

SEQUENCE LISTING

<110> Santaris Pharma A/S

<120> RNA ANTAGONIST COMPOUNDS FOR THE MODULATION OF BCL-2.

<130> 1062WO

<150> US 61/012185

<151> 2007-12-07

<150> US 61/106261

<151> 2007-10-17

<160> 97

<170> PatentIn version 3.5

<210> 1

<211> 6492

<212> DNA

<213> Homo sapiens

<400> 1

tttctgtgaa	gcagaagtct	gggaatcgat	ctggaaatcc	tcctaatttt	tactccctct	60
ccccgcgact	cctgattcat	tgggaagttt	caaatcagct	ataactggag	agtgcgaag	120
attgatggga	tcgttgccct	atgcatttgt	tttggtttta	caaaaaggaa	acttgacaga	180
ggatcatgct	gtacttaaaa	aatacaacat	cacagaggaa	gtagactgat	attaacaata	240
cttactaata	ataacgtgcc	tcatgaaata	aagatccgaa	aggaattgga	ataaaaaatt	300
cctgcacctc	atgccaaagg	ggaacacca	gaatcaagt	ttccgcgtga	ttgaagacac	360
ccctcgtcc	aagaatgcaa	agcacatcca	ataaaatagc	tggattataa	ctcctcttct	420
ttctctgggg	gccgtggggt	gggagctggg	gcgagaggtg	ccgttggccc	ccgttgcttt	480
tcctctggga	aggatggcgc	acgctgggag	aacaggggtac	gataaccggg	agatagtgat	540
gaagtacatc	cattataaag	tgtcgcagag	gggctacgag	tgggatgcgg	gagatgtggg	600
cgccgcgccc	cggggggccg	ccccgcacc	gggcatcttc	tcctcccagc	ccgggcacac	660
gccccatcca	gccgcacccc	gggacccggt	cgccaggacc	tcgcccgtgc	agaccccggc	720
tgcccccggc	gcccgcgcgg	ggcctgcgct	cagcccgggtg	ccacctgtgg	tcacacctgac	780
cctccgccag	gccggcgacg	acttctcccg	ccgctaccgc	cgcgacttgc	ccgagatgtc	840
tgccacagtc	cacctgacgc	ccttcaccgc	gcggggacgc	tttgccacgg	tgggtggagga	900
gctcttcagg	gacgggggtg	actgggggag	gattgtggcc	ttctttgagt	tcgggtgggt	960
catgtgtgtg	gagagcgta	accggggagat	gtcgccctcg	gtggacaaca	tcgccctgtg	1020
gatgactgag	tacctgaacc	ggcacctgca	cacctggatc	caggataacg	gaggctggga	1080
tgccctttgt	gaactgtacg	gcccagcat	gcggcctctg	tttgatttct	cctggctgtc	1140
tctgaagact	ctgctcagtt	tggccctggg	gggagcttgc	atcacccctg	gtgcctatct	1200
gggcccacaag	tgaagtcaac	atgcctgccc	caaacaaaata	tgcaaaagg	tcactaaagc	1260
agtagaataa	atatgcattg	tcagtgatgt	accatgaaac	aaagctgcag	gctgtttaag	1320
aaaaaataac	acacatagat	acatcacaca	cacagacaga	cacacacaca	cacaacaatt	1380
aacagtcctc	aggcaaaacg	tcgaatcagc	tatttactgc	caaagggaaa	tatcatttat	1440
tttttacatt	attaagaaaa	aaagatttat	ttatttaaga	cagtcccatc	aaaactcctg	1500
tctttggaaa	tcgaccact	aattgcgaag	caccgcttcg	tgtggctcca	cctggatgtt	1560
ctgtgcctgt	aaacatagat	tcgctttcca	tgttgtggc	cggatcacca	tctgaagagc	1620
agacggatgg	aaaaaggacc	tgatcattgg	ggaagctggc	tttctggctg	ctggaggctg	1680
gggagaaggt	gttcattcac	ttgcatttct	ttgccctggg	ggctgtgata	ttaacagagg	1740
gagggttccat	gtggggggga	gtccatgcct	ccctggcctg	aagaagagac	tcctttgcata	1800
tgactcacct	gatgcataac	tgttgggagg	aaaagagttg	ggaacttcag	atggacctag	1860
taccactga	gatttccacg	ccgaaggaca	gcgatgggaa	aaatgccctt	aaatcatagg	1920
aaagtatttt	tttaagctac	caattgtgcc	gagaaaagca	ttttagcaat	ttatacaata	1980
tcatccagta	ccttaagccc	tgatttgtga	tattcatata	ttttggatac	gcacccccca	2040
actcccaata	ctggctctgt	ctgagtaaga	aacagaatcc	ctcggaactt	gaggaagtga	2100
acatttcggg	gacttccgca	tcaggaaggc	tagagttacc	cagagcatca	ggccgccaca	2160
agtgccctgt	tttaggagac	cgaagtccgc	agaacctgcc	tgtgtcccag	cttggaggcc	2220
tggctcctga	actgagccgg	ggccctcact	ggcctcctcc	agggatgatc	aacagggcag	2280
tgtgtctctc	gaatgtctgt	aagctgatgg	agctcagaat	tccactgtca	agaaagagca	2340
gtagaggggt	gtggctgggc	ctgtcaccct	ggggccctcc	aggtaggccc	gttttcaagt	2400
ggagcatggg	agccacgacc	cttcttaaga	catgtatcac	tgtagaggga	aggaacagag	2460
gccctggggc	cttccatca	gaaggacatg	gtgaaggctg	ggaacgtgag	gagaggcaat	2520
ggccacggcc	caatttggct	gtagcacatg	gcacgttggc	tgtgtggcct	tggcccacct	2580
gtgagtttaa	agcaaggcct	taaatgactt	tggagagggt	cacaaatcct	aaaagaagca	2640
ttgaagttag	gtgtcatgga	tttaattgac	cctgtctatg	gaattacatg	taaaacatta	2700
tcttgtcact	gtagtttggg	tttatttgaa	aacctgacaa	aaaaaaagtt	ccaggtgtgg	2760
aatatggggg	ttatctgtac	atcctggggc	attaaaaaaa	aatcaatgg	tggggaaacta	2820
taaagaagta	acaaaagaag	tgacatcttc	agcaataaaa	ctaggaaatt	tttttttctt	2880
ccagtttaga	atcagccttg	aaacattgat	ggaataactc	tgtggcatta	ttgcattata	2940
taccatttat	ctgtattaac	tttggaatgt	actctgttca	atgtttaatg	ctgtggttga	3000

