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Heineken Supply Chain B.V.

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Page 19

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Ala Val Gly Cys His Gly Gly Ile Ser Met Leu Ala Lys Pro Thr Ala
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Val Arg Arg Arg Phe Ala Ala Gly Gly Pro Ala Ala Gly Leu Glu Cys
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Asn Arg His Pro Asp Ser Ile Phe Arg Asp Lys Thr Val Ala Glu Leu
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Gly Cys Gly Asn Gly Trp Ile Ser Ile Ala Leu Ala Glu Lys Trp Cys
130 135 140

Pro Ser Lys Val Tyr Gly Leu Asp Ile Asn Pro Arg Ala Ile Lys Ile
145 150 155 160

Ala Trp Ile Asn Leu Tyr Leu Asn Ala Leu Asp Asp Asp Gly Leu Pro
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Ile Tyr Asp Ala Glu Gly Lys Thr Leu Leu Asp Arg Val Glu Phe Tyr
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Glu Ser Asp Leu Leu Ser Tyr Cys Arg Asp Asn Lys Ile Glu Leu Asp
195 200 205

Arg Ile Val Gly Cys Ile Pro Gln Ile Leu Asn Pro Asn Pro Glu Ala
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Leu Gly Leu Ile Ala Arg Ala Val Glu Glu Gly Ile Ser Val Ile Lys
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Pro Ser Gly Leu Met Val Phe Asn Met Gly Gly Arg Pro Gly Gln Gly
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Val Cys Glu Arg Leu Phe Leu Arg Arg Gly Phe Arg Ile Asn Lys Leu
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Asn Arg His Pro Asp Ser Ile Phe Arg Asp Lys Thr Val Ala Glu Leu
115 120 125

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130 135 140

Pro Ser Lys Val Tyr Gly Leu Asp Ile Asn Pro Arg Ala Ile Lys Ile
145 150 155 160

Ala Trp Ile Asn Leu Tyr Leu Asn Ala Leu Asp Asp Asp Gly Leu Pro
165 170 175

Ile Tyr Asp Ala Glu Gly Lys Thr Leu Leu Asp Arg Val Glu Phe Tyr
180 185 190

Glu Ser Asp Leu Leu Ser Tyr Cys Arg Asp Asn Lys Ile Glu Leu Asp
195 200 205

Arg Ile Val Gly Cys Ile Pro Gln Ile Leu Asn Pro Asn Pro Glu Ala
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Met Ser Lys Ile Val Thr Glu Asn Ser Ser Glu Glu Phe Leu Tyr Ser
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275 280 285

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Leu Gln Gly Phe Gln Gln Arg Lys Lys Leu Thr Met Met Glu Ile Pro
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Ser Ile Phe Ile Pro Glu Asp Trp Ser Phe Thr Phe Tyr Glu Gly Leu
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Pro Ser Lys Ile Gly Thr Ser Cys Ser Val Asp Ile Tyr Leu Ile Ser
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Phe Arg Thr Phe His Phe Arg Ile His Asp Val Val Leu Asp Pro His
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Leu Gln Gly Phe Gln Gln Arg Lys Lys Leu Thr Met Met Glu Ile Pro
 85 90 95

Ser Ile Phe Ile Pro Glu Asp Trp Ser Phe Thr Phe Tyr Glu Gly Leu
 100 105 110

Asn Arg His Pro Asp Ser Ile Phe Arg Asp Lys Thr Val Ala Glu Leu
 115 120 125

Gly Cys Gly Asn Gly Leu Trp Ser Gly Tyr Lys Pro Lys Ser Tyr Gln
 130 135 140

Asp Cys Met Asp Lys Pro Leu Leu Glu Cys Thr Arg Arg Arg Trp Ser
 145 150 155 160

Pro Asn Leu

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<210> 27
<211> 781
<212> DNA
<213> Artificial

