaatgg atgtgacaag accatcagct acatgggctg tgccatccag 300
 ctcttcctgt tcctgggtct ggggtgggtgt gagtgcctgc ttctggctgt catggcctat 360
 gaccgggtgtg tggctatctg caagcccctg cactacatgg tgatcatgaa ccccaggctc 420

tgccggggct tgggtgtcagt gacctggggc tgtgggggtgg ccaactcctt ggccatgtct 480
 cctgtgaccc tgcgcttacc ccgctgtggg caccacgagg tggaccactt cctgcgtgag 540
 atgcccggcc tgatccggat ggcttgcgtc agcactgtgg ccatcgacgg caccgtcttt 600
 gtcctggcgg tgggtgttgt gctgtcccc ttggtgttta tcctgctctc ttacagctac 660
 attgtgaggg ctgtgttaca aattcggta gcatcaggaa ggcagaaggc cttcggcacc 720
 tgcggctccc atctcactgt ggtctccctt ttctatggaa acatcatcta catgtacatg 780
 cagccaggag ccagttcttc ccaggaccag ggcatgttcc tcatgctctt ctacaacatt 840
 gtcaccccc tcctcaatcc tctcatctac accctcagaa acagagaggt gaaagggggc 900
 actgggaagg ttgcttctgg ggaagagaga gctaggaaaag gagta 945

<210> 59
 <211> 314
 <212> PRT
 <213> Homo sapiens_OR2W3 olfactory receptor (GI: 937628231)

<400> 59

Met Asp Gly Thr Asn Gly Ser Thr Gln Thr His Phe Ile Leu Leu Gly
 1 5 10 15

Phe Ser Asp Arg Pro His Leu Glu Arg Ile Leu Phe Val Val Ile Leu
 20 25 30

Ile Ala Tyr Leu Leu Thr Leu Val Gly Asn Thr Thr Ile Ile Leu Val
 35 40 45

Ser Arg Leu Asp Pro His Leu His Thr Pro Met Tyr Phe Phe Leu Ala
 50 55 60

His Leu Ser Phe Leu Asp Leu Ser Phe Thr Thr Ser Ser Ile Pro Gln
 65 70 75 80

Leu Leu Tyr Asn Leu Asn Gly Cys Asp Lys Thr Ile Ser Tyr Met Gly
 85 90 95

Cys Ala Ile Gln Leu Phe Leu Phe Leu Gly Leu Gly Gly Val Glu Cys
100 105 110

Leu Leu Leu Ala Val Met Ala Tyr Asp Arg Cys Val Ala Ile Cys Lys
115 120 125

Pro Leu His Tyr Met Val Ile Met Asn Pro Arg Leu Cys Arg Gly Leu
130 135 140

Val Ser Val Thr Trp Gly Cys Gly Val Ala Asn Ser Leu Ala Met Ser
145 150 155 160

Pro Val Thr Leu Arg Leu Pro Arg Cys Gly His His Glu Val Asp His
165 170 175

Phe Leu Arg Glu Met Pro Ala Leu Ile Arg Met Ala Cys Val Ser Thr
180 185 190

Val Ala Ile Glu Gly Thr Val Phe Val Leu Ala Val Gly Val Val Leu
195 200 205

Ser Pro Leu Val Phe Ile Leu Leu Ser Tyr Ser Tyr Ile Val Arg Ala
210 215 220

Val Leu Gln Ile Arg Ser Ala Ser Gly Arg Gln Lys Ala Phe Gly Thr
225 230 235 240

Cys Gly Ser His Leu Thr Val Val Ser Leu Phe Tyr Gly Asn Ile Ile
245 250 255

Tyr Met Tyr Met Gln Pro Gly Ala Ser Ser Ser Gln Asp Gln Gly Met
260 265 270

Phe Leu Met Leu Phe Tyr Asn Ile Val Thr Pro Leu Leu Asn Pro Leu
275 280 285

Ile Tyr Thr Leu Arg Asn Arg Glu Val Lys Gly Ala Leu Gly Arg Leu
290 295 300

Leu Leu Gly Lys Arg Glu Leu Gly Lys Glu
 305 310

<210> 60
 <211> 936
 <212> DNA
 <213> Homo sapiens_OR8G1 olfactory receptor (GI:937628054)

<400> 60
 atgtcaggag aaaataattc ctcagtgact gagttcattc tggctgggct ctcagaacag 60
 ccagagctcc agctgcccct cttcctcctg ttcttaggaa tctatgtggt cacagtgggtg 120
 ggcaacctgg gcatgaccac actgatttgg ctcagttctc acctgcacac ccctatgtac 180
 tatttcctca gcagtctgtc cttcattgac ttctgccatt ccaactgtcat taccctaag 240
 atgctggtga actttgtgac agagaagaac atcatctcct accctgaatg catgactcag 300
 ctctacttct tcctcgtttt tgctattgca gagtgtcaca tgttggctgc aatggcgtat 360
 gaccgttaca tggccatctg tagccccctg ctgtacagtg tcatcatatc caataaggct 420
 tgcttttctc tgattttagg ggtgtatata ataggcctgg tttgtgcatc agttcataca 480
 ggctgtatgt ttagggttca attctgcaaa tttgatttga ttaaccatta tttctgtgat 540
 cttcttcccc tcctaaagct ctcttgctct agtatctatg tcaacaaact acttattcta 600
 tgtgttggtg catttaacat ccttgctccc agcctgacca tcctttgctc ttacatcttt 660
 attattgcca gcatcctcca cattcgctcc actgagggca ggtccaaagc cttcagcact 720
 tgtagctccc acatgttggc ggttgtaatc ttttttggat ctgcagcatt catgtacttg 780
 cagccatctt caatcagctc catggaccag gggaaagtat cctctgtggt ttatactatt 840
 attgtgcccc tgttgaacct tctgatttat agcctgagga ataaagatgt ccatgtttcc 900
 ctgaagaaaa tgctacagag aagaacatta ttgtaa 936