tatttcgaaa	gctgctttaa	aaaaatacat	gcatctcage	gtttttttgt	ttttaattgt	3060
atttagttat	ggcctataca	ctattttgtga	gcaaaggtga	tcgtttttctg	tttgagattt	3120
ttatctcttg	attcttcaaa	agcattctga	gaagggtgaga	taagccctga	gtctcagcta	3180
cctaagaaaa	acctggatgt	cactggccac	tgaggagctt	tgtttcaacc	aagtcagtgtg	3240
cattttccacg	tcaacagaat	tgtttattgt	gacagttata	tctgtttgtcc	ctttgacctt	3300
gttttcttgaa	ggtttctcog	tcctctgggca	attccgcatt	taattccatgg	tattcaggat	3360
tacatgcatg	tttggttaaa	cccatgagat	tcattcagtt	aaaaatccag	atggcaaatg	3420
accagcagat	tcaaatctat	ggtggtttga	ccttttagaga	gttgctttac	gtggcctgtt	3480
tcaacacaga	cccacccaga	gccctcctgc	cctccttccg	cgggggcttt	ctcatggctg	3540
tccttcaggg	tcttctgaa	atgcagtggg	gcttacgctc	caccaagaaa	gcaggaaacc	3600
tgtggtatga	agccagacct	ccccggcggg	cctcagggaa	cagaatgatc	agacctttga	3660
atgattctaa	tttttaagca	aaatattatt	ttatgaaaag	tttacattgt	caaagtgatg	3720
aatatggaat	atccaatcct	gtgctgctat	cctgccaaaa	tcattttta	ggagtcagtt	3780
tgacgtatgt	tccaagtggg	aagatcctcc	aagctgcttt	agaagtaaca	atgaagaacg	3840
tggacgtttt	taataataag	cctgttttgt	cttttgttgt	tgttcaaacg	ggattcacag	3900
agtatttgaa	aaatgtatat	atattaagag	gtcacggggg	ctaattgctg	gctggctgcc	3960
ttttgctgtg	gggttttgtt	acctggtttt	aataacagta	aatgtgcccc	gcctcttggc	4020
cccagaactg	tacagtattg	tgctgcact	tgctctaaga	gtagttgatg	ttgcattttc	4080
cttattgtta	aaaaacatgt	agaagcaatg	aatgtatata	aaagcctcaa	ctagtcattt	4140
ttttctcctc	ttcttttttt	tcatttatatc	taattatttt	gcagttgggc	aacagagAAC	4200
catccctatt	ttgtattgaa	gagggattca	catctgcact	ttactgtctc	tttatgaatg	4260
aaaaaacatg	cctctgtatg	tactcctctt	tacactggcc	agggtcagag	ttaaatagag	4320
tatatgcact	ttccaaatgt	gggacaaggg	ctctaaaaaa	agccccaaaa	ggagaagaac	4380
atctgagaac	ctcctcggcc	ctcccagtc	ctogctgcac	aaatactccg	caagagaggc	4440
cagaatgaca	gctgacaggg	tctatggcca	tcgggtcgtc	tcogaagatt	tggcaggggc	4500
agaaaactct	ggcaggctta	agatttgga	taaagtcaca	gaattaaagg	agcacctcaa	4560
tttagttcaa	agttttcaga	aacattctct	ccacagctca	cttacctctc	tgtgttcaga	4620
tgtggccttc	catttatatg	tgatctttgt	tttattagta	aatgcttata	atctaaagat	4680
gtagctctgg	cccagtgagg	aaaattagga	agtgtattata	aatcgagagg	agttataata	4740
