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<151> 2007-11-29

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<151> 2007-11-29

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<151> 2007-09-21

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<210> 9

5 <211> 442

<212> PRT

10 <213> Streptococcus pneumoniae

<400> 9

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 GKLAELNDLF TDEFVKDVNN ENIVQASKAG DKAYMPISS APFYMAMNKK MLEDAGVANL 180  
 VKEGWTTDDF EKVLKALKDK GYTPGSLFSS GQGGDQGTTRA FISNLYSGSV TDEKVSQYTT 240  
 DDPKFVKGLE KATSWIKDNL INNGSQFDGG ADIQNFANGQ TSYTILWAPA QNGIQAKLLE 300  
 20 ASKVEVVEVP FPSDEGKPAL EYLVNGFAVF NNKDDKKVAA SKKFIQFIAD DKEWGP KDVV 360  
 RTGAFPVRTS FGKLYEDKRM ETISGWTQYY SPYNTIDGF AEMRTLWFPM LQSVSNGDEK 420  
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25 <210> 10

<211> 630

30 <212> DNA

<213> Streptococcus pneumoniae

35 <400> 10

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 40 acaactcttt tacgtatgct tgcaggtctt gaaaccattg attcagggca aatcttttat 180  
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50 <210> 11

<211> 213

55 <212> PRT

<213> Streptococcus pneumoniae

60

<400> 11

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5	EQLGLGGHAE	AYPFSLSGGQ	KQRVALARAM	MIDPEIIGYD	EPTSAFTLDP	ELRLEVEKLI	180
	LQNRELGMTQ	IVVTHDLQFA	ENIADVLLKV	EPK			213

10

Lys Val Glu Pro Lys

210

15

<210> 12

20 <211> 1272

<212> DNA

25 <213> Streptococcus pneumoniae

<400> 12

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	aaagcttatg	aaaaagaagc	tggagtaaaa	gtcactctta	aaactgggtga	tgctctagga	240
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<211> 437

<212> PRT

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<213> Streptococcus pneumoniae

5 <400> 13

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VKLSDGAKTD	DTKSLVTAA	NGKVYGAFAV	IESLVMYYNK	DLVKDAPFTK	TFADLENLAK	180
10 DSKYAFAGED	GKTTAFLADW	TNFYYTYGLL	AGNGAYVFGQ	NGKDAKDIFT	GLANDGSIAG	240
INYAKSWYEK	WPKGMQDTEG	AGNLIQTQFQ	EGKTAAIIDG	PWKAQAFKDF	TAKVNYGVAT	300
IPTLPNGKEY	AAFGGGKAWV	IPQAVKNLEA	SQKFVDFLVA	TEQQKVLYDK	FTTNEIPANT	360
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15 NDAVTLIKET	IKQKFGE					437

<210> 14

20 <211> 444

<212> DNA

<213> Streptococcus pneumoniae

25

<400> 14

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35 attctctcca	ggcatcaaac	ctaattgtcct	aaactctatca	tttgttgtct	caccaacaaa	360
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<210> 15

<211> 147

45 <212> PRT

<213> Streptococcus pneumoniae

50

<400> 15

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55 EIVHNAQNSL	FNVKQQLNVE	EEEDLCL				147

<210> 16

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<211> 161

<212> PRT

5 <213> Streptococcus pneumoniae

<400> 16

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<210> 17

<211> 501

20 <212> PRT

<213> Streptococcus pneumoniae

25

<400> 17

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GIKSTREVIA LNVAGALDIY DDVEVGRQVL VDDGKLGLRV VAKDDATREF EVEVENDGII 180  
AKQKGVNIPN TKIPFPALAE RDNDDIRFGL EQGINFIAIS FVRTAKDVNE VRAICEETGN 240  
GHVQLFAKIE NQQGIDNLDE IIEAADGIMI ARGDMGIEVP FEMVPVYQKM IIKKVNAAGK 300  
VVITATNMLE TMTEKPRATR SEVSDVFNAV IDGTDATMLS GESANGKYPL ESVTTMATID 360  
35 KNAQALLNEY GRLDSDSFER NSKTEVMASA VKDATSSMDI KLVVTLTKTG HTARLISKYR 420  
PNADILALTF DELTERGLML NWGVIPMLTD APSSTDDMFE IAERKAVEAG LVESGDDIVI 480  
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<210> 18

