

G1021PCT\_ST25.txt  
SEQUENCE LISTING

<110> Universität des Saarlandes  
Helmholtz-Zentrum für Infektionsforschung GmbH  
Müller, Prof. Dr. Rolf  
Wenzel, Dr. Silke  
Garcia, Dr. Ronald

<120> Biosynthetic genes for the production of Argyrins

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<170> PatentIn version 3.5

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Leu Ile Ser Phe Tyr Gly His Ala Gln Leu Tyr Gly Ser Asn Pro Pro  
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Glu Thr Ile Val Ser Glu Leu Glu Phe Leu Leu Ser Arg Asn Leu Arg  
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Ile Leu Lys Leu Ala Glu Arg Val Ile Arg Leu Asn Glu Thr His Pro  
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Val Thr Gly Asp Ser Leu Ala Met Leu Tyr Leu Gln Trp Leu Leu Tyr  
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Ala Asn Asn Val Thr Ile Arg Pro Glu Tyr Arg Glu Leu Leu Phe Glu  
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Pro Pro Val Glu Pro Ala Ser Ala Val Gly  
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<211> 3538  
<212> PRT  
<213> Artificial

<220>  
<223> Seq.-ID No. 8: Arg2

<400> 8

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Arg Lys Gln Ala Ser Gly Glu Val Cys Phe Leu Asp Leu Phe Leu Arg  
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Gln Ala Glu Leu His Pro Ser Lys Ser Ala Val Glu Cys Gly Ser Ala  
35 40 45

Arg Leu Thr Tyr Gln Ala Leu Val Ala Arg Ser Glu Arg Leu Ala Ser  
50 55 60

Ala Leu Gly Ala Ser Gly Val His Pro Gly Asp Arg Val Ala Val Val  
65 70 75 80

Leu His Arg Gly Leu Asp Thr Val Val Ala Met Val Ala Val Leu Arg  
85 90 95

Thr Gly Ala Val Tyr Val Pro Ile Asp Val Thr Trp Pro Asp Asn Arg  
100 105 110

Ile Arg Tyr Ile Leu Asp Asp Leu Gln Pro Gly Ala Ile Leu Cys Asp  
115 120 125

Glu Glu Asn Ser Arg Arg Ala Cys Phe Thr Ser Asp Asp Arg Leu Leu  
130 135 140

Leu Ala Ser Ser Glu Gly Thr Gly Gly Ser Asp Phe Arg Pro Gly Pro  
145 150 155 160

