

VU62788PCT_ST25.txt
SEQUENCE LISTING

<110> GlaxoSmithKline Biologicals S.A.
ID Biomedical Corporation of Quebec
BAUDOUX, Guy J-M
BLAIS, Normand
Rheault, Patrick
RUELLE, Jean-Louis

<120> Recombinant Antigen

<130> VU62788

<150> 61/016,524

<151> 2007-12-24

<150> 61/056,206

<151> 2008-05-27

<160> 16

<170> PatentIn version 3.5

<210> 1

<211> 1697

<212> DNA

<213> respiratory syncytial virus

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<210> 2
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 <213> respiratory syncytial virus

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Tyr Gln Ser Thr Cys Ser Ala Val Ser Lys Gly Tyr Leu Ser Ala Leu
 35 40 45

Arg Thr Gly Trp Tyr Thr Ser Val Ile Thr Ile Glu Leu Ser Asn Ile
 50 55 60

Lys Glu Asn Lys Cys Asn Gly Thr Asp Ala Lys Val Lys Leu Ile Lys
 65 70 75 80

Gln Glu Leu Asp Lys Tyr Lys Asn Ala Val Thr Glu Leu Gln Leu Leu
 85 90 95

Met Gln Ser Thr Pro Ala Thr Asn Asn Arg Ala Arg Arg Glu Leu Pro
 100 105 110

Arg Phe Met Asn Tyr Thr Leu Asn Asn Ala Lys Lys Thr Asn Val Thr
 115 120 125

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 145 150 155 160
 Glu Gly Glu Val Asn Lys Ile Lys Ser Ala Leu Leu Ser Thr Asn Lys
 165 170 175
 Ala Val Val Ser Leu Ser Asn Gly Val Ser Val Leu Thr Ser Lys Val
 180 185 190
 Leu Asp Leu Lys Asn Tyr Ile Asp Lys Gln Leu Leu Pro Ile Val Asn
 195 200 205
 Lys Gln Ser Cys Ser Ile Ser Asn Ile Ala Thr Val Ile Glu Phe Gln
 210 215 220
 Gln Lys Asn Asn Arg Leu Leu Glu Ile Thr Arg Glu Phe Ser Val Asn
 225 230 235 240
 Ala Gly Val Thr Thr Pro Val Ser Thr Tyr Met Leu Thr Asn Ser Glu
 245 250 255
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 260 265 270
 Leu Met Ser Asn Asn Val Gln Ile Val Arg Gln Gln Ser Tyr Ser Ile
 275 280 285
 Met Ser Ile Ile Lys Glu Glu Val Leu Ala Tyr Val Val Gln Leu Pro
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 Leu Tyr Gly Val Ile Asp Thr Pro Cys Trp Lys Leu His Thr Ser Pro
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 325 330 335
 Thr Asp Arg Gly Trp Tyr Cys Asp Asn Ala Gly Ser Val Ser Phe Phe
 340 345 350
 Pro Gln Ala Glu Thr Cys Lys Val Gln Ser Asn Arg Val Phe Cys Asp
 355 360 365
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 370 375 380

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Asp Ile Phe Asn Pro Lys Tyr Asp Cys Lys Ile Met Thr Ser Lys Thr
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405 410 415

Tyr Gly Lys Thr Lys Cys Thr Ala Ser Asn Lys Asn Arg Gly Ile Ile
420 425 430

Lys Thr Phe Ser Asn Gly Cys Asp Tyr Val Ser Asn Lys Gly Val Asp
435 440 445

Thr Val Ser Val Gly Asn Thr Leu Tyr Tyr Val Asn Lys Gln Glu Gly
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Lys Ser Leu Tyr Val Lys Gly Glu Pro Ile Ile Asn Phe Tyr Asp Pro
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Leu Val Phe Pro Ser Asp Glu Phe Asp Ala Ser Ile Ser Gln Val Asn
485 490 495

Glu Lys Ile Asn Gln Ser Leu Ala Phe Ile Arg Lys Ser Asp Glu Leu
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Leu His Asn Val Asn Ala Gly Lys Ser Thr Ile Asn Ile Met Ile Thr
515 520 525

Thr Ile Ile Ile Val Ile Ile Val Ile Leu Leu Ser Leu Ile Ala Val
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<210> 3
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<212> DNA
<213> respiratory syncytial virus