<211> 1317

45 <212> DNA

<213> Streptococcus pneumoniae

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<400> 18

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	ttctggtaac	actggttgta	cttccggttc	ccctttttca	gtcacaacag	cttctggtaa	720
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	<211>	438					
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30	ESKESYALVY	EKDALPNTGS	SQSIMTALGL	LAIGSLIVII	TKDKKRKKIA	TFLIVGATGL	120
	VTLSTASALN	LNANIHESGR	DGVLQISGYR	YVDYLELDDR	TVSPVEQPKV	VTDKGEPEVQ	180
	PALPEAVVTG	KGKTEVQPTL	PEAVVTEKGE	PEVQPVLPFA	VVAEKGEPEV	QPVLPEAVVA	240
	EKGEPEVQPA	LPEAVVTEKG	EPEVHEKPDY	TQPIGANLVE	PEVHEKLAYT	EPVGTGTVDE	300
	NGNLIIEPPVN	DIPEYTEPIS	TVSEVASERE	ELPSLHTDIR	TETIPKTTIE	ESDPSKFIGD	360
35	NSVKQVGEDG	ERQIVTSYEE	LHGKKISESV	ETVTILKEMK	PEIIVKGTKE	RPKEKTDSCF	420
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5	tcctacaaga atcagaatag aaacatccag aaaaagagaa agaattggtag aagccaaggc	660
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10 <210> 21

<211> 296

<212> PRT

15 <213> Streptococcus pneumoniae

20 <400> 21

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	IIFSFMKPF EKMNDVMSQSN SMVSSAIED INGIETIKSL TSEENRYQNI DSEFVDYLEK	180
	SFKLSKYSIL QTSCLKQGTKL VLNILILWFG AQLVMSSKIS IGQLITFNTL FSYFTTPMEN	240
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30 <210> 22

<211> 1071

<212> DNA

35 <213> Streptococcus pneumoniae

40 <400> 22

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60

<210> 23

**<211> 356**

5 <212> PRT

<213> Streptococcus pneumoniae

10                      <400>      23

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FLNQSFDPGN	KFSIPYFWGT	LGIVYNETMV	DEAPEHWDDL	WKPEYKNSIM	LFDGAREVLG	180
LGLNSLGYSL	NSKDLQQLLE	TVDKLYKLTPT	NIKAIVADEM	KGYMIQNNVA	IGVTFSGEAS	240
QMLEKNENLR	YVPTEDASNL	WFDNMVIPKT	VKNQNSAYAF	INFMCLKPNA	LQNAEYVGYS	300
TPNLPAKELL	PEETKEDKAF	YPDVETMKHL	EYVEKPDHKW	TGKYSDLFLO	FKMYRK	356

20

<210> 24

<211> 2574

<212> DNA

<213> Streptococcus pneumoniae

30

<400> 24

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<210> 25

20 <211> 857

<212> PRT

25 <213> Streptococcus pneumoniae

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PELTDVLKET VDTADVDGTQ ASPAETTPEQ VKGGVKENTK DSIDVPAAYL EKAEGKGPFT 180

AGVNVQVIPYE LFAGDGMLTR LLLKASDNAP WSDNGTAKNP ALPPLEGLTK GKYFYEVLDN 240

35 GNTVGKQGQA LIDQLRANGT QTYKATVKVY GNKDGKADLT NLVATKNVDI NINGLVAKET 300

VQKAVADNVK DSIDVPAAYL EKAKGEGPFT AGVNVHVIPE LFAGDGMLTR LLLKASDKAP 360

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40 LALDGNVAGK EKQALIDQFR ANGTQYTSAT VNVYGNKDGK PDLNIVATK KVTININGLI 600