Met Ala Pro Ala Tyr Phe Met Tyr Thr Ser Gly Ser Thr Gly Arg Pro  
165 170 175

Lys Gly Val Val Leu Ala His Gly Gly Leu Ala Ser Arg Leu His Ala  
180 185 190

Phe Ser Arg Ala Tyr Glu Ile Gln Pro Glu Asp Arg Phe Leu Ala Leu  
195 200 205

Ser Ser Val Ser Phe Asp Val Ser Val Leu Asp Leu Met Leu Pro Leu  
210 215 220

G1021PCT\_ST25.txt

Val Asn Gly Cys Cys Thr Phe Ile Ala Ser Asp Glu Gln Arg Arg Asp  
 225 230 235 240  
 Pro Asp Ala Leu Arg Asn Leu Phe Glu Glu Arg Ala Leu Asn Val Ala  
 245 250 255  
 Phe Ala Thr Pro Thr Thr Met Arg Ala Leu Val Ser Val Gly Trp Lys  
 260 265 270  
 Gly Ser Pro Arg Thr Lys Ile Leu Cys Gly Gly Glu Ala Ile Pro Gln  
 275 280 285  
 Ser Leu Met Asn Glu Leu Val Ala Arg Gly Arg Leu Phe Asn Val Tyr  
 290 295 300  
 Gly Pro Thr Glu Ala Thr Val Ala Val Thr Ser Pro Glu Leu Phe Ala  
 305 310 315 320  
 Gly Asp Ser Val His Leu Gly Arg Ala Leu Pro Gly Val Glu Leu Leu  
 325 330 335  
 Val Leu Asp Glu Ala Gly Ala Ile Cys Gly Pro Arg Gln Pro Gly Glu  
 340 345 350  
 Leu Val Ile Gly Gly Ile Gly Val Ala Leu Gly Tyr Trp Lys Asn Asp  
 355 360 365  
 Glu Leu Thr Arg Lys Lys Phe Val Asp Gly Lys Tyr Arg Thr Gly Asp  
 370 375 380  
 Leu Val Ser Trp Gly Glu Asp Gly Asn Leu Tyr Tyr His Gly Arg Met  
 385 390 395 400  
 Asp Glu Gln Val Lys Leu His Gly His Arg Ile Glu Leu Leu Glu Ile  
 405 410 415  
 Glu Glu Met Ala Arg Ser Leu Gly Leu Val Arg Asp Ile Lys Val Leu  
 420 425 430  
 Ile Gln Glu Asn Ala Ala Ser Pro Arg Leu Val Ala Phe Phe Ile Gly  
 435 440 445  
 Asp Glu Ala Ala Ala Gln Ser Leu Arg Arg Arg Leu Ala Ser Glu Leu  
 450 455 460  
 Pro Ala Tyr Met Val Pro Ser Val Trp Val Gly Val Glu Gly Phe Pro  
 465 470 475 480  
 Gln Thr Ser Thr Gly Lys Leu Asp Arg Lys Ala Leu Leu Ala Lys Val  
 485 490 495

G1021PCT\_ST25.txt

Asp Glu Arg Ala Glu Gly Leu Asp Ser Pro Pro Glu Ala Ala Pro Ser  
500 505 510

Gly Gly Arg Glu Ala Thr Leu Leu Gly Ile Trp Arg Glu Val Leu Gln  
515 520 525

Arg Pro Asp Leu Ser Pro Asp Asp Asp Phe Phe Ala Ser Gly Gly Asp  
530 535 540

Ser Ile Leu Ala Met Arg Thr Leu Ser Arg Ala Arg Glu Ala Gly Ile  
545 550 555 560

Asn Tyr Arg Ala Val His Ile Phe Gln His Pro Thr Val Arg Ser Leu  
565 570 575

Leu Glu Thr Val Val Gln Ala His Glu Gly Pro Arg Pro Glu Leu Pro  
580 585 590

Glu Leu Thr Thr Ser Gly Leu Thr Pro Val Gln Arg Trp Phe Phe Glu  
595 600 605

Gln Pro Leu Val Asn Arg Gly Phe Trp Asn Gln Ser Ile Leu Leu Arg  
610 615 620

Leu Thr Arg Pro Met Glu Leu Arg Glu Leu Arg Glu Ile Ala Asp Cys  
625 630 635 640

Leu Thr Arg Thr His Gln Ile Leu Ala Cys Glu Ile Asp Glu Lys Gly  
645 650 655

Met Arg Leu Gly Ser Arg Asp Ala Asp Ala Cys Cys Ala Gln Val Ser  
660 665 670

Leu Thr Thr Gly Ser Gly Thr Ser Ser Pro Glu Phe Ala Arg Ile Ile  
675 680 685

Asp Asp Ala His Arg Ser Leu Arg Pro Glu Glu Gly Arg Leu His Arg  
690 695 700

Leu Val Leu Ile Glu Ser Arg Gly Ser Gly Glu Trp Tyr Leu Phe Trp  
705 710 715 720

Thr Ile His His Leu Val Ile Asp Gly Val Ser Trp Arg Ile Leu Leu  
725 730 735

Ser Asp Leu Gly Thr Leu Leu Gln Gln Lys Ala Ser Gly Asp Ala Leu  
740 745 750

His Leu Glu Lys Ala Pro Val Ser Phe Leu His Cys Ser Glu Arg Met  
755 760 765

Arg Ala Leu His Gly Lys Val Arg Glu Ala Glu Leu Ser Tyr Trp Arg

770

775

780

Lys Leu Pro Glu Ala Pro Leu Pro Trp Ser Ser Glu Val Arg Gln Glu  
 785 790 795 800

Val Pro Glu Ala Ala Arg Thr Glu Leu Val Leu Ser Leu Ser Gln Glu  
 805 810 815

Ala Thr Arg Gly Leu Leu Gln Asp Val Leu Ala Gly Thr Gly Lys Gly  
 820 825 830

Ile Asn Asp Val Leu Leu Ser Ala Leu Leu Gln Ala Val Tyr Asp Val  
 835 840 845

Ser Gly Glu Arg Arg Leu Ser Leu Trp Leu Glu Gly His Gly Arg Glu  
 850 855 860

Glu Gly Leu Leu Glu Leu Asp Thr Ser Arg Thr Val Gly Trp Phe Thr  
 865 870 875 880