<210> 61
 <211> 311
 <212> PRT
 <213> Homo sapiens_OR8G1 olfactory receptor (GI:937628054)

<400> 61

Met Ser Gly Glu Asn Asn Ser Ser Val Thr Glu Phe Ile Leu Ala Gly
1 5 10 15

Leu Ser Glu Gln Pro Glu Leu Gln Leu Pro Leu Phe Leu Leu Phe Leu
20 25 30

Gly Ile Tyr Val Val Thr Val Val Gly Asn Leu Gly Met Thr Thr Leu
35 40 45

Ile Trp Leu Ser Ser His Leu His Thr Pro Met Tyr Tyr Phe Leu Ser
50 55 60

Ser Leu Ser Phe Ile Asp Phe Cys His Ser Thr Val Ile Thr Pro Lys
65 70 75 80

Met Leu Val Asn Phe Val Thr Glu Lys Asn Ile Ile Ser Tyr Pro Glu
85 90 95

Cys Met Thr Gln Leu Tyr Phe Phe Leu Val Phe Ala Ile Ala Glu Cys
100 105 110

His Met Leu Ala Ala Met Ala Tyr Asp Arg Tyr Met Ala Ile Cys Ser
115 120 125

Pro Leu Leu Tyr Ser Val Ile Ile Ser Asn Lys Ala Cys Phe Ser Leu
130 135 140

Ile Leu Gly Val Tyr Ile Ile Gly Leu Val Cys Ala Ser Val His Thr
145 150 155 160

Gly Cys Met Phe Arg Val Gln Phe Cys Lys Phe Asp Leu Ile Asn His
165 170 175

Tyr Phe Cys Asp Leu Leu Pro Leu Leu Lys Leu Ser Cys Ser Ser Ile
180 185 190

Tyr Val Asn Lys Leu Leu Ile Leu Cys Val Gly Ala Phe Asn Ile Leu
195 200 205

Val Pro Ser Leu Thr Ile Leu Cys Ser Tyr Ile Phe Ile Ile Ala Ser
210 215 220

Ile Leu His Ile Arg Ser Thr Glu Gly Arg Ser Lys Ala Phe Ser Thr
225 230 235 240

Cys Ser Ser His Met Leu Ala Val Val Ile Phe Phe Gly Ser Ala Ala
245 250 255

Phe Met Tyr Leu Gln Pro Ser Ser Ile Ser Ser Met Asp Gln Gly Lys
260 265 270

Val Ser Ser Val Phe Tyr Thr Ile Ile Val Pro Met Leu Asn Pro Leu
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Val His Val Ser Leu Lys Lys Met
290 295 300

Leu Gln Arg Arg Thr Leu Leu
305 310

<210> 62
<211> 939
<212> DNA
<213> Mus musculus_01fr93 olfactory receptor (GI: 32060027)

<400> 62
atggtcaacc agagcacccc cgtgggcttc ctctcctgg gcttctctga acaccacaa 60
ctggaaaagg ttctcttcgt cgttgtcttg tgctcctacc tcctcaccct cctaggaaac 120
acactcatcc tcctgctgtc caccctggac cccaggctcc actctccaat gtacttcttc 180
ctctctaacc tctccttctt ggacctctgc ttcaccacaa cctgtgttcc ccagatgttg 240
ttcaacctct ggggccccac aaagaccatc agcttcctgg gatgctctgt ccagctcttc 300
atcttcatgc tcctggggac aacagagtgc atcctgttga cagtaatggc ctttgaccgc 360

tatgtggctg tctgtcagcc cctgcactat gccaccataa tccacccccg cctatgtcgc	420
cagttggcag gtgtggcctg ggctataggt ttggtccaat ccatagttca aataccaccc	480
accctcacac tgcccttctg ttcccatagg caaatagatg acttttctgtg tgaagtccca	540
tctctaatacc gactctcttg tggggacacc acttttaatg agattcagtt gtcagttgca	600
gggtgcatct tcctgcttgt acctctgagc ctcatcattg tctcttatgg tgcattgcc	660
agggctgtac taaaaactaa ctcttcaaaa gggcgagaa aagcttttgg gacctgttca	720
tcccacctca ttgtggttac cctcttttac agctcagtca ttgctgtcta tctgcagccc	780
aaaaatccct atgccaaga gaggagcaag ttctttggtc tcttttatgc agtgggcacc	840
cccacactca accctcttgt atataccctg aggaacaagg aggtaaagag ggcatcttgg	900
aggctgctgg ggaaggatgc ggcttctgga ggaaactaa	939

