

22078651.TXT

SEQUENCE LISTING

<110> Elbion GmbH

<120> Methods of Treating Obesity and
Metabolic Disorders

<130> 20743-0024w01

<150> US 61/004,883

<151> 2007-11-30

<160> 14

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 1

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26

<210> 2

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 2

tatccctgca ggccttcagc agaggctct

29

<210> 3

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 3

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28

<210> 4

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 4

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31

<210> 5

<211> 967

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<212> DNA

<213> Sus scrofa

<400> 5

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cacttcgaca	ttgggtcctt	tgaaaacatg	tggcctggaa	tctttgtcta	tatggttcat	180
cgcttctgtg	ggacggcctg	ctttgagctt	gaaaagctgt	gtcgttttat	catgtctgtg	240
aagaagaact	atcgtcgggt	tccttaccac	aactggaagc	acgcggtcac	ggtggcacac	300
tgcattgtacg	ccatcctcca	gaacagccac	gggtcttcca	ccgacctcga	gcgcaaagga	360
ctgctaatacg	cggtgtctgtg	ccacgacctg	gaccacaggg	gcttcagcaa	cagctacctg	420
cagaaattcg	accacccctt	ggccgctctc	tactccacgc	ccaccatgga	gcagcaccac	480
ttctcccaga	ccgtgtccat	cctccagttg	gaagggcaca	acatcttctc	caccctgagc	540
tccagtgtgt	acgagcaggt	gcttgagatc	atccgcaaag	ccatcattgc	cacagacctc	600
gctttgtact	ttggaaacag	gaaacagttg	gaggagatgt	accagaccgg	atcgctaaac	660
cttaataacc	agtcacatag	agaccgcgtc	attggtttga	tgatgactgc	ctgtgatctc	720
tggtccgtga	caaaactgtg	gccagtaaca	aaactgacgg	caaatgatat	atatgcggaa	780
ttctgggccc	agggcgatga	ggtgaagaag	ctgggaatac	agcctattcc	catgatggac	840
agagacaaga	aggacgaagt	cccacaaggc	cagctcggat	tctacaacgc	ggtagctatc	900
ccctgctaca	ccaccctcac	ccagatcttc	ccgcccacag	agcctcttct	gaaggcctgc	960
agggata						967

<210> 6

<211> 732

<212> DNA

<213> Guinea pig

<400> 6

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aaggccctgt	aattgcctgt	ctgtgccatg	acctggacca	caggggcttc	agtaacagct	180
acctgcagaa	attcgaccac	cccctggctg	cgttgtactc	cacctccacc	atggagcaac	240
accacttctc	ccagacggtg	ttcatcctcc	agctggaagg	acacaacatc	ttctccaccc	300
tgagctccag	cgagtacgag	cagggtgctgg	agatcatccg	caaagccatc	atcgccactg	360
acctcgcact	gtactttggg	aacaggaagc	agttggagga	gatgtaccag	acaggggtcg	420
tgaacctcaa	taaccagtcc	catcgagacc	gcgtcatcgg	cttgatgatg	actgcctgcg	480
atctttgctc	tgtgacgaaa	ctatggccag	ttacaaaatt	gacagcaaatt	gatatatatg	540
cagagttctg	ggctgagggg	gatgagatga	agaagtggg	gatacagccc	atccctatga	600
tggacagaga	caagaaggat	gaagtccctc	aaggacagct	tggattctac	aatgctgtgg	660
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<210> 7

<211> 266

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated oligonucleotide

<400> 7

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cgaccaggaa	ggtcgatgac	tgatcctgag	gtgatgtctg	cctagcaact	gactcaacct	180
gcttctgtga	cttcgttctt	tttattttta	tttttttaac	ggggtgaaaa	cctctctcag	240
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<210> 8