Ser Met Phe Pro Val Tyr Leu Glu Ser Pro Ser Pro Glu Asp Phe Gln  
 885 890 895

Ser Thr Leu Glu Ala Thr Arg Ala Ser Leu Gly Ala Met Pro Asn Arg  
 900 905 910

Gly Val Gly Tyr Gly Ile Val Arg Tyr Leu Gly Glu Asp Ala Arg Gly  
 915 920 925

Glu Gly Leu Arg Thr Gly Asn Glu Pro Arg Ile Ser Phe Asn Tyr Leu  
 930 935 940

Gly Gln Trp Asp Asp Val Ala Ser Asp His Phe Ser Val Val Ser Glu  
 945 950 955 960

Pro Gly Leu Asp Asp Ile Ala Pro Glu Asn Lys Trp His Arg Glu Val  
 965 970 975

Asp Ile Asn Cys Leu Val Ala Gln Gly Ile Phe Lys Val His Leu Thr  
 980 985 990

Phe Val Arg Arg Leu Gln Asp Lys Glu Lys Leu Glu Ser Leu Leu Arg  
 995 1000 1005

Arg Phe Ile Ala Arg Leu Glu Ser Ala Ile Asp Ala Tyr Lys Gly  
 1010 1015 1020

Ala Gly Glu Phe Arg Arg Lys Phe Pro Leu Leu Ser Ile Pro Pro  
 1025 1030 1035

Glu Ala Phe Ala Arg Asn Gly Ile Asp Leu Gln Ser Val Gln Asp  
 1040 1045 1050

## G1021PCT\_ST25.txt

Ala	Tyr	Pro	Leu	Thr	Pro	Met	Gln	Glu	Gly	Met	Leu	Leu	Arg	Ala
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Leu	Thr	Val	Pro	Glu	Ser	Gly	Asn	Tyr	Ile	Val	Arg	Thr	Phe	Phe
	1070					1075					1080			
Asp	Leu	Thr	Gly	Glu	Leu	His	Pro	Asp	Ala	Trp	Arg	Glu	Ala	Trp
	1085					1090					1095			
Arg	Arg	Glu	Leu	Ala	Glu	Gln	Glu	Leu	Leu	Arg	Ser	Ala	Phe	Phe
	1100					1105					1110			
Trp	Glu	His	Ser	Pro	Thr	Pro	Phe	Gln	Val	Val	Phe	Ser	His	Val
	1115					1120					1125			
Asp	Leu	Asp	Trp	Arg	Thr	His	Asp	Trp	Gly	His	Leu	Gly	Pro	Glu
	1130					1135					1140			
Glu	Gln	Gln	Gln	Ala	Phe	Ser	Lys	Leu	Glu	Lys	Ala	Arg	His	Ala
	1145					1150					1155			
Glu	Gly	Phe	Ser	Leu	Ser	Lys	Ala	Pro	Leu	Leu	Arg	Ile	Asp	Phe
	1160					1165					1170			
Ile	Ala	Arg	Gly	Gly	Ser	Asp	Tyr	Arg	Leu	Leu	Leu	Ser	Phe	His
	1175					1180					1185			
His	Leu	Ile	Leu	Asp	Gly	Trp	Ser	Leu	Gln	Val	Leu	Leu	Glu	Arg
	1190					1195					1200			
Val	Leu	Lys	Arg	Tyr	Gly	Gln	Ala	Arg	Gly	Gly	Gly	Glu	Glu	Arg
	1205					1210					1215			
Leu	Thr	Pro	Ala	Phe	Arg	Phe	Arg	Asp	Tyr	Val	Ala	Trp	Asn	Arg
	1220					1225					1230			
Asn	His	Glu	Ser	Ser	Asp	Ala	Leu	Arg	Phe	Trp	Arg	Glu	His	Leu
	1235					1240					1245			
Glu	Gly	Val	Glu	Glu	Pro	Thr	Leu	Leu	Gly	Asp	Glu	Gln	Gly	Thr
	1250					1255					1260			
Arg	His	Glu	Tyr	Ala	Glu	Thr	Val	Leu	Arg	Leu	Glu	Glu	Ala	Arg
	1265					1270					1275			
Trp	Ser	Gly	Leu	Gly	Ala	Arg	Cys	Arg	Arg	Gln	Gly	Met	Thr	Lys
	1280					1285					1290			
Ser	Ser	Leu	Ile	Gln	Ala	Val	Trp	Cys	Trp	Val	Ala	Lys	Ser	Tyr
	1295					1300					1305			