atcaagatta	aatgtaaata	atcagggcaa	tcaccaacaca	tgtctagctt	tcacctccag	4800
gatctattga	aggtatttga	ttgcAAatag	tctctatttg	taattgaact	tatcctaata	4860
caaatagttt	ataaatgtga	acttaaaactc	taattaattc	caactgtact	tttaaggcag	4920
tggctgtttt	tagactttct	tatcacttat	agttagtaat	gtacacctac	tctatcagag	4980
aaaaacagga	aaggctcgaa	atacaagcca	ttctaaggaa	attagggagt	cagttgaaat	5040
tctattctga	tcttattctg	tggtgtcttt	tgccagccag	acaaatgtgg	ttacacactt	5100
tttaagaaat	acaattctac	attgtcaagc	ttatgaagg	tcCAatcaga	tctttattgt	5160
tattcaattt	ggatctttca	gggatttttt	ttttaaat	ttatgggaca	aaggacattt	5220
gttggagggg	tgggagggag	gaagaatttt	taaagttaaa	acattcccaa	gtttggatca	5280
gggagtttga	agtttttcaga	ataaccagaa	ctaagggtat	gaaggacctg	tattggggtc	5340
gatgtgatgc	ctctgcgaag	aaccttgtgt	gacaaatgag	aaacattttg	aagtttgttg	5400
tacgaccttt	agattccaga	gacatcagca	tggctcaaa	tgccagctccg	tttggcagtg	5460
caatgggtata	aatttcaagg	tggatatgtc	taatgggtat	ttaaacaata	aatgtgcagt	5520
tttaactaac	aggataattt	atgacaacct	tctgggttgg	agggacatct	gtttctaaat	5580
gtttattatg	tacaatacag	aaaaaaattt	tataaaatta	agcaatgtga	aactgaattg	5640
gagagtgata	atacaagtcc	tttagtctta	cccagtgaa	caattctgttc	catgtctttg	5700
gacaaccatg	accttgga	atcatgaaat	atgcactctc	ctggatgcaa	agaaaaatcag	5760
atggagcact	aattttcactg	taccggttca	tctggactgc	cccagaaaaa	taacttcaag	5820
caaacatcct	atcaacaaca	aggttgttct	gcataccaag	ctgagcacag	aagatgggaa	5880
cactggttga	ggatggaaag	gctcgtcaa	tcaagaaaat	tctgagacta	ttataaata	5940
agactgtagt	gtagatactg	agtaaatcca	tgccactaaa	cctttttgaa	aatctgccgt	6000
gggcctccca	gtatagctcat	ttcatatagt	tttccctcc	aaggtagaag	ttgcaagagt	6060
gacagtggat	tgcatttctt	ttggggaagc	tttcttttgg	tggttttgtt	tattataacct	6120
tcttaagttt	tcaaccaagg	tttgcttttg	ttttgagtta	ctggggttat	ttttgtttta	6180
ataaaaaata	agtgtacaat	aagtgttttt	gtattgaaag	cttttgttat	caagattttc	6240
atactttttac	cttccatggc	tcttttttaag	attgatactt	ttaaagagg	gctgatattc	6300
tgcaacactg	tacacataaa	aaatacggta	aggatacttt	acatggttaa	ggtaaagtaa	6360
gtctccagtt	ggccaccatt	agctataatg	gcactttgtt	tgtgttgttg	gaaaaagtca	6420
cattgccatt	aaactttcct	tgtctgtcta	gttaatatgt	tgaagaaaaa	taaagtacag	6480
tgtgagatac	tg					6492