<211> 993

<212> DNA

<213> Artificial Sequence

<220>

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<223> Consensus sequence

<400> 8

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ttttgacttg	aaaatgtgct	tttatcatgt	ctgtgaagaa	gaactatcgg	cggtttcctt	180
accacaactg	gaagcatgca	gtcacgggtg	cgactgcat	gtacgccata	cttcaaaaca	240
acaatggcct	cttcacagac	cttgagcgca	aaggcctgct	aattgcctgt	ctgtgccatg	300
acctggacca	caggggcttc	agtaacagct	acctgcagaa	attcgaccac	cccctggctg	360
cgttgtactc	cacctccacc	atggagcaac	accacttctc	ccagacggtg	tccatcctcc	420
agctggaagg	acacaacatc	ttctccaccc	tgagctccag	cgagtacgag	caggtgctgg	480
agatcatccg	caaagccatc	atcgccactg	acctcgact	gtactttggg	aacaggaagc	540
agttggagga	gatgtaccag	acagggctcg	tgaacctcca	caaccagtcc	catcgagacc	600
gcgtcatcgg	cttgatgatg	actgcctgcg	atctttgctc	tgtgacgaaa	ctatggccag	660
ttacaaaatt	gacagcaaat	gatatatatg	cagagtcttg	ggctgagggg	gatgagatga	720
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tcctcccacc	cacagagcct	ctgctgaagg	cctgcagggg	taacctcaat	cagtgggaga	900
aggtaattcg	aggggaagag	acagcaatgt	ggatttcagg	cccagcaact	agcaaaagca	960
catcgggaag	cgaccaggaa	ggtcgaatga	tga			993

<210> 9

<211> 845

<212> DNA

<213> Guinea pig

<400> 9

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aaggactgct	aatcgcggtg	ctgtgccacg	acctggacca	caggggcttc	agcaacagct	180
acctgcagaa	attcgaccac	cccctggccg	ctctctactc	cacgcccacc	atggagcagc	240
accacttctc	ccagaccgtg	tccatcctcc	agttggaagg	gcacaacatc	ttctccaccc	300
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actga						845

<210> 10

<211> 1032

<212> DNA

<213> Rattus norvegicus

<400> 10

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tacatgatcc	atcggtcttg	tgggacatcc	tgttttgaac	ttgaaaaatt	gtgccgtttt	180
atcatgtctg	tgaagaagaa	ctataggcgg	gttccttacc	acaactggaa	gcattgcagtc	240
acgggtggcgc	actgcatgta	cgccatactt	caaaacaaca	atggcctctt	cacagacctt	300
gagcgcaaaag	gcctgcta	tgctgtctg	tgccatgacc	tggaccacag	gggcttcagt	360
aacagctacc	tgcagaaaatt	cgaccacccc	ctggctgctg	tgtactccac	ctccaccatg	420
gagcaacacc	acttctccca	gacggtgtcc	atcctccagc	tggagggaca	caacatcttc	480
tccaccctga	gctccagcga	gtacgagcag	gtgctggaga	tcattccgaa	agccatcatc	540
gccactgacc	ctgcactgta	ctttgggaac	aggaagcagt	tggaggagat	gtaccagaca	600
gggtcgctga	acctccacaa	ccagtcccat	cgagaccgcg	tcattcggctt	gatgatgact	660
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cctatgatgg	acagagacaa	gcgagatgaa	gtccctcaag	gacagcttgg	attctacaat	840

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gctgtggcca tcccctgcta taccaccctg acgcagatcc tcccacccac agagcctctg 900
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 gtcgatgact ga 1032

<210> 11
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 <212> PRT
 <213> Sus scrofa

<400> 11
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 35 40 45
 Pro Phe Glu Asn Met Trp Pro Gly Ile Phe Val Tyr Met Val His Arg
 50 55 60
 Phe Cys Gly Thr Ala Cys Phe Glu Leu Glu Lys Leu Cys Arg Phe Ile
 65 70 75 80
 Met Ser Val Lys Lys Asn Tyr Arg Arg Val Pro Tyr His Asn Trp Lys
 85 90 95
 His Ala Val Thr Val Ala His Cys Met Tyr Ala Ile Leu Gln Asn Ser
 100 105 110
 His Gly Leu Phe Thr Asp Leu Glu Arg Lys Gly Leu Leu Ile Ala Cys
 115 120 125
 Leu Cys His Asp Leu Asp His Arg Gly Phe Ser Asn Ser Tyr Leu Gln
 130 135 140
 Lys Phe Asp His Pro Leu Ala Ala Leu Tyr Ser Thr Pro Thr Met Glu
 145 150 155 160
 Gln His His Phe Ser Gln Thr Val Ser Ile Leu Gln Leu Glu Gly His
 165 170 175
 Asn Ile Phe Ser Thr Leu Ser Ser Ser Glu Tyr Glu Gln Val Leu Glu
 180 185 190
 Ile Ile Arg Lys Ala Ile Ile Ala Thr Asp Leu Ala Leu Tyr Phe Gly
 195 200 205
 Asn Arg Lys Gln Leu Glu Glu Met Tyr Gln Thr Gly Ser Leu Asn Leu
 210 215 220
 Asn Asn Gln Ser His Arg Asp Arg Val Ile Gly Leu Met Met Thr Ala
 225 230 235 240
 Cys Asp Leu Cys Ser Val Thr Lys Leu Trp Pro Val Thr Lys Leu Thr
 245 250 255
 Ala Asn Asp Thr Tyr Ala Glu Pro Trp Ala Glu Gly Asp Glu Val Lys
 260 265 270
 Lys Leu Gly Ile Gln Pro Ile Pro Met Met Asp Arg Asp Lys Lys Asp
 275 280 285
 Glu Val Pro Gln Gly Gln Leu Gly Phe Tyr Asn Ala Val Ala Ile Pro
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 Cys Tyr Thr Thr Leu Thr Gln Ile Phe Pro Pro Thr Glu Pro Leu Leu
 305 310 315 320
 Lys Ala Cys Arg Asp Lys Ala Glu Phe 325