## G1021PCT\_ST25.txt

Gly	Arg	Lys	Ser	His	Val	Val	Tyr	Gly	Leu	Thr	Gln	Ala	Gly	Arg
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Ala	Ala	Ala	Ile	Gly	Asp	Ile	Glu	Asn	Gly	Val	Gly	Leu	Phe	Ile
	1325					1330					1335			
Thr	Thr	Ser	Pro	Val	Ala	Val	Asp	Leu	Asp	Lys	His	Ser	Lys	Leu
	1340					1345					1350			
Ser	Thr	Val	Gly	Arg	Phe	Ile	Gln	Gln	Val	Asn	Ala	Gln	Ala	Leu
	1355					1360					1365			
His	His	Asp	Arg	Leu	Pro	Leu	Ser	Glu	Ile	Gln	Arg	Ile	Ser	Gly
	1370					1375					1380			
Arg	Glu	Ile	Gly	Gln	Pro	Leu	Phe	Asp	Cys	Leu	Leu	Val	Phe	Glu
	1385					1390					1395			
Gln	Glu	Pro	Ile	Pro	Glu	Leu	Ala	Gly	Gly	Val	Ser	Gly	Gly	Leu
	1400					1405					1410			
Ser	Val	Ala	Gly	Thr	Arg	Thr	Tyr	Glu	Ser	Thr	Glu	Tyr	Pro	Leu
	1415					1420					1425			
Thr	Leu	Ser	Ile	Leu	Glu	Lys	Arg	Asp	Gly	Ser	Cys	Asp	Leu	Arg
	1430					1435					1440			
Phe	Tyr	Phe	Asn	Lys	Lys	Asn	Phe	Ser	Glu	Phe	Arg	Val	Glu	Gly
	1445					1450					1455			
Leu	Arg	Leu	Leu	Phe	Glu	Glu	Ile	Leu	Ala	Ala	Trp	Glu	Arg	Glu
	1460					1465					1470			
Gln	Glu	Leu	Glu	Leu	Ser	Ser	Leu	Pro	Ala	Phe	Pro	Ser	Arg	Asp
	1475					1480					1485			
Gly	Ala	Leu	Leu	Ser	Arg	Trp	Asn	Ala	Thr	Gly	Ser	Asp	Tyr	Pro
	1490					1495					1500			
Ala	Gln	Ser	Leu	Thr	Glu	Leu	Phe	Leu	Gln	Gln	Ala	Arg	Arg	Thr
	1505					1510					1515			
Pro	Asn	His	Arg	Ala	Val	Arg	Tyr	Gly	Glu	Arg	Glu	Leu	Ser	Tyr
	1520					1525					1530			
Ala	Glu	Leu	Ala	Glu	Arg	Thr	Gly	Thr	Leu	Ala	Arg	Arg	Leu	Glu
	1535					1540					1545			
Ala	Leu	Gly	Val	Arg	Pro	Gly	Thr	Pro	Val	Ala	Val	His	Met	His
	1550					1555					1560			