<210> 63

<211> 312

<212> PRT

<213> Mus musculus_0lfr93 olfactory receptor (GI: 32060027)

<400> 63

Met	Val	Asn	Gln	Ser	Thr	Pro	Val	Gly	Phe	Leu	Leu	Leu	Gly	Phe	Ser
1				5					10					15	

Glu	His	Pro	Gln	Leu	Glu	Lys	Val	Leu	Phe	Val	Val	Val	Leu	Cys	Ser
			20					25					30		

Tyr	Leu	Leu	Thr	Leu	Leu	Gly	Asn	Thr	Leu	Ile	Leu	Leu	Leu	Ser	Thr
		35					40					45			

Leu	Asp	Pro	Arg	Leu	His	Ser	Pro	Met	Tyr	Phe	Phe	Leu	Ser	Asn	Leu
	50					55					60				

Ser	Phe	Leu	Asp	Leu	Cys	Phe	Thr	Thr	Thr	Cys	Val	Pro	Gln	Met	Leu
65					70					75					80

Phe	Asn	Leu	Trp	Gly	Pro	Thr	Lys	Thr	Ile	Ser	Phe	Leu	Gly	Cys	Ser
				85					90					95	

Val Gln Leu Phe Ile Phe Met Leu Leu Gly Thr Thr Glu Cys Ile Leu
100 105 110

Leu Thr Val Met Ala Phe Asp Arg Tyr Val Ala Val Cys Gln Pro Leu
115 120 125

His Tyr Ala Thr Ile Ile His Pro Arg Leu Cys Arg Gln Leu Ala Gly
130 135 140

Val Ala Trp Ala Ile Gly Leu Val Gln Ser Ile Val Gln Ile Pro Pro
145 150 155 160

Thr Leu Thr Leu Pro Phe Cys Ser His Arg Gln Ile Asp Asp Phe Leu
165 170 175

Cys Glu Val Pro Ser Leu Ile Arg Leu Ser Cys Gly Asp Thr Thr Phe
180 185 190

Asn Glu Ile Gln Leu Ser Val Ala Gly Val Ile Phe Leu Leu Val Pro
195 200 205

Leu Ser Leu Ile Ile Val Ser Tyr Gly Val Ile Ala Arg Ala Val Leu
210 215 220

Lys Thr Asn Ser Ser Lys Gly Arg Arg Lys Ala Phe Gly Thr Cys Ser
225 230 235 240

Ser His Leu Ile Val Val Thr Leu Phe Tyr Ser Ser Val Ile Ala Val
245 250 255

Tyr Leu Gln Pro Lys Asn Pro Tyr Ala Gln Glu Arg Ser Lys Phe Phe
260 265 270

Gly Leu Phe Tyr Ala Val Gly Thr Pro Thr Leu Asn Pro Leu Val Tyr
275 280 285

Thr Leu Arg Asn Lys Glu Val Lys Arg Ala Phe Trp Arg Leu Leu Gly
 290 295 300

Lys Asp Ala Ala Ser Gly Gly Asn
 305 310

<210> 64
 <211> 945
 <212> DNA
 <213> Mus musculus_01fr398 olfactory receptor (GI: 32049056)

<400> 64
 atggctgtga ccaacctcac atacaaacca cagttccagc tcctcggctt gatggatggc 60
 acagatcccc acccgctgct gtttcttctt ttccttagca ttacctact caatgccctg 120
 ggcaatctga gcatgggtgg gctgggtgagg tctgatgggg ctctgtgctc ccccatgtat 180
 tatttcctgg gtcacctgag cctcgtggat gtctgcttta ccacagtcac tgtccccaga 240
 ctgctggcca ccttgctcca tcctggccag gccatatcct tccaggcttg ttttgcccag 300
 atgtacttct ttgtagctct gggtatcacc gagagctacc ttctggcagc catgtcttat 360
 gaccgtgcgg tggctgtgtg tagaccgctg cactatgggtg cagtcatgac accctggcgc 420
 tgctttttgt tgggtggctgc atcctgggct gtggcccatc tgcactctct tctacatata 480
 ctgctcatct ctgctctcac ctaccctccc tctgccccag tgcgccactt cttttgtgac 540
 atgactgtaa tgctgagctt ggcaacctct gacacatcag ctgcagagac tgccatcttc 600
 tcagagggggc taacagtggg gttgacctct ctgctcctcg tgtccctttc ctatgcacgc 660
 atccttgtgg cagtgccttg aattcggacc acaggaggcc ggcaccgtgt cttctccacc 720
 tgtggggccc acctgggtgg agtgtcactt ttctttggct cagtcctctc cgtctacttc 780
 cgtccatcat ctgcctactc agctcgttat gaccgcatgg ccagtgtggg ctatgaggta 840
 gtcacaccga ccttgaacct ttttatctac agtcttcgta acaaagagg caagagtgcc 900
 ctaaaaaggg gtttcagatg gagagcagca cccaagatg agtaa 945