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atcacattat ccattctggc aatgataatc tcaacttcac ttataattac agccatcata 180
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ggagtcaagt caaacctgca acccacaaca gtcaagacta aaaacacaac aacaacccaa      420
acacaacca gcaagcccac tacaaaacaa cgccaaaaca aaccaccaa caaacccaat      480
aatgattttc acttcgaagt gtttaacttt gtaccctgca gcatatgcag caacaatcca      540
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aaaccaaagg aagtaccac caccaagccc acagaagagc caaccatcaa caccacaaa      720
acaaacatca caactacact gctcaccaac aacaccacag gaaatccaaa actcacaagt      780
caaatggaaa ccttcactc aacctcctcc gaaggcaatc taagcccttc tcaagtctcc      840
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<212> PRT
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Leu Asn Leu Lys Ser Ile Ala Gln Ile Thr Leu Ser Ile Leu Ala Met
          35          40          45
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```
Ile Ile Ser Thr Ser Leu Ile Ile Thr Ala Ile Ile Phe Ile Ala Ser
          50          55          60
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Ala Asn His Lys Val Thr Leu Thr Thr Ala Ile Ile Gln Asp Ala Thr
65          70          75          80
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Ser Gln Ile Lys Asn Thr Thr Pro Thr Tyr Leu Thr Gln Asp Pro Gln
          85          90          95
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Leu Gly Ile Ser Phe Ser Asn Leu Ser Glu Ile Thr Ser Gln Thr Thr
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          115          120          125
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Lys Pro Thr Thr Lys Gln Arg Gln Asn Lys Pro Pro Asn Lys Pro Asn
 145 150 155 160

Asn Asp Phe His Phe Glu Val Phe Asn Phe Val Pro Cys Ser Ile Cys
 165 170 175

Ser Asn Asn Pro Thr Cys Trp Ala Ile Cys Lys Arg Ile Pro Asn Lys
 180 185 190

Lys Pro Gly Lys Lys Thr Thr Thr Lys Pro Thr Lys Lys Pro Thr Phe
 195 200 205

Lys Thr Thr Lys Lys Asp Leu Lys Pro Gln Thr Thr Lys Pro Lys Glu
 210 215 220

Val Pro Thr Thr Lys Pro Thr Glu Glu Pro Thr Ile Asn Thr Thr Lys
 225 230 235 240

Thr Asn Ile Thr Thr Thr Leu Leu Thr Asn Asn Thr Thr Gly Asn Pro
 245 250 255

Lys Leu Thr Ser Gln Met Glu Thr Phe His Ser Thr Ser Ser Glu Gly
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 <223> Recombinant PreF polynucleotide

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 tgctccgccg tgtccaaggg ctacctgtcc gccctgcgga ccggctggta cacctccgtg 180
 atcaccatcg agctgtccaa catcaaggaa aacaagtgca acggcaccga cgccaaggtg 240
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480 atcaagagc cctgtgtc cccaacaag gccgtgtgt cctgtcca cgcgtgtcc
540 gtgtgacct ccaagtggt gatttgag aactacatg acaagcagct gctgacct
600 gtgaacaagc agtctgtc catctccaac atcgaagccg tgaatcgagt ccagcagaag
660 aacaacggc tgttgagat caccgcgag ttctccgtga acgcccgt gaccacct
720 gtgtccacct acatgtgac caatccgag ctgtgtccc tgaatcaaga catgtccatc
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25
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35

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 35 40 45

Arg Thr Gly Trp Tyr Thr Ser Val Ile Thr Ile Glu Leu Ser Asn Ile
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Lys Glu Asn Lys Cys Asn Gly Thr Asp Ala Lys Val Lys Leu Ile Lys
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Gln Glu Leu Asp Lys Tyr Lys Ser Ala Val Thr Glu Leu Gln Leu Leu
 85 90 95

Met Gln Ser Thr Pro Ala Thr Asn Asn Lys Phe Leu Gly Phe Leu Leu
 100 105 110

Gly Val Gly Ser Ala Ile Ala Ser Gly Ile Ala Val Ser Lys Val Leu
 115 120 125

His Leu Glu Gly Glu Val Asn Lys Ile Lys Ser Ala Leu Leu Ser Thr
 130 135 140

Asn Lys Ala Val Val Ser Leu Ser Asn Gly Val Ser Val Leu Thr Ser
 145 150 155 160

Lys Val Leu Asp Leu Lys Asn Tyr Ile Asp Lys Gln Leu Leu Pro Ile
 165 170 175

Val Asn Lys Gln Ser Cys Ser Ile Ser Asn Ile Glu Thr Val Ile Glu
 180 185 190

Phe Gln Gln Lys Asn Asn Arg Leu Leu Glu Ile Thr Arg Glu Phe Ser
 195 200 205

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

Ser Glu Leu Leu Ser Leu Ile Asn Asp Met Pro Ile Thr Asn Asp Gln
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Lys Lys Leu Met Ser Asn Asn Val Gln Ile Val Arg Gln Gln Ser Tyr
 245 250 255