Arg Ser Leu Glu Met Val Ile Ala Leu His Ala Ile Val Arg Ala  
 1565 1570 1575  
 Gly Gly Ala Tyr Val Pro Ile Asp Pro Glu Tyr Pro Ala Ala Arg  
 1580 1585 1590  
 Val Arg Thr Ile Leu Glu Asp Val Ala Ala Pro Val Val Ile Phe  
 1595 1600 1605  
 His Asp Ala Ala Pro Leu Lys Cys Gln Val Gly Gly Thr Val Leu  
 1610 1615 1620  
 Asp Val Thr Arg Ile Val Glu Glu Gly His Gly Gly Ala Asp His  
 1625 1630 1635  
 Arg Ala Ala Glu Tyr Asp Pro Glu Arg Leu Met Tyr Ile Ile Tyr  
 1640 1645 1650  
 Thr Ser Gly Ser Thr Gly Arg Pro Lys Gly Val Lys Cys Arg His  
 1655 1660 1665  
 Glu Gly Ala Val Asn Arg Ile Cys Trp Met Gln Arg Ser Tyr Pro  
 1670 1675 1680  
 Leu Ser Ser Asp Asp Val Val Leu Gln Lys Thr Pro Tyr Thr Phe  
 1685 1690 1695  
 Asp Val Ser Val Trp Glu Phe Phe Trp Pro Leu Ala Val Gly Ala  
 1700 1705 1710  
 Ser Leu Val Val Ala Ala Pro Gly Val His Gln Asp Ala Ser Ala  
 1715 1720 1725  
 Leu Ala Ala Leu Ile Glu Arg Glu Gly Val Thr His Leu His Phe  
 1730 1735 1740  
 Val Pro Ser Met Leu Asp Val Phe Leu Ala Ser Lys Gly Gly Ala  
 1745 1750 1755  
 Arg Cys Ala Ser Leu Arg Arg Val Phe Cys Ser Gly Glu Ala Leu  
 1760 1765 1770  
 Pro Ser Pro Val Val Lys Glu Phe Phe Arg Ser Val Pro His Ala  
 1775 1780 1785  
 Glu Leu His Asn Leu Tyr Gly Pro Thr Glu Ala Ser Ile Asp Val  
 1790 1795 1800  
 Thr Ala Trp Asp Cys Arg Ser Asp Ser Pro Val Ala Ser Ile Pro  
 1805 1810 1815  
 Ile Gly Tyr Ala Ile Gln Asn Val Arg Leu His Val Leu Asp Glu

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Lys	Gln	Ala	Pro	Val	Pro	His	Gly	Val	Pro	Gly	Glu	Leu	Cys	Ile		
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Ala	Gly	Ile	Ala	Leu	Ala	Glu	Gly	Tyr	Val	Asn	Arg	Pro	Glu	Glu		
1850						1855					1860					
Thr	Ala	Lys	Arg	Phe	Val	Gln	Ser	Ser	Trp	Asp	Ala	Arg	Glu	Arg		
1865						1870					1875					
Leu	Tyr	Arg	Thr	Gly	Asp	Leu	Ala	Arg	Tyr	Leu	Pro	Asn	Gly	Ala		
1880						1885					1890					
Ile	Glu	Tyr	Leu	Gly	Arg	Leu	Asp	Gln	Gln	Val	Lys	Leu	Arg	Gly		
1895						1900					1905					
Leu	Arg	Ile	Glu	Leu	Asp	Glu	Val	Ser	Ser	Val	Leu	Leu	Arg	Asp		
1910						1915					1920					
Ala	Arg	Val	Arg	Gln	Ala	Val	Val	Arg	Val	Val	Ala	Gly	Pro	Ala		
1925						1930					1935					
Gly	Gln	Pro	Val	Leu	Ala	Ala	Tyr	Val	Val	Ala	His	Glu	Gly	Ser		
1940						1945					1950					
Ala	Gly	Thr	Leu	Glu	Glu	Ala	Leu	Lys	Ala	Glu	Leu	Glu	Arg	Ser		
1955						1960					1965					
Leu	Pro	Arg	Tyr	Met	Val	Pro	Glu	Phe	Phe	Phe	Phe	Leu	Glu	Ala		
1970						1975					1980					
Leu	Pro	Val	Asn	Arg	Asn	Gly	Lys	Leu	Asp	Ala	Asp	Ala	Leu	Pro		
1985						1990					1995					
Arg	Pro	Gly	Ala	Ser	Ser	Ser	Arg	Glu	Trp	Glu	Pro	Pro	Gln	Thr		
2000						2005					2010					
Glu	Val	Glu	Lys	Asp	Leu	Ala	Ala	Ile	Trp	Gln	Arg	Val	Leu	Gly		
2015						2020					2025					
Val	Glu	Arg	Val	Gly	Arg	Asn	Asp	Ser	Phe	Phe	Ala	Leu	Gly	Gly		
2030						2035					2040					
Asp	Ser	Ile	Leu	Ser	Ile	Arg	Ile	Leu	Ala	Leu	Ala	Lys	Glu	Arg		
2045						2050					2055					
Gly	Trp	Asp	Val	Ser	Leu	Gly	Glu	Leu	Phe	Arg	Ser	Pro	Arg	Leu		
2060						2065					2070					
Ser	Asp	Phe	Ala	Arg	Thr	Ala	Lys	Ala	Ala	Ala	His	Thr	Pro	Val		
2075						2080					2085					