<210> 65
 <211> 314
 <212> PRT

<213> Mus musculus_Olfr398 olfactory receptor (GI: 32049056)

<400> 65

Met Ala Val Thr Asn Leu Thr Tyr Lys Pro Gln Phe Gln Leu Leu Gly
1 5 10 15

Leu Met Asp Gly Thr Asp Pro His Pro Leu Leu Phe Leu Leu Phe Leu
20 25 30

Ser Ile Tyr Leu Leu Asn Ala Leu Gly Asn Leu Ser Met Val Val Leu
35 40 45

Val Arg Ser Asp Gly Ala Leu Cys Ser Pro Met Tyr Tyr Phe Leu Gly
50 55 60

His Leu Ser Leu Val Asp Val Cys Phe Thr Thr Val Thr Val Pro Arg
65 70 75 80

Leu Leu Ala Thr Leu Leu His Pro Gly Gln Ala Ile Ser Phe Gln Ala
85 90 95

Cys Phe Ala Gln Met Tyr Phe Phe Val Ala Leu Gly Ile Thr Glu Ser
100 105 110

Tyr Leu Leu Ala Ala Met Ser Tyr Asp Arg Ala Val Ala Val Cys Arg
115 120 125

Pro Leu His Tyr Gly Ala Val Met Thr Pro Trp Arg Cys Phe Leu Leu
130 135 140

Val Ala Ala Ser Trp Ala Val Ala His Leu His Ser Leu Leu His Thr
145 150 155 160

Leu Leu Ile Ser Ala Leu Thr Tyr Pro Pro Ser Ala Pro Val Arg His
165 170 175

Phe Phe Cys Asp Met Thr Val Met Leu Ser Leu Ala Thr Ser Asp Thr
180 185 190

Ser Ala Ala Glu Thr Ala Ile Phe Ser Glu Gly Leu Thr Val Val Leu
 195 200 205

Thr Pro Leu Leu Leu Val Ser Leu Ser Tyr Ala Arg Ile Leu Val Ala
 210 215 220

Val Leu Gly Ile Arg Thr Thr Gly Gly Arg His Arg Val Phe Ser Thr
 225 230 235 240

Cys Gly Ala His Leu Val Val Val Ser Leu Phe Phe Gly Ser Val Leu
 245 250 255

Ser Val Tyr Phe Arg Pro Ser Ser Ala Tyr Ser Ala Arg Tyr Asp Arg
 260 265 270

Met Ala Ser Val Val Tyr Ala Val Val Thr Pro Thr Leu Asn Pro Phe
 275 280 285

Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Ser Ala Leu Lys Arg Gly
 290 295 300

Phe Arg Trp Arg Ala Ala Pro Gln Asp Glu
 305 310

<210> 66

<211> 966

<212> DNA

<213> Mus musculus_Olfr120 olfactory receptor (GI: 32060790)

<400> 66

atgagtgtca actgctctct gtggcaggaa aataagttgt ctgtcaaaca ctttgcattt 60

gccaagttct ctgaggttcc tgaagaatgc ttctcctgt ttaccctgat tctcctcatg 120

ttcttagtat cactgacagg aaatgcactt ataacccttg ccatatgcac cagtccagcc 180

ctacacaccc ccatgtactt ctttctggcc aacttgcttc tcctggaaaat tggctacact 240

tgttctgtca taccgaagat gttgaagaac cttgtaactg aggcccagg gatctctcgg 300

gaagggtgtg ccacacagat gtttttcttt atattctttg gtataactga gtgttgcccta 360
 ctggcagcta tggcctttga ccgctacatg gccatatgct cccactcca ctatgcaacc 420
 cgaatgagtc gtgaggatg tgcccatttg gcaatagttt catggggaat gggatgcata 480
 gtagggttgg gacagaccaa ttttattttc tccttaaact tctgtggacc ctgtgagata 540
 gaccatttct tctgtgacct tccacctgtc ctggcacttg cctgtggaga tacatcccaa 600
 aatgaggctg caatcttcgt gacagtagtt ctctgcatat ctagcccatt tttgttgatc 660
 atttattcct atgtcagaat tttgtttgca gtgctggtga tgccttcacc tgaggggctgc 720
 cataaagctc tctccacctg ttcctcccat ctactttag tccattggtt ctatggctca 780
 gcatctatta cctacttgag gcccaagtct agccactcac caggaataga taaactcttg 840
 gcccttttct acaccgcggt gacttccatg ctgaaccca tcatctatag ctttaaggaaac 900
 aaggaagtga aggcagcact gagaagaact ctgagtctga agaaacctct ggcaataaat 960
 aggtaa 966

<210> 67

<211> 321

<212> PRT

<213> Mus musculus_Olfmr120 olfactory receptor (GI: 32060790)