Ser Ile Met Ser Ile Ile Lys Glu Glu Val Leu Ala Tyr Val Val Gln
 260 265 270

Leu Pro Leu Tyr Gly Val Ile Asp Thr Pro Cys Trp Lys Leu His Thr
 275 280 285

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325 330 335

Cys Asp Thr Met Asn Ser Leu Thr Leu Pro Ser Glu Val Asn Leu Cys
340 345 350

Asn Ile Asp Ile Phe Asn Pro Lys Tyr Asp Cys Lys Ile Met Thr Ser
355 360 365

Lys Thr Asp Val Ser Ser Ser Val Ile Thr Ser Leu Gly Ala Ile Val
370 375 380

Ser Cys Tyr Gly Lys Thr Lys Cys Thr Ala Ser Asn Lys Asn Arg Gly
385 390 395 400

Ile Ile Lys Thr Phe Ser Asn Gly Cys Asp Tyr Val Ser Asn Lys Gly
405 410 415

Val Asp Thr Val Ser Val Gly Asn Thr Leu Tyr Tyr Val Asn Lys Gln
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Glu Gly Lys Ser Leu Tyr Val Lys Gly Glu Pro Ile Ile Asn Phe Tyr
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Asp Pro Leu Val Phe Pro Ser Asp Glu Phe Asp Ala Ser Ile Ser Gln
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Val Asn Glu Lys Ile Asn Gln Ser Leu Ala Phe Ile Arg Lys Ser Asp
465 470 475 480

Glu Lys Leu His Asn Val Glu Asp Lys Ile Glu Glu Ile Leu Ser Lys
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<211> 1855

<400>
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240	atcaccatcg	agctgtcca	catcaagaag	aaagaattga	acgacacga	cgcgaagtc	
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<213> Artificial sequence

<220>
<223> Chimeric PreF-G polypeptide

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Tyr Gln Ser Thr Cys Ser Ala Val Ser Lys Gly Tyr Leu Ser Ala Leu
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Arg Thr Gly Trp Tyr Thr Ser Val Ile Thr Ile Glu Leu Ser Asn Ile
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Lys Glu Asn Lys Cys Asn Gly Thr Asp Ala Lys Val Lys Leu Ile Lys
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Gln Glu Leu Asp Lys Tyr Lys Ser Ala Val Thr Glu Leu Gln Leu Leu
85 90 95