## G1021PCT\_ST25.txt

Leu	Ala	Arg	Ser	Ala	Phe	Ser	Leu	Ile	Ser	Ala	Arg	Asp	Arg	Ala
	2090					2095					2100			
Ala	Met	Pro	Ala	Ser	Val	Val	Asp	Ala	Leu	Pro	Ile	Ala	Ala	Leu
	2105					2110					2115			
Gln	Ala	Gly	Met	Leu	Phe	His	Thr	Lys	Leu	Ala	Glu	Glu	Gly	Val
	2120					2125					2130			
Met	Tyr	Arg	Asp	Ser	Phe	Leu	Tyr	Val	Ile	Gly	Gly	Glu	Phe	Asn
	2135					2140					2145			
Glu	Gln	Ala	Phe	Arg	Gln	Ala	Leu	Lys	Glu	Leu	Val	His	Arg	His
	2150					2155					2160			
Pro	Met	Leu	Arg	Thr	Ser	Phe	Glu	Leu	Gly	Ala	Tyr	Ser	Glu	Pro
	2165					2170					2175			
Leu	Gln	Arg	Val	Glu	Arg	Glu	Val	Glu	Leu	Pro	Leu	Arg	Leu	Glu
	2180					2185					2190			
Asp	Trp	Arg	Asp	Ser	Gln	Asp	Gln	Glu	Gln	Arg	Leu	Ser	Ala	Trp
	2195					2200					2205			
His	Glu	Ser	Tyr	Arg	Pro	Thr	Phe	Asp	Ile	Thr	Arg	Ala	Pro	Leu
	2210					2215					2220			
Phe	Lys	Met	Glu	Val	Lys	Leu	Leu	Ser	Gly	Ala	Arg	Phe	Ala	Leu
	2225					2230					2235			
Gly	Leu	Cys	Phe	His	His	Ala	Ile	Leu	Asp	Gly	Trp	Ser	Ile	Ala
	2240					2245					2250			
Ser	Met	Met	Thr	Glu	Leu	Leu	Leu	Asp	Tyr	Gln	Arg	Leu	Leu	Thr
	2255					2260					2265			
Gly	Arg	Gly	Arg	Ala	Ile	Glu	Pro	Leu	Gly	Ser	Gly	Tyr	Ala	Asp
	2270					2275					2280			
Tyr	Leu	Glu	Leu	Glu	Lys	Arg	Val	Val	Glu	Asp	Pro	Gln	Gln	Lys
	2285					2290					2295			
Ala	Phe	Trp	Ser	Thr	Tyr	Leu	Asn	Asp	Ala	Gln	Ser	Leu	Arg	Leu
	2300					2305					2310			
Pro	Val	Lys	Gln	Glu	Val	Glu	His	Arg	Asn	Arg	Arg	Gly	Thr	Ser
	2315					2320					2325			
Val	His	Gly	Arg	Phe	Asp	Ile	Pro	Glu	Glu	Leu	Val	Gly	Gln	Leu
	2330					2335					2340			