<400> 67

Met Ser Val Asn Cys Ser Leu Trp Gln Glu Asn Lys Leu Ser Val Lys
 1 5 10 15

His Phe Ala Phe Ala Lys Phe Ser Glu Val Pro Glu Glu Cys Phe Leu
 20 25 30

Leu Phe Thr Leu Ile Leu Leu Met Phe Leu Val Ser Leu Thr Gly Asn
 35 40 45

Ala Leu Ile Thr Leu Ala Ile Cys Thr Ser Pro Ala Leu His Thr Pro
 50 55 60

Met Tyr Phe Phe Leu Ala Asn Leu Ser Leu Leu Glu Ile Gly Tyr Thr
 65 70 75 80

Cys Ser Val Ile Pro Lys Met Leu Lys Asn Leu Val Thr Glu Ala Arg
85 90 95

Gly Ile Ser Arg Glu Gly Cys Ala Thr Gln Met Phe Phe Phe Ile Phe
100 105 110

Phe Gly Ile Thr Glu Cys Cys Leu Leu Ala Ala Met Ala Phe Asp Arg
115 120 125

Tyr Met Ala Ile Cys Ser Pro Leu His Tyr Ala Thr Arg Met Ser Arg
130 135 140

Glu Val Cys Ala His Leu Ala Ile Val Ser Trp Gly Met Gly Cys Ile
145 150 155 160

Val Gly Leu Gly Gln Thr Asn Phe Ile Phe Ser Leu Asn Phe Cys Gly
165 170 175

Pro Cys Glu Ile Asp His Phe Phe Cys Asp Leu Pro Pro Val Leu Ala
180 185 190

Leu Ala Cys Gly Asp Thr Ser Gln Asn Glu Ala Ala Ile Phe Val Thr
195 200 205

Val Val Leu Cys Ile Ser Ser Pro Phe Leu Leu Ile Ile Tyr Ser Tyr
210 215 220

Val Arg Ile Leu Phe Ala Val Leu Val Met Pro Ser Pro Glu Gly Arg
225 230 235 240

His Lys Ala Leu Ser Thr Cys Ser Ser His Leu Leu Val Val Thr Leu
245 250 255

Phe Tyr Gly Ser Ala Ser Ile Thr Tyr Leu Arg Pro Lys Ser Ser His
260 265 270

Ser Pro Gly Ile Asp Lys Leu Leu Ala Leu Phe Tyr Thr Ala Val Thr
 275 280 285

Ser Met Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys
 290 295 300

Ala Ala Leu Arg Arg Thr Leu Ser Leu Lys Lys Pro Leu Ala Ile Asn
 305 310 315 320

Arg

<210> 68
 <211> 921
 <212> DNA
 <213> Mus musculus_0lfr1364 olfactory receptor (GI: 32078800)

<400> 68
 atgatcaacc agagctgcca ggaacagttc atcctgctgg gcttctcaga cagaccgagg 60
 ctagaatcca tcctctttgt gtttgcctc atcttctacc tggtagacttt agtgggcaac 120
 atcatcatta tcttagtttc ctatctggac ccctgtcttc acacccccat gtacttcttc 180
 ctcaccaact tgtcctttct tgacctctgt ttcactacca gttccatccc tcaattgctc 240
 ttcaacttag gaggccagga caagagcatc agttacattg gctgtgcagt ccagctgttc 300
 atgtttcttg gcctaggagg tactgagtgt gttttgctgg ctgtcatggc ttacgaccgt 360
 ttcactgcaa tctgcaagcc ctttactac tcggtcatta tgcattctca gctctgctgg 420
 acattgggtg ctgtagcctg gagtgtggga ctctcaact ccctgggcat gtctcctgtg 480
 accatgaagc tgcctcgatg tggcagatgt caggtgaggc acttcctgtg tgagatgcca 540
 gctctgataa aaattgcctg tgtggacact gtggctgtgg aaagcactgt tttcatttta 600
 tcggtgataa tcgtgctggg gcctttgact ctcatcctca tttcttacag ctatattgct 660
 ctagcagtga tgaggatcaa gtcggcctca ggaaggagga aggctttcaa cacgtgtggg 720
 tctcacctca ccgtagtctc cttgttttac gggaatatca tctatatgta tatgcagcct 780
 ggacacaagg cttcccagga ccaaggga aa tttcttacct tcttctacaa cttggtaacc 840

cccatgttaa accctgtcat ctatacactg agaaacaagg atgtaaaggg cgcactgaag 900
aggcttgtga ctacgaaata a 921

<210> 69
<211> 306
<212> PRT
<213> Mus musculus_Olfmr1364 olfactory receptor (GI: 32078800)