<210> 12
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 <212> PRT
 <213> Guinea pig

<400> 12
 Val Lys Lys Asn Tyr Arg Arg Val Pro Tyr His Asn Trp Lys His Ala
 1 5 10 15

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Val Thr Val Ala His Cys Met Tyr Ala Ile Leu Gln Asn Ser His Gly
20 25 30
Leu Phe Thr Asp Leu Glu Arg Lys Gly Leu Leu Ile Ala Cys Leu Cys
35 40 45
His Asp Leu Asp His Arg Gly Phe Ser Asn Ser Tyr Leu Gln Lys Phe
50 55 60
Asp His Pro Leu Ala Ala Leu Tyr Ser Thr Ser Thr Met Glu Gln His
65 70 75 80
His Phe Ser Gln Thr Val Phe Ile Leu Gln Leu Glu Gly His Asn Ile
85 90 95
Phe Ser Thr Leu Ser Ser Ser Glu Tyr Glu Gln Val Leu Glu Ile Ile
100 105 110
Arg Lys Ala Ile Ile Ala Thr Asp Leu Ala Leu Tyr Phe Gly Asn Arg
115 120 125
Lys Gln Leu Glu Glu Met Tyr Gln Thr Gly Ser Leu Asn Leu Asn Asn
130 135 140
Gln Ser His Arg Asp Arg Val Ile Gly Leu Met Met Thr Ala Cys Asp
145 150 155 160
Leu Cys Ser Val Thr Lys Leu Trp Pro Val Thr Lys Leu Thr Ala Asn
165 170 175
Asp Thr Tyr Ala Glu Pro Trp Ala Glu Gly Asp Glu Met Lys Lys Leu
180 185 190
Gly Ile Gln Pro Ile Pro Met Met Asp Arg Asp Lys Lys Asp Glu Val
195 200 205
Pro Gln Gly Gln Leu Gly Phe Tyr Asn Ala Val Ala Ile Pro Cys Tyr
210 215 220
Thr Thr Leu Thr Gln Ile Leu Pro Pro Thr Glu Pro Leu Leu Lys Ala
225 230 235 240
Cys Arg Asp Asn Leu Asn Gln Trp Glu Lys Val Ile Arg Gly Glu Glu
245 250 255
Thr Ala Met Trp Ile Ser Gly Pro Ala Thr Ser Lys Ser Thr Ser Glu
260 265 270
Lys Pro Thr Arg Lys Val Asp Asp
275 280

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<210> 13

<211> 343

<212> PRT

<213> Rattus norvegicus

<400> 13

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Asn Met Trp Pro Gly Ile Phe Val Tyr Met Ile His Arg Ser Cys Gly
35 40 45
Thr Ser Cys Phe Glu Leu Glu Lys Leu Cys Arg Phe Ile Met Ser Val
50 55 60
Lys Lys Asn Tyr Arg Arg Val Pro Tyr His Asn Trp Lys His Ala Val
65 70 75 80
Thr Val Ala His Cys Met Tyr Ala Ile Leu Gln Asn Asn Asn Gly Leu
85 90 95
Phe Thr Asp Leu Glu Arg Lys Gly Leu Leu Ile Ala Cys Leu Cys His
100 105 110
Asp Leu Asp His Arg Gly Phe Ser Asn Ser Tyr Leu Gln Lys Phe Asp
115 120 125
His Pro Leu Ala Ala Leu Tyr Ser Thr Ser Thr Met Glu Gln His His
130 135 140
Phe Ser Gln Thr Val Ser Ile Leu Gln Leu Glu Gly His Asn Ile Phe
145 150 155 160
Ser Thr Leu Ser Ser Ser Glu Tyr Glu Gln Val Leu Glu Ile Ile Arg
165 170 175