<220>
<223> SacII BamHI fragment of Product 2

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ccccacctc caaggattcc agcaaagaaa gaagctaaca atgatggaga taccagcat 120
tttcattcca gaagactggt cattcacttt ctacgagggt ctcaaccggc atccagattc 180
catcttcagg gataagacag tagcagagct gggatgtggc aatggttgga tatccattgc 240
acttgcagaa aagtgggtgcc cttcgaagggt ttatgggtctg gatataaacc caagagctat 300
caagattgca tggataaacc ttactttgaa tgcactagac gacgatggtc tccaatcta 360
tgatgcggag gggaaaacat tgcttgacag agtcgaattc tatgaatctg atcttctttc 420
ttactgtaga gataacaaga tagaacttga tcgcattgtt ggatgcatac cacagattct 480
taacccaat ccagaggcaa tgtcaaagat tgtaactgaa aattcaagtg aggagtctct 540
gtactccttg agcaactact gtgctctcca gggttttgtt gaggaccaat ttggcctcgg 600
gttgattgct cgggctgttg aagaagggat atctgtgata aagcctagtg gtcttatggt 660
attcaacatg ggaggccggc caggacaagg tgtctgtgag cgctatttc tacgccgtgg 720
atttcgcata aataagctct ggcaaacaaa aattatgcag atagcaattc ttgaggatc 780
c 781

<210> 28
<211> 781
<212> DNA
<213> Artificial

<220>
<223> SacII BamHI fragment of Product 3

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ccccacctc caaggattcc agcaaagaaa gaagctaaca atgatggaga taccagcat 120
tttcattcca gaagactggt cattcacttt ctacgagggt ctcaaccggc atccagattc 180
catcttcagg gataagacag tagcagagct gggatgtggc aatggttgga tatccattgc 240
acttgcagaa aagtgggtgcc cttcgaagggt ttatgggtctg gatataaacc caagagctat 300
caagattgca tggataaacc ttactttgaa tgcactagac gacgatggtc tccaatcta 360
tgatgcggag gggaaaacat tgcttgacag agtcgaattc tatgaatctg atcttctttc 420

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ttactgtaga gataacaaga tagaacttga tcgcattggt ggatgcatac cacagattct	480
taacccaat ccagaggcaa tgtcaaagat tgtaactgaa aattcaagt aggagttctt	540
gtactccttg agcaactact gtgctctcca gggttttggt gaggaccaat ttggcctcgg	600
gttgattgct cgggctgttg aagaagggat atctgtgata aagcctagt gtcttatggt	660
attcaacatg ggaggccggc caggacaagg tgtctgtgag cgcctatttc tacgccgtgg	720
atttcgcatac aataagctct ggcaacaaa aattatgcag atagcaattc tttgaggatc	780
c	781

<210> 29
 <211> 703
 <212> DNA
 <213> Artificial

<220>
 <223> SacII BamHI fragment of Product 4

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ccccacctc caaggattcc agcaaagaaa gaagctaaca atgatggaga taccagcat	120
tttcattcca gaagactggt cattcacttt ctacgagggt ctcaaccggc atccagattc	180
catcttcagg gataagacag tagcagagct gggatgtggc aatgggttga tatccattgc	240
acttgagaa aagtgggtgcc cttcgaagggt ttatggtctg gatataaacc caagagctat	300
caagattgca tggataaacc ttacttgaa tgcactagac gacgatggc tccaatcta	360
tgatgcggag gggaaaacat tgcttgacag agtcgaattc tatgaatctg atcttctttc	420
ttactgtaga gataacaaga tagaacttga tcgcattggt ggatgcatac cacagattct	480
taacccaat ccagaggcaa tgtcaaagat tgtaactgaa aattcaagt aggagttctt	540
gtactccttg agcaactact gtgctctcca gggttttggt gaggaccaat ttggcctcgg	600
gttgattgct cgggctgttg aagaagggat atctgtgata aagcctagt gtcttatggt	660
attcaacatg ggaggccggc caggacaagg ctgctaagga tcc	703