<210> 2
 <211> 1207
 <212> DNA
 <213> Homo sapiens

<400> 2						
tttctgtgaa	gcagaagtct	gggaatcgat	ctggaaatcc	tcctaatttt	tactccctct	60
ccccgcgact	cctgattcat	tgggaagttt	caaatacagct	ataactggag	agtgtctgaag	120
attgatggga	togttgcctt	atgcatttgt	tttggtttta	caaaaaggaa	acttgacaga	180
ggatcatgct	gtacttaaaa	aatacaacat	cacagaggaa	gtagactgat	attaacaata	240
cttactaata	ataacgtgcc	tcatgaaata	aagatccgaa	aggaattgga	ataaaaattt	300
cctgcactct	atgccaaagg	ggaacacca	gaatcaagt	ttccgcgtga	ttgaagacac	360
ccctcgtctc	aagaatgcaa	agcacatcca	ataaaatagc	tggattataa	ctcctcttct	420
ttctctgggg	gccgtggggg	gggagctggg	gcgagagggtg	ccgttgggcc	ccgttgcttt	480

```

tcctctggga aggatggcgc acgctgggag aacaggggtac gataaccggg agatagtgat 540
gaagtacatc cattataagc tgtcgcacag gggctacgag tgggatgcgg gagatgtggg 600
cgccgcgccc ccggggggccg ccccgccacc gggcatcttc tcctcccagc ccggggcacac 660
gccccatcca gccgcatccc gggacccggg cggcaggacc tcgccgctgc agaccccggc 720
tgcccccggc gccgcgcggg ggctgcgct cagcccgggt ccacctgtgg tccacctgac 780
cctccgccag gccggcgacg acttctcccg ccgctaccgc cgcgaactcg ccgagatgtc 840
cagccagctg cacctgacgc ccttcaccgc gcggggacgc tttgccacgg tgggtggagga 900
gctcttcagg gacgggggtga actgggggag gattgtggcc ttctttgagt tcgggtgggg 960
catgtgtgtg gagagcgtca accggggagat gtcgcccctg gtggacaaca tcgccctgtg 1020
gatgactgag tacctgaacc ggcacctgca cacctggatc caggataacg gagggctggg 1080
aggtgcactt ggtgatgtga gtctgggctg aggccacagg tccgagatgc ggggggttga 1140
gtgcgggttg gctcctgggg caatgggagg ctgtggagcc gccgaaataa aatcagagtt 1200
gttgcta 1207