## G1021PCT\_ST25.txt

Glu	Arg	Ile	Ala	Arg	Ser	Leu	Glu	Ile	Thr	Lys	Arg	His	Leu	Phe
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Leu	Ala	Ala	His	Phe	Arg	Val	Leu	Ala	Met	Ile	Cys	Gly	His	Lys
	2360					2365					2370			
Asp	Ile	Val	Ser	Gly	Val	Val	Thr	Asn	Gly	Arg	Pro	Glu	Thr	Val
	2375					2380					2385			
Asp	Ala	Glu	Arg	Ile	Val	Gly	Leu	Phe	Leu	Asn	Ala	Pro	Pro	Met
	2390					2395					2400			
Arg	Leu	Thr	Leu	Gly	Gly	Gly	Ser	Trp	Arg	Gln	Leu	Ile	Gln	Ala
	2405					2410					2415			
Ile	Val	Glu	Glu	Glu	Arg	Asn	Ile	Leu	Pro	His	Arg	Arg	Tyr	Pro
	2420					2425					2430			
Val	Ser	Glu	Met	Lys	Arg	His	Cys	Val	Gln	Ala	Asp	Leu	Phe	Asp
	2435					2440					2445			
Val	Ala	Phe	Asn	Tyr	Val	Asp	Phe	His	Val	Tyr	Ser	Arg	Ala	Gly
	2450					2455					2460			
Glu	Leu	Ala	Ser	Val	Gly	Ile	Gln	Thr	Leu	Lys	Ala	Lys	Glu	Val
	2465					2470					2475			
Thr	Asn	Phe	Gly	Leu	Tyr	Val	Thr	Phe	Tyr	Gln	Gly	Trp	Pro	Tyr
	2480					2485					2490			
Ser	Asn	Gln	Phe	Thr	Leu	Ala	Tyr	Asp	Pro	Asp	Leu	Phe	Asp	Arg
	2495					2500					2505			
Glu	Gln	Val	Asp	Gln	Phe	Ala	Arg	Tyr	Tyr	Leu	Ala	Ala	Leu	Arg
	2510					2515					2520			
Ala	Met	Ala	Gln	Ser	Leu	Glu	Gly	Arg	Tyr	Glu	Leu	Ser	Leu	Leu
	2525					2530					2535			
Thr	Pro	Glu	Glu	Arg	Ser	Ala	Leu	Leu	Ile	Ser	Gly	Glu	Pro	Pro
	2540					2545					2550			
Ala	Ser	Lys	Pro	Ala	Leu	Val	Glu	Lys	Ile	Trp	Ser	Asn	Ala	Arg
	2555					2560					2565			
Ala	His	Pro	Glu	Arg	Gln	Ala	Leu	Thr	Asp	Gly	Ser	Arg	Ser	Leu
	2570					2575					2580			
Ser	Tyr	Arg	Glu	Leu	Ala	Ser	Leu	Ser	Asp	Ser	Leu	Ala	Arg	Ala
	2585					2590					2595			

Leu His Gln Ala Glu Val Lys Pro Gly Asp Ile Val Ala Val Asn  
 2600 2605 2610  
 Leu Arg Arg Asp Val His Leu Pro Val Ala Leu Leu Gly Val Met  
 2615 2620 2625  
 Arg Ala Gly Ala Thr Tyr Leu Pro Leu Asp Asn Arg Phe Pro Leu  
 2630 2635 2640  
 Glu Arg Gln Ala Phe Met Leu Gln Asp Ser Gly Ala Lys Leu Val  
 2645 2650 2655  
 Leu Cys Asp Asn Glu Thr Arg Pro Ala Ser Gly Gly Thr Ala Arg  
 2660 2665 2670  
 Leu Phe Asn Leu Asp Glu Glu Lys Trp Gln Asp His Gly Gly Glu  
 2675 2680 2685  
 Arg Pro Leu Pro Glu Leu His Ala Glu Ser Ile Ala Tyr Leu Ile  
 2690 2695 2700  
 Tyr Thr Ser Gly Ser Thr Gly Lys Pro Lys Gly Val Leu Ile Arg  
 2705 2710 2715  
 His Arg Asn Leu Asp Asn Phe Ile Ala Ser Met Glu Arg Ser Pro  
 2720 2725 2730  
 Gly Phe Ser Gln Gly Asp Arg Leu Leu Ala Val Thr Thr Val Ala  
 2735 2740 2745  
 Phe Asp Ile Ala Ala Leu Glu Leu Phe Leu Pro Leu Ser Cys Gly  
 2750 2755 2760  
 Gly Gln Val Val Leu Ala Pro Glu Gln Val Gly Lys Asp Ala Thr  
 2765 2770 2775  
 Leu Leu Met Glu Trp Leu Lys Arg His Asp Ile Thr Val Met Gln  
 2780 2785 2790  
 Ala Thr Pro Ala Thr Trp Gln Gln Phe Val Asp Leu Gly Trp Arg  
 2795 2800 2805  
 Gly Lys Pro Asp Leu Lys Ile Leu Val Gly Gly Glu Ala Leu Pro  
 2810 2815 2820  
 Pro Ala Leu Ala Arg Gly Leu Leu Thr Arg Cys Arg Glu Leu Trp  
 2825 2830 2835  
 Asn Met Tyr Gly Pro Thr Glu Thr Thr Val Trp Ser Ser Cys Met  
 2840 2845 2850  
 Arg Ile Ala Asp Ser Thr Arg Ile Arg Ile Gly Gln Pro Ile Ala