<210> 30
 <211> 394
 <212> DNA
 <213> Artificial

<220>
 <223> SacII BamHI fragment of Product 6

<400> 30	
ggccgcgggg ctcgagtgt tccgcacctt ccacttccgc atccacgacg tcgtcctcga	60
ccccacctc caaggattcc agcaaagaaa gaagctaaca atgatggaga taccagcat	120
tttcattcca gaagactggt cattcacttt ctacgagggt ctcaaccggc atccagattc	180

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catcttcagg gataagacag tagcagagct gggatgtggc aatgggttga tatccattgc	240
acttgcagaa aagtgggtgcc ctccgaagat tggcacctct tggtccgtag atatttatct	300
tatctcggtt gttgcaaaca tgggacctgc agaagttaga catttactca ggttacttta	360
tatgaaactt ttaggtgtct gccagtaggg atcc	394

<210> 31
 <211> 376
 <212> DNA
 <213> Artificial

<220>
 <223> SacII BamHI fragment of Product 7

<400> 31	
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ccccacctc caaggattcc agcaaagaaa gaagctaaca atgatggaga taccagcat	120
tttcattcca gaagactggt cattcacttt ctacgagggt ctcaaccggc atccagattc	180
catcttcagg gataagacag tagcagagct gggatgtggc aatgggttga tatccattgc	240
acttgcagaa aagtgggtgcc ctccgaagat tggcacctct tggtccgtag atatttatct	300
tatctcggtt gttgcaaaca tgggacctgc agaagttaga catttactca ggtttatggt	360
ctggatataa ggatcc	376

<210> 32
 <211> 325
 <212> DNA
 <213> Artificial

<220>
 <223> SacII BamHI fragment of Product 8

<400> 32	
ggccgcgggg ctcgagtgt tccgcacctt ccacttccgc atccacgacg tcgtcctcga	60
ccccacctc caaggattcc agcaaagaaa gaagctaaca atgatggaga taccagcat	120
tttcattcca gaagactggt cattcacttt ctacgagggt ctcaaccggc atccagattc	180
catcttcagg gataagacag tagcagagct gggatgtggc aatgggttat ggtctggata	240
taaaccaag agctatcaag attgcatgga taaaccttta cttgaatgca ctagacgacg	300
atggtctccc aatctataag gatcc	325

<210> 33
 <211> 271
 <212> DNA
 <213> Barley cv. Prestige

<400> 33	
cgattccagc ttccggttgt taattttggt atgtttgtga actttgctgc attcaggggt	60

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ttgttgagga ccaatttggc ctcgggttga ttgctcgggc tgttgaagaa gggatatctg 120
 tgataaagcc tagtgggtctt atggtattca acatgggagg ccggccagga caaggtgtct 180
 gtgagcgctt atttctacgc cgtggatttc gcatcaataa gctctggcaa acaaaaatta 240
 tgcaggtagc aattctttga gtgactagat g 271

<210> 34
 <211> 271
 <212> DNA
 <213> Barley Mutant 8063

<400> 34
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 ttgttgagga ccaatttggc ctcgggttga ttgctcgggc tgttgaagaa gggatatctg 120
 tgataaagcc tagtgggtctt atggtattca acatgggagg ccggccagga caaggtgtct 180
 gtgagcgctt atttctacgc cgtggatttc gcatcaataa gctctggcaa acaaaaatta 240
 tgcagatagc aattctttga gtgactagat g 271

<210> 35
 <211> 121
 <212> DNA
 <213> Barley cv. Sebastian

<400> 35
 ggcatccaga ttccatcttc agggataaga cagtagcaga gctgggatgt ggcaatggtt 60
 ggatatccat tgcacttgca gaaaagtggg gcccttcgaa gggtggcacc tcttgttccg 120
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<210> 36
 <211> 123
 <212> DNA
 <213> Barley Mutant 14018