Met Gln Ser Thr Pro Ala Thr Asn Asn Lys Lys Phe Leu Gly Phe Leu
100 105 110

Leu Gly Val Gly Ser Ala Ile Ala Ser Gly Ile Ala Val Ser Lys Val
115 120 125

Leu His Leu Glu Gly Glu Val Asn Lys Ile Lys Ser Ala Leu Leu Ser
130 135 140

Thr Asn Lys Ala Val Val Ser Leu Ser Asn Gly Val Ser Val Leu Thr
145 150 155 160

Ser Lys Val Leu Asp Leu Lys Asn Tyr Ile Asp Lys Gln Leu Leu Pro
165 170 175

Ile Val Asn Lys Gln Ser Cys Ser Ile Ser Asn Ile Glu Thr Val Ile
180 185 190

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Glu Phe Gln Gln Lys Asn Asn Arg Leu Leu Glu Ile Thr Arg Glu Phe
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 Asn Ser Glu Leu Leu Ser Leu Ile Asn Asp Met Pro Ile Thr Asn Asp
 225 230 235 240
 Gln Lys Lys Leu Met Ser Asn Asn Val Gln Ile Val Arg Gln Gln Ser
 245 250 255
 Tyr Ser Ile Met Ser Ile Ile Lys Glu Glu Val Leu Ala Tyr Val Val
 260 265 270
 Gln Leu Pro Leu Tyr Gly Val Ile Asp Thr Pro Cys Trp Lys Leu His
 275 280 285
 Thr Ser Pro Leu Cys Thr Thr Asn Thr Lys Glu Gly Ser Asn Ile Cys
 290 295 300
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 305 310 315 320
 Ser Phe Phe Pro Leu Ala Glu Thr Cys Lys Val Gln Ser Asn Arg Val
 325 330 335
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 340 345 350
 Cys Asn Ile Asp Ile Phe Asn Pro Lys Tyr Asp Cys Lys Ile Met Thr
 355 360 365
 Ser Lys Thr Asp Val Ser Ser Ser Val Ile Thr Ser Leu Gly Ala Ile
 370 375 380
 Val Ser Cys Tyr Gly Lys Thr Lys Cys Thr Ala Ser Asn Lys Asn Arg
 385 390 395 400
 Gly Ile Ile Lys Thr Phe Ser Asn Gly Cys Asp Tyr Val Ser Asn Lys
 405 410 415
 Gly Val Asp Thr Val Ser Val Gly Asn Thr Leu Tyr Tyr Val Asn Lys
 420 425 430
 Gln Glu Gly Lys Ser Leu Tyr Val Lys Gly Glu Pro Ile Ile Asn Phe
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435

440

445

Tyr Asp Pro Leu Val Phe Pro Ser Asp Glu Phe Asp Ala Ser Ile Ser
 450 455 460

Gln Val Asn Glu Lys Ile Asn Gln Ser Leu Ala Phe Ile Arg Lys Ser
 465 470 475 480

Asp Glu Lys Leu His Asn Val Glu Asp Lys Ile Glu Glu Ile Leu Ser
 485 490 495

Lys Ile Tyr His Ile Glu Asn Glu Ile Ala Arg Ile Lys Lys Leu Ile
 500 505 510

Gly Glu Ala Gly Gly Ser Gly Gly Ser Gly Gly Ser Lys Gln Arg Gln
 515 520 525

Asn Lys Pro Pro Asn Lys Pro Asn Asn Asp Phe His Phe Glu Val Phe
 530 535 540

Asn Phe Val Pro Cys Ser Ile Cys Ser Asn Asn Pro Thr Cys Trp Ala
 545 550 555 560

Ile Cys Lys Arg Ile Pro Asn Lys Lys Pro Gly Lys Lys Thr Thr Thr
 565 570 575

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<210> 9

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<212> DNA

<213> Artificial Sequence

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tgctccgccg tgtccaaggg ctacctgtcc gccctgcgga ccggctggta cacctccgtg 180

atcaccatcg agctgtccaa catcaaagaa aacaagtgca acggcaccga cgccaaggtc 240

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 Met Gln Ser Thr Pro Ala Thr Asn Asn Lys Lys Phe Leu Gly Phe Leu
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 Leu Gly Val Gly Ser Ala Ile Ala Ser Gly Ile Ala Val Ser Lys Val
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 Thr Asn Lys Ala Val Val Ser Leu Ser Asn Gly Val Ser Val Leu Thr
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 Ser Lys Val Leu Asp Leu Lys Asn Tyr Ile Asp Lys Gln Leu Leu Pro
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 Gln Lys Lys Leu Met Ser Asn Asn Val Gln Ile Val Arg Gln Gln Ser
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Thr Ser Pro Leu Cys Thr Thr Asn Thr Lys Glu Gly Ser Asn Ile Cys
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Leu Thr Arg Thr Asp Arg Gly Trp Tyr Cys Asp Asn Ala Gly Ser Val
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Ser Phe Phe Pro Leu Ala Glu Thr Cys Lys Val Gln Ser Asn Arg Val
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Phe Cys Asp Thr Met Asn Ser Leu Thr Leu Pro Ser Glu Val Asn Leu
340 345 350

Cys Asn Ile Asp Ile Phe Asn Pro Lys Tyr Asp Cys Lys Ile Met Thr
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Ser Lys Thr Asp Val Ser Ser Ser Val Ile Thr Ser Leu Gly Ala Ile
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Val Ser Cys Tyr Gly Lys Thr Lys Cys Thr Ala Ser Asn Lys Asn Arg
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Tyr Asp Pro Leu Val Phe Pro Ser Asp Glu Phe Asp Ala Ser Ile Ser
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Asp Glu Lys Leu His Asn Val Glu Asp Lys Ile Glu Glu Ile Leu Ser
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Lys Ile Tyr His Ile Glu Asn Glu Ile Ala Arg Ile Lys Lys Leu Ile
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<212> PRT

<213> Artificial sequence

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<223> Furin cleavage consensus motif

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<213> Artificial sequence

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1