

15. März 2011

492-31 PCT\_SeqList.txt  
SEQUENCE LISTING

<110> European Molecular Biology Laboratory (EMBL), et al.

<120> Influenza A 2009 pandemic H1N1 polypeptide fragments comprising endonuclease activity and their use

<150> US 61/340,335

<151> 2010-03-16

<130> 492-31 PCT

<160> 12

<170> PatentIn version 3.5

<210> 1

<211> 2151

<212> DNA

<213> Influenza A pandemic H1N1 virus (A/California/04/2009)

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<221> CDS

<222> (1)..(2151)

<223> PA-subunit of the Influenza A pandemic H1N1 virus (A/California/04/2009) RNA-dependent RNA polymerase

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gcg gaa aag gca atg aaa gaa tat ggg gaa gat ccg aaa atc gaa act	96
Ala Glu Lys Ala Met Lys Glu Tyr Gly Glu Asp Pro Lys Ile Glu Thr	
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aac aag ttt gct gca ata tgc aca cat ttg gaa gtt tgt ttc atg tat	144
Asn Lys Phe Ala Ala Ile Cys Thr His Leu Glu Val Cys Phe Met Tyr	
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tcg gat ttc cat ttc atc gac gaa cgg ggt gaa tca ata att gta gaa	192
Ser Asp Phe His Phe Ile Asp Glu Arg Gly Glu Ser Ile Ile Val Glu	
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tct ggt gac ccg aat gca cta ttg aag cac cga ttt gag ata att gaa	240
Ser Gly Asp Pro Asn Ala Leu Leu Lys His Arg Phe Glu Ile Ile Glu	
65 70 75 80	
gga aga gac cga atc atg gcc tgg aca gtg gtg aac agt ata tgt aac	288
Gly Arg Asp Arg Ile Met Ala Trp Thr Val Val Asn Ser Ile Cys Asn	
85 90 95	
aca aca ggg gta gag aag cct aaa ttt ctt cct gat ttg tat gat tac	336
Thr Thr Gly Val Glu Lys Pro Lys Phe Leu Pro Asp Leu Tyr Asp Tyr	
100 105 110	
aaa gag aac ccg ttc att gaa att gga gta aca ccg agg gaa gtc cac	384
Lys Glu Asn Arg Phe Ile Glu Ile Gly Val Thr Arg Arg Glu Val His	
115 120 125	
ata tat tac cta gag aaa gcc aac aaa ata aaa tct gag aag aca cac	432
Ile Tyr Tyr Leu Glu Lys Ala Asn Lys Ile Lys Ser Glu Lys Thr His	
130 135 140	
att cac atc ttt tca ttc act gga gag gag atg gcc acc aaa gcg gac	480
Ile His Ile Phe Ser Phe Thr Gly Glu Glu Met Ala Thr Lys Ala Asp	
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cag tcc gaa aga ggc gaa gag aca att gaa gaa aaa ttt gag att aca Gln Ser Glu Arg Gly Glu Glu Thr Ile Glu Glu Lys Phe Glu Ile Thr 195 200 205	624
gga act atg cgc aag ctt gcc gac caa agt ctc cca ccg aac ttc ccc Gly Thr Met Arg Lys Leu Ala Asp Gln Ser Leu Pro Pro Asn Phe Pro 210 215 220	672
agc ctt gaa aac ttt aga gcc tat gta gat gga ttc gag ccg aac ggc Ser Leu Glu Asn Phe Arg Ala Tyr Val Asp Gly Phe Glu Pro Asn Gly 225 230 235 240	720
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tat gat gca atc aaa tgc atg aag aca ttc ttt ggc tgg aaa gag cct Tyr Asp Ala Ile Lys Cys Met Lys Thr Phe Phe Gly Trp Lys Glu Pro 305 310 315 320	960
aac ata gtc aaa cca cat gag aaa ggc ata aat ccc aat tac ctc atg Asn Ile Val Lys Pro His Glu Lys Gly Ile Asn Pro Asn Tyr Leu Met 325 330 335	1008
gct tgg aag cag gtg cta gca gag cta cag gac att gaa aat gaa gag Ala Trp Lys Gln Val Leu Ala Glu Leu Gln Asp Ile Glu Asn Glu Glu 340 345 350	1056
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aga tct cta gca agc tgg gtc caa aat gaa ttc aat aag gca tgt gaa Arg Ser Leu Ala Ser Trp Val Gln Asn Glu Phe Asn Lys Ala Cys Glu 405 410 415	1248
ttg act gat tca agc tgg ata gaa ctt gat gaa ata gga gaa gat gtt Leu Thr Asp Ser Ser Trp Ile Glu Leu Asp Glu Ile Gly Glu Asp Val 420 425 430	1296