<400> 36
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 ggatatccat tgcacttgca gaaaagtggg gcccttcgaa gattggcacc tcttgttccg 120
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<210> 37
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25

<210> 38
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<220>
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<400> 38
 aggattccag caaagaaaga agc

23

<210> 39
 <211> 24
 <212> DNA
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<220>
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<400> 39
 gattcttaac cccaatccag aggc

24

<210> 40
 <211> 25
 <212> DNA
 <213> Artificial

<220>
 <223> PCR primer

<400> 40
 gggttttgtt gaggaccaat ttggc

25

<210> 41
 <211> 21
 <212> DNA
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<400> 41
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21

<210> 42
 <211> 26
 <212> DNA
 <213> Artificial

<220>
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<400> 42
 catatggatc tggaccgcag cttctt

26

<210> 43

<211> 25
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ccttcgaagg gcaccacttt tctgc

25

<210> 44
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ctggagagca cagtagttgc tcaag

25

<210> 45
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<400> 45
ctgcataatt tttgtttgcc agagc

25

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<400> 46
tacaccattt gagcttggca gact

24

<210> 47
<211> 24
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<400> 47
aaaatggagg cgtttactgc agaa

24

<210> 48
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<400> 48
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<400> 56
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<210> 57
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<400> 57
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<210> 58
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<400> 58
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<210> 59
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<220>
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<400> 59
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<210> 60
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<220>
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<400> 60
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<210> 61
 <211> 26
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<220>
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<400> 61
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<210> 62
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<400> 63
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cttggaggtg ggggtcgagg acgacg

26

<210> 65
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<400> 65
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<210> 66
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<220>
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<400> 66
aggattccag caaagaaaga agc

23

<210> 67
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aatccagca acaagattcc ggaaa

25

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25

<210> 69
<211> 12
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<223> His Tag

<400> 69

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1 5 10

<210> 70

<211> 11

<212> PRT

<213> Artificial

<220>

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1 5 10

<210> 71

<211> 31

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<220>

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<400> 71

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31

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32

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27

<210> 74

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46

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27

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37

<210> 77

<211> 19

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cgattccagc ttccggttg

19

<210> 79

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<400> 79

cgattccagc ttccggttg

19

<210> 80

<211> 22

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<220>

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<220>

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<400> 81

catctagtca ctcaaagaat tgctac

26

<210> 82

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<400> 82

catctagtca ctcaaagaat tgctat

26

<210> 83

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<212> DNA

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<400> 84

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<210> 85
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<400> 85
 ggccgcgggg ctcgagtgt tccgcac 27

<210> 86
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<400> 86
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 tgc 63

<210> 87
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<220>
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<400> 87
 ggccgcgggg ctcgagtgt tccgcac 27

<210> 88
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 <212> DNA
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<220>
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<400> 88
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 atatctacgg 70

<210> 89
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 <213> Artificial

<220>
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<400> 89
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<210> 90
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 <212> DNA
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<220>
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<400> 90
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<210> 91
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<220>
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<400> 91
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<210> 92
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<220>
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<400> 92
 ggatccttat atccagacca taaacctgag taaatgtcta acttctgc 48

<210> 93
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<220>
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<400> 93
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<210> 94
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<220>
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<400> 94

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 acatcccagc tctgctactg 80

<210> 95
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<220>
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<400> 95
 ggccgcgggg ctcgagtgc tccgcac 27

<210> 96
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<210> 97
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<400> 97
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<210> 98
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<400> 98
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<400> 99
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<400> 101
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<400> 102
 ctacggaaca agaggtgcca at 22

<210> 103
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<400> 103
 ctacggaaca agaggtgcca at 22

<210> 104
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<220>
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<400> 104
 catctagtca ctcaaagaat tgctat 26

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