<400> 69

Met Ile Asn Gln Ser Cys Gln Glu Gln Phe Ile Leu Leu Gly Phe Ser
1 5 10 15

Asp Arg Pro Arg Leu Glu Ser Ile Leu Phe Val Phe Val Leu Ile Phe
20 25 30

Tyr Leu Val Thr Leu Val Gly Asn Ile Ile Ile Ile Leu Val Ser Tyr
35 40 45

Leu Asp Pro Cys Leu His Thr Pro Met Tyr Phe Phe Leu Thr Asn Leu
50 55 60

Ser Phe Leu Asp Leu Cys Phe Thr Thr Ser Ser Ile Pro Gln Leu Leu
65 70 75 80

Phe Asn Leu Gly Gly Gln Asp Lys Ser Ile Ser Tyr Ile Gly Cys Ala
85 90 95

Val Gln Leu Phe Met Phe Leu Gly Leu Gly Gly Thr Glu Cys Val Leu
100 105 110

Leu Ala Val Met Ala Tyr Asp Arg Phe Thr Ala Ile Cys Lys Pro Leu
115 120 125

His Tyr Ser Val Ile Met His Ser Gln Leu Cys Trp Thr Leu Val Ser
130 135 140

Val Ala Trp Ser Val Gly Leu Leu Asn Ser Leu Val Met Ser Pro Val
145 150 155 160

Thr Met Lys Leu Pro Arg Cys Gly Arg Cys Gln Val Arg His Phe Leu
165 170 175

Cys Glu Met Pro Ala Leu Ile Lys Ile Ala Cys Val Asp Thr Val Ala
180 185 190

Val Glu Ser Thr Val Phe Ile Leu Ser Val Ile Ile Val Leu Val Pro
195 200 205

Leu Thr Leu Ile Leu Ile Ser Tyr Ser Tyr Ile Ala Leu Ala Val Met
210 215 220

Arg Ile Lys Ser Ala Ser Gly Arg Arg Lys Ala Phe Asn Thr Cys Gly
225 230 235 240

Ser His Leu Thr Val Val Ser Leu Phe Tyr Gly Asn Ile Ile Tyr Met
245 250 255

Tyr Met Gln Pro Gly His Lys Ala Ser Gln Asp Gln Gly Lys Phe Leu
260 265 270

Thr Leu Phe Tyr Asn Leu Val Thr Pro Met Leu Asn Pro Val Ile Tyr
275 280 285

Thr Leu Arg Asn Lys Asp Val Lys Gly Ala Leu Lys Arg Leu Val Thr
290 295 300

Thr Lys
305

<210> 70

<211> 936

<212> DNA

<213> Mus musculus_0lfr937 olfactory receptor (GI: 32064616)

<400> 70

atggcaacag gaaactattg catgttacct gagttcattc tgactgggct ctcaaagaag

60

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ccacaactcc agatgcctct cttcctcctc ttcctaggaa tctatgtggt cactgtagtg      120
gggaatttgg gcatgattac actgattaag ctcagttctc acctgcatac ccccatgtac      180
tatttcctca gtagtttgtc ctttattgat ctctgccatt ccaactgtcat taccaccaaa      240
atgttgggtga actttgtgat agagaaaaac atcatttcct aactgggatg catggctcag      300
ctctatttct ttctaatttt tgctattgca gagtgtcata tgtagctgc aatggcatat      360
gatcgctatg ttgccatctg taacccttg ctttacaatg taaccatgtc ctatcagatt      420
tacacttccc tgatctttgg agtctatatt attgggtgtgg tttgtgcatc agctcacaca      480
ggcttcatga tcagaataca gttttgtaac ttagagggtga tcaaccacta tttctgtgat      540
cttcttcccc tgctggagct tgctcactct agtacttatg ttaatgaatt gtagtttta      600
tgttttggta catttaacat tgttgttcca accatgacta ttcttacttc ttacatcttc      660
atcattgcca acatcttacg cattcgttct actggaggca ggtccaaagc cttcagtacc      720
tgcagctccc acatcttagc tgttgctgtg ttctttgggt ctgctgcatt catgtacctt      780
caaccatcat cagtcagctc catggaccaa gggaaagtgt cctctgtgtt ttataccatt      840
gttgttccca tgctgaaccc cttgatctat agtctgagga ataaggatgt cagtgttgcc      900
ctgaagaaaa tactagaaag aaaattattc atgtaa                                936

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<210> 71
<211> 311
<212> PRT
<213> Mus musculus_Olfr937 olfactory receptor (GI: 32064616)

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<400> 71

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Met Ala Thr Gly Asn Tyr Cys Met Leu Pro Glu Phe Ile Leu Thr Gly
1           5           10          15

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Leu Ser Lys Lys Pro Gln Leu Gln Met Pro Leu Phe Leu Leu Phe Leu
20          25          30