```

```

<210> 3
<211> 16
<212> DNA
<213> artificial

```

```

<220>
<223> Oligomer sequence motif/LNA Oligomer

```

```

<220>
<221> misc_feature
<222> (1)..(16)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

```

```

<400> 3
gttaatatca gtctac 16

```

```

<210> 4
<211> 16
<212> DNA
<213> artificial

```

```

<220>
<223> Oligomer sequence motif/LNA Oligomer

```

```

<220>
<221> misc_feature
<222> (1)..(16)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

```

```

<400> 4
atatcagtct acttcc 16

```

```

<210> 5
<211> 16
<212> DNA
<213> artificial

```

```

<220>
<223> Oligomer sequence motif/LNA Oligomer

```

```

<220>
<221> misc_feature
<222> (1)..(16)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

```

```

<400> 5
gaacacttga ttctgg 16

```

```

<210> 6
<211> 16
<212> DNA
<213> artificial

```

```

<220>
<223> Oligomer sequence motif/LNA Oligomer

```

```

<220>
<221> misc_feature
<222> (1)..(16)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

```

<400> 6
gattctggtg tttccc 16

<210> 7
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 7
ttggcatgag atgcag 16

<210> 8
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 8
atgagatgca ggaaat 16

<210> 9
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 9
tattggatgt gctttg 16

<210> 10
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 10
ggatgtgctt tgcatt 16

<210> 11
<211> 16
<212> DNA
<213> artificial

<220>

```
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 11
gctttgcatt cttgga                                     16

<210> 12
<211> 15
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 12
agttataatc cagct                                     15

<210> 13
<211> 14
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 13
gacagcttat aatg                                     14

<210> 14
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 14
ctccacacac atgacc                                     16

<210> 15
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 15
ggttcaggta ctcagt                                     16
```

<210> 16
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 16
ggtactcagt catcca 16

<210> 17
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 17
cagtcattcca cagggc 16

<210> 18
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 18
aggaggattt ccagat 16

<210> 19
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 19
atgacacct gtcaag 16

<210> 20
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature

```

<222> (1)..(16)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 20
tgtacttcat cactat 16

<210> 21
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 21
ggaacacttg attctg 16

<210> 22
<211> 24
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(24)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 22
tattgttaat atcagtctac ttcc 24

<210> 23
<211> 24
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(24)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 23
gttaatatca gtctacttcc tctg 24

<210> 24
<211> 24
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(24)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 24
ogcggaacac ttgattctgg tggt 24

<210> 25
<211> 24
<212> DNA
<213> artificial

```

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(24)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 25
acttgattct ggtgtttccc cctt 24

<210> 26
<211> 24
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(24)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 26
tggcatgaga tgcaggaaat tttt 24

<210> 27
<211> 24
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(24)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 27
ottggcatga gatgcaggaa attt 24

<210> 28
<211> 24
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(24)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 28
atattattgg atgtgctttg catt 24

<210> 29
<211> 24
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(24)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 29

tattggatgt gctttgcatt cttg 24

<210> 30
<211> 24
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(24)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 30
atgtgctttg cattcttgga cgag 24

<210> 31
<211> 24
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(24)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 31
agaggagtta taatccagct attt 24

<210> 32
<211> 24
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(24)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 32
tctgcgacag cttataatgg atgt 24