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Ser	His	Arg	Asp	195	Arg	Val	Ile	Gly	Leu	200	Met	Met	Thr	Ala	Cys	205	Asp	Leu
Cys	Ser	Val	Thr	210	Lys	Leu	Trp	Pro	Val	215	Thr	Lys	Leu	Thr	Ala	220	Asn	Asp
Ile	Tyr	Ala	Glu	225	Phe	Trp	Ala	Glu	Gly	230	Asp	Glu	Met	Lys	Lys	235	Leu	Gly
Ile	Gln	Pro	Ile	245	Pro	Met	Met	Asp	Arg	250	Asp	Lys	Arg	Asp	Glu	255	Val	Pro
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Thr	Leu	Thr	Gln	275	Ile	Leu	Pro	Pro	Thr	280	Glu	Pro	Leu	Leu	Lys	285	Ala	Cys
Arg	Asp	Asn	Leu	290	Asn	Gln	Trp	Glu	Lys	295	Val	Ile	Arg	Gly	Glu	300	Glu	Thr
Ala	Met	Trp	Ile	305	Ser	Gly	Pro	Ala	Thr	310	Ser	Lys	Ser	Thr	Ser	315	Glu	Lys
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<210> 14
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 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Consensus sequence

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			20					25					30		
Trp	Pro	Gly	Ile	Phe	Val	Tyr	Met	Ile	His	Arg	Cys	Gly	Thr	Ser	Cys
		35					40					45			
Phe	Glu	Leu	Glu	Lys	Leu	Cys	Arg	Phe	Ile	Met	Ser	Val	Lys	Lys	Asn
		50				55					60				
Tyr	Arg	Arg	Val	Pro	Tyr	His	Asn	Trp	Lys	His	Ala	Val	Thr	Val	Ala
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His	Cys	Met	Tyr	Ala	Ile	Leu	Gln	Asn	Asn	Asn	Gly	Leu	Phe	Thr	Asp
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Leu	Glu	Arg	Lys	Gly	Leu	Leu	Ile	Ala	Cys	Leu	Cys	His	Asp	Leu	Asp
			100					105					110		
His	Arg	Gly	Phe	Ser	Asn	Ser	Tyr	Leu	Gln	Lys	Phe	Asp	His	Pro	Leu
		115					120					125			
Ala	Ala	Leu	Tyr	Ser	Thr	Ser	Thr	Met	Glu	Gln	His	His	Phe	Ser	Gln
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145					150					155					160
Ser	Ser	Ser	Glu	Tyr	Glu	Gln	Val	Leu	Glu	Ile	Ile	Arg	Lys	Ala	Ile
			165						170					175	
Ile	Ala	Thr	Asp	Leu	Ala	Leu	Tyr	Phe	Gly	Asn	Arg	Lys	Gln	Leu	Glu
			180					185					190		
Glu	Met	Tyr	Gln	Thr	Gly	Ser	Leu	Asn	Leu	His	Asn	Gln	Ser	His	Arg
		195					200					205			
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		210				215					220				
Thr	Lys	Leu	Trp	Pro	Val	Thr	Lys	Leu	Thr	Ala	Asn	Asp	Ile	Tyr	Ala

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225					230					235					240
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Ile	Pro	Met	Met	Asp	Arg	Asp	Lys	Lys	Asp	Glu	Val	Pro	Gln	Gly	Gln
			260					265					270		
Leu	Gly	Phe	Tyr	Asn	Ala	Val	Ala	Ile	Pro	Cys	Tyr	Thr	Thr	Leu	Thr
		275					280					285			
Gln	Ile	Leu	Pro	Pro	Thr	Glu	Pro	Leu	Leu	Lys	Ala	Cys	Arg	Asp	Asn
	290					295					300				
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305					310					315					320
Ile	Ser	Gly	Pro	Ala	Thr	Ser	Lys	Ser	Thr	Ser	Lys	Pro	Thr	Arg	Lys
				325					330					335	
Val	Asp	Asp													