SKETVQKAVA DNVKDSIDVP AAYLEKAKGE GPFTAGVNHV IPYELFAGDG MLTRLLLKAS 660

DKAPWSDNGD AKNPALSPLG ENVKTKGQYF YQVALDGNVA GKEKQALIDQ FRANGTQYTS 720

ATVNVYGNKD GKPDLDNIVA TTKVTIKINV KETS DTANGS LSPSNSGSGV TPMNHNHATG 780

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<210> 26

50 <211> 600

<212> DNA

55 <213> Streptococcus pneumoniae

<400> 26

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	gggaaaggct	ctttcactgc	cggtgtaaac	caagtaattc	cttatgaact	attcgctggt	180
	gatggatgt	taactcgtct	attactaaaa	gcttcggata	atgctccttg	gtctgacaat	240
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	ggtaaagctg	acttgactaa	tctagtgtct	actaaaaatg	tagacatcaa	catcaatgga	480
	ttagttgcta	aagaaacagt	tcaaaaagcc	ggtgcagaca	acgttaaaga	cagtatcgat	540
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<210> 27

15 <211> 200

<212> PRT

20 <213> Streptococcus pneumoniae

<400> 27

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	LRANGTQTYK	ATVKVYGNKD	GKADLTNLVA	TKNVDINING	LVAKETVQKA	VADNVKDSID	180
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<210> 28

<211> 839

35 <212> DNA

<213> Streptococcus pneumoniae

40

<400> 28

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	cagacaacgt	taaggacagt	atcgatgttc	cagcagccta	cctagaaaag	gccaaagggtg	240
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60 <210> 29

<211> 279

<212> PRT

5 <213> Streptococcus pneumoniae

<400> 29

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	AKNPALSPLG	ENVKTKGQYF	YQVALDGNVA	GKEKQALIDQ	FRANGTQTYS	ATVNVYGNKD	180
	GKPDLDNIVA	TKKVTIKINV	KETS DTANGS	LSPSNSGSGV	TPMNHNHATG	TTDSMPADTM	240
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<210> 30

20 <211> 1977

<212> DNA

25 <213> Streptococcus pneumoniae

<400> 30

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<210> 31

<211> 658

10

<212> PRT

<213> Streptococcus pneumoniae

15

<400> 31

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	AKVIEDWVYD	SQYDAWFYIK	ADGQHAKEW	LQIKGKDYYF	KSGGYLLTSQ	WINQAYVNAS	180
20	GAKVQQGWLF	DKQYQSWFYI	KENGNYADKE	WIFENGHYYY	LKSGGYMAAN	EWIWDKESWF	240
	YLKFDGKMAE	KEWVYDSHSQ	AWYYFKSGGY	MTANEWIWDK	ESWFYLKSDG	KIAEKEWVYD	300
	SHSQAWYYFK	SGGYMTANEW	IWDKESWFYL	KSDGKIAEKE	WVYDSHSQAW	YYFKSGGYMA	360
	KNETVDGYQL	GSDGKWLGGK	TTNENAAYYQ	VVPVTANVYD	SDGEKLSYIS	QGSVVWLDKD	420
	RKSDDKRLAI	TISGLSGYMK	TEDLQALDAS	KDFIPYYESD	GHRFYHYVAQ	NASIPVASHL	480
25	SDMEVGKKYY	SADGLHFDGF	KLENPFLFKD	LTEATNYSAE	ELDKVFSLLN	INNSLLENKG	540
	ATFKEAEEHY	HINALYLLAH	SALESNWGRS	KIAKDKNNFF	GITAYDTTPY	LSAKTFDDVD	600
	KGILGATKWI	KENYIDRGRT	FLGNKASGMN	VEYASDPYWG	EKIASVMMKI	NEKLGGKD	658