<210> 33
<211> 24
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(24)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 33
cgctctccac acacatgacc ccac 24

<210> 34
<211> 24
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

```

<220>
<221> misc_feature
<222> (1)..(24)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 34
tgccggttca ggtactcagt catc 24

<210> 35
<211> 24
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(24)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 35
ttcaggtact cagtcacca cagg 24

<210> 36
<211> 24
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(24)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 36
tactcagtca tccacagggc gatg 24

<210> 37
<211> 24
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(24)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 37
aattaggagg atttcagat cgat 24

<210> 38
<211> 24
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(24)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 38
cagcatgatc ctctgtcaag tttc 24

<210> 39
<211> 24

```

```

<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(24)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 39
tggtatgtact tcatactat ctcc 24

<210> 40
<211> 24
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(24)
<223> nucleotide or nucleotide analogues - optionally phosphorothioate

<400> 40
acgcggaaca cttgattctg gtgt 24

<210> 41
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 Gapmer oligo - optionally phosphorothioate

<400> 41
gttaatatca gtctac 16

<210> 42
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 Gapmer oligo - optionally phosphorothioate

<400> 42
atatcagtct acttcc 16

<210> 43
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 Gapmer oligo - optionally phosphorothioate

```

```

<400> 43
gaacacttga ttctgg                                     16

<210> 44
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 Gapmer oligo - optionally phosphorothioate

<400> 44
gattctggtg tttccc                                     16

<210> 45
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 Gapmer oligo - optionally phosphorothioate

<400> 45
ttggcatgag atgcag                                     16

<210> 46
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 Gapmer oligo - optionally phosphorothioate

<400> 46
atgagatgca ggaaat                                     16

<210> 47
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 Gapmer oligo - optionally phosphorothioate

<400> 47
tattggatgt gctttg                                     16

<210> 48
<211> 16
<212> DNA
<213> artificial

<220>

```

```

<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 Gapmer oligo - optionally phosphorothioate

<400> 48
ggatgtgctt tgcatt                                     16

<210> 49
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 Gapmer oligo - optionally phosphorothioate

<400> 49
gctttgcatt cttgga                                     16

<210> 50
<211> 15
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(15)
<223> 3-9-3 Gapmer oligo - optionally phosphorothioate

<400> 50
agttataatc cagct                                     15

<210> 51
<211> 14
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(14)
<223> 3-8-3 Gapmer oligo - optionally phosphorothioate

<400> 51
gacagcttat aatg                                     14

<210> 52
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 Gapmer oligo - optionally phosphorothioate

<400> 52
ctccacacac atgacc                                     16

```

<210> 53
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 Gapmer oligo - optionally phosphorothioate

<400> 53
gggttcaggta ctcaagt 16

<210> 54
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 Gapmer oligo - optionally phosphorothioate

<400> 54
ggtactcagt catcca 16

<210> 55
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 Gapmer oligo - optionally phosphorothioate

<400> 55
cagtcatcca cagggc 16

<210> 56
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 Gapmer oligo - optionally phosphorothioate

<400> 56
aggaggattt ccagat 16

<210> 57
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature

```

<222> (1)..(16)
<223> 3-10-3 Gapmer oligo - optionally phosphorothioate

<400> 57
atgatacctct gtcaag 16

<210> 58
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 Gapmer oligo - optionally phosphorothioate

<400> 58
tgtacttcat cactat 16

<210> 59
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 Gapmer oligo - optionally phosphorothioate

<400> 59
ggaacacttg attctg 16

<210> 60
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 LNA Gapmer oligo - fully phosphorothioate

<400> 60
gttaatatca gtctac 16

<210> 61
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 LNA Gapmer oligo - fully phosphorothioate

<400> 61
atatcagtct acttcc 16

<210> 62
<211> 16
<212> DNA
<213> artificial