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Gly Ile Tyr Val Val Thr Val Val Gly Asn Leu Gly Met Ile Thr Leu
35          40          45

```

Ile Lys Leu Ser Ser His Leu His Thr Pro Met Tyr Tyr Phe Leu Ser
50 55 60

Ser Leu Ser Phe Ile Asp Leu Cys His Ser Thr Val Ile Thr Pro Lys
65 70 75 80

Met Leu Val Asn Phe Val Ile Glu Lys Asn Ile Ile Ser Tyr Thr Gly
85 90 95

Cys Met Ala Gln Leu Tyr Phe Phe Leu Ile Phe Ala Ile Ala Glu Cys
100 105 110

His Met Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn
115 120 125

Pro Leu Leu Tyr Asn Val Thr Met Ser Tyr Gln Ile Tyr Thr Ser Leu
130 135 140

Ile Phe Gly Val Tyr Ile Ile Gly Val Val Cys Ala Ser Ala His Thr
145 150 155 160

Gly Phe Met Ile Arg Ile Gln Phe Cys Asn Leu Glu Val Ile Asn His
165 170 175

Tyr Phe Cys Asp Leu Leu Pro Leu Leu Glu Leu Ala His Ser Ser Thr
180 185 190

Tyr Val Asn Glu Leu Leu Val Leu Cys Phe Gly Thr Phe Asn Ile Val
195 200 205

Val Pro Thr Met Thr Ile Leu Thr Ser Tyr Ile Phe Ile Ile Ala Asn
210 215 220

Ile Leu Arg Ile Arg Ser Thr Gly Gly Arg Ser Lys Ala Phe Ser Thr
225 230 235 240

Cys Ser Ser His Ile Leu Ala Val Ala Val Phe Phe Gly Ser Ala Ala
245 250 255

Phe Met Tyr Leu Gln Pro Ser Ser Val Ser Ser Met Asp Gln Gly Lys
260 265 270

Val Ser Ser Val Phe Tyr Thr Ile Val Val Pro Met Leu Asn Pro Leu
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Val Ser Val Ala Leu Lys Lys Ile
290 295 300

Leu Glu Arg Lys Leu Phe Met
305 310

<210> 72

<211> 933

<212> DNA

<213> Mus musculus_Olfr1322 olfactory receptor (GI: 46404727)

<400> 72

atgactcaaa tttcagaaat tattcttttg ggttttggag atctccatgg ctttcagttt	60
cttcttttttg ggctatttct agccatttat gttatgactc tcctgggtaa cattgtaatt	120
ctcaccgtag tatccactga ttgctccctt cacacacca tgtatttctt tcttggccac	180
ttctccttcc tagagatcag ctacaccaca acaattgagc ctgtaatgct gtggacattg	240
ttatcggctc atgtgcctat ctcttgcca gcctgtgctt gtcagtttta cttttttgca	300
tcttttggtgg caacagaatg cttcctcctt gctgtaatgt cttatgatag atacatagcc	360
atttgtaacc cactacacta ttccagtatc atggactcct ggggttgttt ccagctagca	420
ttggcctctt ggttggctgg atttctggca cctatcttac tcatgatctt gatttttcgc	480
ttaacatttt gttctgcca tgagattgac cacttcttct gtgatttgaa gcccacatg	540
aaactggcct gcactaatac tcaagtagct gaaatgactt cttttatatg tacctcatta	600
ttcgtcttg gtcccttcat actgacctg gcttcctata ttcacatcat ttgcaccatt	660
ctgaggatcc cttcgaccac aggggaagcag agggctttct ccacctgttc atctcacctt	720
atagtgggtca gtctttatta tgggactctg ggcattgtct atggcttccc atcaatgcct	780

caatatgaaa gtatatggaa gttgctttct cttctgtata cagtgtttac ccctgctgcc 840
aatcctatca ttacaccct aaggaacaag gatgtgaagg tagctctgag aaaattgaca 900
caatggcata catacctggc caaagaaggc taa 933

<210> 73
<211> 310
<212> PRT
<213> Mus musculus_0lfr1322 olfactory receptor (GI: 46404727)

<400> 73

Met Thr Gln Ile Ser Glu Ile Ile Leu Leu Gly Phe Gly Asp Leu His
1 5 10 15

Gly Leu Gln Phe Leu Leu Phe Gly Leu Phe Leu Ala Ile Tyr Val Met
20 25 30

Thr Leu Leu Gly Asn Ile Val Ile Leu Thr Val Val Ser Thr Asp Cys
35 40 45

Ser Leu His Thr Pro Met Tyr Phe Phe Leu Gly His Phe Ser Phe Leu
50 55 60

Glu Ile Ser Tyr Thr Thr Thr Ile Glu Pro Val Met Leu Trp Thr Leu
65 70 75 80

Leu Ser Ala His Val Pro Ile Ser Leu Pro Ala Cys Ala Cys Gln Phe
85 90 95

Tyr Phe Phe Ala Ser Leu Val Ala Thr Glu Cys Phe Leu Leu Ala Val
100 105 110

Met Ser Tyr Asp Arg Tyr Ile Ala Ile Cys Asn Pro Leu His Tyr Ser
115 120 125

Ser Ile Met Asp Ser Trp Gly Cys Phe Gln Leu Ala Leu Ala Ser Trp
130 135 140

Leu Ala Gly Phe Leu Ala Pro Ile Leu Leu Met Ile Leu Ile Phe Arg
 145 150 155 160

Leu Thr Phe Cys Ser Ala Asn Glu Ile Asp His Phe Phe Cys Asp Leu