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ccc agg gga gtg gag gaa ggc tct att ggg aaa gtg tgc agg acc tta Pro Arg Gly Val Glu Glu Gly Ser Ile Gly Lys Val Cys Arg Thr Leu 625 630 635 640	1920
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2151

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&lt;212&gt; PRT

&lt;213&gt; Influenza A pandemic H1N1 virus (A/California/04/2009)

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Ser Asp Phe His Phe Ile Asp Glu Arg Gly Glu Ser Ile Ile Val Glu  
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Gly Arg Asp Arg Ile Met Ala Trp Thr Val Val Asn Ser Ile Cys Asn  
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Thr Thr Gly Val Glu Lys Pro Lys Phe Leu Pro Asp Leu Tyr Asp Tyr  
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Lys Glu Asn Arg Phe Ile Glu Ile Gly Val Thr Arg Arg Glu Val His  
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Ile His Ile Phe Ser Phe Thr Gly Glu Glu Met Ala Thr Lys Ala Asp  
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Tyr Thr Leu Asp Glu Glu Ser Arg Ala Arg Ile Lys Thr Arg Leu Phe  
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Thr Ile Arg Gln Glu Met Ala Ser Arg Ser Leu Trp Asp Ser Phe Arg  
 180 185 190

Gln Ser Glu Arg Gly Glu Glu Thr Ile Glu Glu Lys Phe Glu Ile Thr  
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Gly Thr Met Arg Lys Leu Ala Asp Gln Ser Leu Pro Pro Asn Phe Pro  
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Ser Leu Glu Asn Phe Arg Ala Tyr Val Asp Gly Phe Glu Pro Asn Gly  
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260 265 270

Gly Pro Leu Cys His Gln Arg Ser Lys Phe Leu Leu Met Asp Ala Leu  
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Lys Leu Ser Ile Glu Asp Pro Ser His Glu Gly Glu Gly Ile Pro Leu  
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Tyr Asp Ala Ile Lys Cys Met Lys Thr Phe Phe Gly Trp Lys Glu Pro  
305 310 315 320

Asn Ile Val Lys Pro His Glu Lys Gly Ile Asn Pro Asn Tyr Leu Met  
325 330 335

Ala Trp Lys Gln Val Leu Ala Glu Leu Gln Asp Ile Glu Asn Glu Glu  
340 345 350

Lys Ile Pro Arg Thr Lys Asn Met Lys Arg Thr Ser Gln Leu Lys Trp  
355 360 365

Ala Leu Gly Glu Asn Met Ala Pro Glu Lys Val Asp Phe Asp Asp Cys  
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Arg Ser Leu Ala Ser Trp Val Gln Asn Glu Phe Asn Lys Ala Cys Glu  
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Leu Thr Asp Ser Ser Trp Ile Glu Leu Asp Glu Ile Gly Glu Asp Val  
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Ala Pro Ile Glu His Ile Ala Ser Met Arg Arg Asn Tyr Phe Thr Ala  
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Glu Val Ser His Cys Arg Ala Thr Glu Tyr Ile Met Lys Gly Val Tyr  
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Gln Leu Ile Pro Met Ile Ser Lys Cys Arg Thr Lys Glu Gly Arg Arg  
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530 535 540

Ile Gly Asp Met Leu Leu Arg Thr Ala Ile Gly Gln Val Ser Arg Pro  
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Met Phe Leu Tyr Val Arg Thr Asn Gly Thr Ser Lys Ile Lys Met Lys  
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Trp Gly Met Glu Met Arg Arg Cys Leu Leu Gln Ser Leu Gln Gln Ile  
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Glu Ser Met Ile Glu Ala Glu Ser Ser Val Lys Glu Lys Asp Met Thr  
595 600 605

Lys Glu Phe Phe Glu Asn Lys Ser Glu Thr Trp Pro Ile Gly Glu Ser  
610 615 620

Pro Arg Gly Val Glu Glu Gly Ser Ile Gly Lys Val Cys Arg Thr Leu  
625 630 635 640

Leu Ala Lys Ser Val Phe Asn Ser Leu Tyr Ala Ser Pro Gln Leu Glu  
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Gly Phe Ser Ala Glu Ser Arg Lys Leu Leu Leu Ile Val Gln Ala Leu  
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Arg Asp Asn Leu Glu Pro Gly Thr Phe Asp Leu Gly Gly Leu Tyr Glu  
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<223> residues 20 to 30 of the PA-subunit of the Influenza A pandemic  
H1N1 virus (A/California/04/2009) RNA-dependent RNA polymerase

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<210> 8  
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<220>  
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 <223> residues 100 to 110 of the PA-subunit of the Influenza A pandemic  
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<210> 11



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<211> 11  
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