```

```

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 LNA Gapmer oligo - fully phosphorothioate

<400> 62
gaacacttga ttctgg                                     16

<210> 63
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 LNA Gapmer oligo - fully phosphorothioate

<400> 63
gattctggtg tttccc                                     16

<210> 64
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 LNA Gapmer oligo - fully phosphorothioate

<400> 64
ttggcatgag atgcag                                     16

<210> 65
<211> 14
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(14)
<223> 3-9-2 LNA Gapmer oligo - fully phosphorothioate

<400> 65
tggcatgaga tgca                                       14

<210> 66
<211> 12
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(12)
<223> 2-8-2 LNA Gapmer oligo - fully phosphorothioate

<400> 66

```



```

ggcatgagat gc 12

<210> 67
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 LNA Gapmer oligo - fully phosphorothioate

<400> 67
atgagatgca ggaaat 16

<210> 68
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 LNA Gapmer oligo - fully phosphorothioate

<400> 68
tattggatgt gctttg 16

<210> 69
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 LNA Gapmer oligo - fully phosphorothioate

<400> 69
ggatgtgctt tgcatt 16

<210> 70
<211> 14
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(14)
<223> 3-9-2 LNA Gapmer oligo - fully phosphorothioate

<400> 70
gatgtgcttt gcat 14

<210> 71
<211> 12
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

```

```

<220>
<221> misc_feature
<222> (1)..(12)
<223> 2-8-2 LNA Gapmer oligo - fully phosphorothioate

<400> 71
atgtgctttg ca 12

<210> 72
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 LNA Gapmer oligo - fully phosphorothioate

<400> 72
gctttgcatt cttgga 16

<210> 73
<211> 14
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(14)
<223> 3-9-2 LNA Gapmer oligo - fully phosphorothioate

<400> 73
ctttgcattc ttgg 14

<210> 74
<211> 12
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(12)
<223> 2-8-2 LNA Gapmer oligo - fully phosphorothioate

<400> 74
tttgcatctt tg 12

<210> 75
<211> 15
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(15)
<223> 3-9-3 LNA Gapmer oligo - fully phosphorothioate

<400> 75
agttataatc cagct 15

<210> 76
<211> 14

```

```

<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(14)
<223> 3-9-2 LNA Gapmer oligo - fully phosphorothioate

<400> 76
agttataatc cagc 14

<210> 77
<211> 12
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(12)
<223> 2-8-2 LNA Gapmer oligo - fully phosphorothioate

<400> 77
gttataatcc ag 12

<210> 78
<211> 14
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(14)
<223> 3-8-3 LNA Gapmer oligo - fully phosphorothioate

<400> 78
gacagcttat aatg 14

<210> 79
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 LNA Gapmer oligo - fully phosphorothioate

<400> 79
ctccacacac atgacc 16

<210> 80
<211> 14
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(14)
<223> 3-9-2 LNA Gapmer oligo - fully phosphorothioate

```

```

<400> 80
tccacacaca tgac 14

<210> 81
<211> 12
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(12)
<223> 2-8-2 LNA Gapmer oligo - fully phosphorothioate

<400> 81
ccacacacat ga 12

<210> 82
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 LNA Gapmer oligo - fully phosphorothioate

<400> 82
ggttcaggta ctcaagt 16

<210> 83
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 LNA Gapmer oligo - fully phosphorothioate

<400> 83
ggtactcagt catcca 16

<210> 84
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 LNA Gapmer oligo - fully phosphorothioate

<400> 84
cagtcaccca cagggc 16

<210> 85
<211> 16
<212> DNA
<213> artificial

<220>

```

```

<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 LNA Gapmer oligo - fully phosphorothioate

<400> 85
aggaggattt ccagat                                     16

<210> 86
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 LNA Gapmer oligo - fully phosphorothioate

<400> 86
atgatcctct gtcaag                                     16

<210> 87
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 LNA Gapmer oligo - fully phosphorothioate

<400> 87
tgtacttcat cactat                                     16

<210> 88
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 LNA Gapmer oligo - fully phosphorothioate

<400> 88
ggaacacttg attctg                                     16

<210> 89
<211> 14
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(14)
<223> 3-9-2 LNA Gapmer oligo - fully phosphorothioate

<400> 89
gaacacttga ttct                                     14