 165 170 175

Lys Pro Ile Met Lys Leu Ala Cys Thr Asn Thr Gln Val Ala Glu Met
 180 185 190

Thr Ser Phe Ile Cys Thr Ser Leu Phe Ala Leu Gly Pro Phe Ile Leu
 195 200 205

Thr Leu Ala Ser Tyr Ile His Ile Ile Cys Thr Ile Leu Arg Ile Pro
 210 215 220

Ser Thr Thr Gly Lys Gln Arg Ala Phe Ser Thr Cys Ser Ser His Leu
 225 230 235 240

Ile Val Val Ser Leu Tyr Tyr Gly Thr Leu Gly Ile Val Tyr Gly Phe
 245 250 255

Pro Ser Met Pro Gln Tyr Glu Ser Ile Leu Lys Leu Leu Ser Leu Leu
 260 265 270

Tyr Thr Val Phe Thr Pro Ala Ala Asn Pro Ile Ile Tyr Thr Leu Arg
 275 280 285

Asn Lys Asp Val Lys Val Ala Leu Arg Lys Leu Thr Gln Trp His Thr
 290 295 300

Tyr Leu Val Lys Glu Gly
 305 310

<210> 74
 <211> 933
 <212> DNA
 <213> Mus musculus_0lfr46 olfactory receptor (GI: 32054916)
 <400> 74

atggtcagtc ccaaccagac agtagtgaca gagtttgtgc tgcaagggtt ctcagagcac	60
ccaagtctaa gactgttcct gatgggctgt ttcctgtccc tgtacacagt ggctttaatg	120
ggcaacatgg tgatcattgc tttgatcacc tcaagcactg ggctccacag tcccatgtac	180
tttttcctgt gcaacttagc gaccatggat attatctgca cctcctctgt actgccaag	240
gcgctggttg gtctactgtc tgaggaaaac accatctcct tcaaagggtg catgactcag	300
ctcttctttc ttgtgtggtc tggatcctct gagctgctgc tgctcacagt catggcctat	360
gaccgctatg tggccatctg tttgcccctg cattacagct ctaggatgag tccacagctc	420
tgtgggacct ttgccgtggg tgtatgggcc atctgcgcac taaatgcatc tatcaacact	480
ggctctgatga cacggctgtc attctgtggc cccaagggtca tcacccactt cttctgtgag	540
attccccac tcctcctgct ctctgtagt cctacatata taaatagcgt tatgactctt	600
gtggcagatg ccttttatgg aggcatcaat tttttactta ccttgctatc ctatggctgc	660
atcattgcca gcatcctgcg catgcgttct gctgagggca agaggaaggc cttttctacc	720
tgctcatccc acctcatcgt ggtctctgtg tactactcat ctgtgttctg tgcctatatc	780
agtcctgggt ccagctacag ccagaaaaga agcaaattta cctcggtttt gtactcagtc	840
ctcagcccaa cctcaaccc cctcatctat aactgagga acaaggatgt caagcttgcc	900
ctgagaagac tcttcccctc tttctcaaat taa	933

<210> 75
 <211> 310
 <212> PRT
 <213> Mus musculus_Olfr46 olfactory receptor (GI: 32054916)

<400> 75

Met	Val	Ser	Pro	Asn	Gln	Thr	Val	Val	Thr	Glu	Phe	Val	Leu	Gln	Gly
1				5					10					15	

Phe	Ser	Glu	His	Pro	Ser	Leu	Arg	Leu	Phe	Leu	Met	Gly	Cys	Phe	Leu
			20					25					30		

Ser	Leu	Tyr	Thr	Val	Ala	Leu	Met	Gly	Asn	Met	Val	Ile	Ile	Ala	Leu
		35					40					45			

Ile Thr Ser Ser Thr Gly Leu His Ser Pro Met Tyr Phe Phe Leu Cys
50 55 60

Asn Leu Ala Thr Met Asp Ile Ile Cys Thr Ser Ser Val Leu Pro Lys
65 70 75 80

Ala Leu Val Gly Leu Leu Ser Glu Glu Asn Thr Ile Ser Phe Lys Gly
85 90 95

Cys Met Thr Gln Leu Phe Phe Leu Val Trp Ser Gly Ser Ser Glu Leu
100 105 110

Leu Leu Leu Thr Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Leu
115 120 125

Pro Leu His Tyr Ser Ser Arg Met Ser Pro Gln Leu Cys Gly Thr Phe
130 135 140

Ala Val Gly Val Trp Ser Ile Cys Ala Leu Asn Ala Ser Ile Asn Thr
145 150 155 160

Gly Leu Met Thr Arg Leu Ser Phe Cys Gly Pro Lys Val Ile Thr His
165 170 175

Phe Phe Cys Glu Ile Pro Pro Leu Leu Leu Ser Cys Ser Pro Thr
180 185 190

Tyr Ile Asn Ser Val Met Thr Leu Val Ala Asp Ala Phe Tyr Gly Gly
195 200 205

Ile Asn Phe Leu Leu Thr Leu Leu Ser Tyr Gly Cys Ile Ile Ala Ser
210 215 220

Ile Leu Arg Met Arg Ser Ala Glu Gly Lys Arg Lys Ala Phe Ser Thr
225 230 235 240

Cys Ser Ser His Leu Ile Val Val Ser Val Tyr Tyr Ser Ser Val Phe
245 250 255

Cys Ala Tyr Ile Ser Pro Gly Ser Ser Tyr Ser Pro Glu Arg Ser Lys
260 265 270

Phe Thr Ser Val Leu Tyr Ser Val Leu Ser Pro Thr Leu Asn Pro Leu
275 280 285

Ile Tyr Thr Leu Arg Asn Lys Asp Val Lys Leu Ala Leu Arg Arg Leu
290 295 300

Phe Pro Ser Phe Ser Asn
305 310