```

```

<210> 90
<211> 12
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(12)
<223> 2-8-2 LNA Gapmer oligo - fully phosphorothioate

<400> 90
aacacttgat tc                                     12

<210> 91
<211> 14
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(14)
<223> 2-9-3 LNA Gapmer oligo - fully phosphorothioate

<400> 91
ttggcatgag atgc                                     14

<210> 92
<211> 14
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(14)
<223> 2-10-2 LNA Gapmer oligo - fully phosphorothioate

<400> 92
ttggcatgag atgc                                     14

<210> 93
<211> 13
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(13)
<223> 2-9-2 LNA Gapmer oligo - fully phosphorothioate

<400> 93
tggcatgaga tgc                                     13

<210> 94
<211> 239
<212> PRT
<213> Homo sapiens

<400> 94
Met Ala His Ala Gly Arg Thr Gly Tyr Asp Asn Arg Glu Ile Val Met
1          5          10          15
Lys Tyr Ile His Tyr Lys Leu Ser Gln Arg Gly Tyr Glu Trp Asp Ala

```

```

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

```

```

<210> 95
<211> 205
<212> PRT
<213> Homo sapiens

```

```

<400> 95

```

```

Met Ala His Ala Gly Arg Thr Gly Tyr Asp Asn Arg Glu Ile Val Met
1      5      10      15
Lys Tyr Ile His Tyr Lys Leu Ser Gln Arg Gly Tyr Glu Trp Asp Ala
      20      25      30
Gly Asp Val Gly Ala Ala Pro Pro Gly Ala Ala Pro Ala Pro Gly Ile
      35      40      45
Phe Ser Ser Gln Pro Gly His Thr Pro His Pro Ala Ala Ser Arg Asp
      50      55      60
Pro Val Ala Arg Thr Ser Pro Leu Gln Thr Pro Ala Ala Pro Gly Ala
      65      70      75      80
Ala Ala Gly Pro Ala Leu Ser Pro Val Pro Val Val His Leu Thr
      85      90      95
Leu Arg Gln Ala Gly Asp Asp Phe Ser Arg Arg Tyr Arg Arg Asp Phe
      100      105      110
Ala Glu Met Ser Ser Gln Leu His Leu Thr Pro Phe Thr Ala Arg Gly
      115      120      125
Arg Phe Ala Thr Val Val Glu Glu Leu Phe Arg Asp Gly Val Asn Trp
      130      135      140
Gly Arg Ile Val Ala Phe Phe Glu Phe Gly Gly Val Met Cys Val Glu
      145      150      155      160
Ser Val Asn Arg Glu Met Ser Pro Leu Val Asp Asn Ile Ala Leu Trp
      165      170      175
Met Thr Glu Tyr Leu Asn Arg His Leu His Thr Trp Ile Gln Asp Asn
      180      185      190
Gly Gly Trp Val Gly Ala Leu Gly Asp Val Ser Leu Gly
      195      200      205

```

```

<210> 96
<211> 14
<212> DNA
<213> artificial

```

```

<220>
<223> Oligomer sequence motif/LNA Oligomer

```

```

<220>
<221> misc_feature
<222> (1)..(14)
<223> 3-8-3 LNA Gapmer oligo - fully phosphorothioate

```

<400> 96
gtaagacaaa caga 14

<210> 97
<211> 16
<212> DNA
<213> artificial

<220>
<223> Oligomer sequence motif/LNA Oligomer

<220>
<221> misc_feature
<222> (1)..(16)
<223> 3-10-3 LNA Gapmer oligo - fully phosphorothioate

<400> 97
ttcagacagt gactct 16