2855						2860							
Asp	Thr	Arg	Leu	Tyr	Val	Leu	Asp	Ala	Tyr	Gly	Asn	Pro	Ala
2870						2875					2880		
Arg	Gln	Thr	Val	Gly	Glu	Leu	Tyr	Ile	Ala	Gly	Gly	Gly	Val
2885						2890					2895		
Ala	Gly	Tyr	Trp	Arg	Arg	Pro	Asp	Leu	Thr	Arg	Glu	Arg	Phe
2900						2905					2910		
Asp	Asp	Pro	Phe	Phe	Gly	Gly	Pro	Met	Tyr	Arg	Thr	Gly	Asp
2915						2920					2925		
Ala	Arg	Ile	Asp	Ser	Arg	Asn	Glu	Val	Glu	Cys	Leu	Gly	Arg
2930						2935					2940		
Asp	His	Gln	Val	Lys	Leu	Arg	Gly	Tyr	Arg	Ile	Glu	Leu	Gly
2945						2950					2955		
Ile	Asp	Ala	Ala	Ile	Gln	Glu	His	Pro	Asp	Val	Ser	Gln	Ser
2960						2965					2970		
Val	Ile	Leu	Arg	Arg	His	Ser	Glu	Arg	Gly	Asp	Glu	Leu	Ala
2975						2980					2985		
Tyr	Tyr	Thr	Leu	His	Asp	Glu	Ala	Leu	Ser	Arg	Arg	Ala	Asn
2990						2995					3000		
Leu	Tyr	Gly	Glu	Gln	Val	Val	Arg	Trp	Glu	Ala	Val	Trp	Ser
3005						3010					3015		
Thr	Tyr	Gly	Arg	Ser	Lys	Glu	Asn	Arg	Gly	Ala	Leu	Asn	Leu
3020						3025					3030		
Gly	Trp	Asn	Ser	Ser	Tyr	Thr	Gly	Gln	Pro	Met	Pro	Glu	Ala
3035						3040					3045		
Met	Arg	Glu	Trp	Ile	Asp	Glu	Thr	Val	Ala	Arg	Ile	Arg	Ser
3050						3055					3060		
Gly	Ala	Lys	Arg	Ile	Leu	Glu	Ile	Gly	Cys	Gly	Thr	Gly	Leu
3065						3070					3075		
Leu	Ala	Arg	Leu	Ala	Pro	His	Cys	Glu	Arg	Tyr	Thr	Ala	Thr
3080						3085					3090		
Phe	Ser	Pro	Ala	Ala	Leu	Glu	Tyr	Val	Gln	Ser	Ala	Ile	Val
3095						3100					3105		
Gln	Leu	Ser	His	Leu	Asp	Cys	Glu	Val	Gln	Leu	Val	Arg	Ala
3110						3115					3120		

## G1021PCT\_ST25.txt

Ala	Asp 3125	Arg	Leu	Glu	Gly	Val 3130	Glu	Asp	Gly	Gln	Phe 3135	Asp	Leu	Val
Ile	Leu 3140	Asn	Ser	Val	Val	Gln 3145	Tyr	Phe	Pro	Ser	Arg 3150	Glu	Tyr	Leu
Asp	Lys 3155	Val	Leu	Ala	Ala	Ala 3160	Ile	Arg	Lys	Thr	Arg 3165	Gln	Pro	Gly
Arg	Ile 3170	Phe	Val	Gly	Asp	Val 3175	Arg	His	Phe	Gly	Leu 3180	Gly	Arg	Ala
Phe	His 3185	Ala	Ser	Ile	Ala	Asp 3190	Tyr	Gln	Ser	Lys	Gly 3195	Ala	Leu	Ala
Pro	Ala 3200	Ala	Leu	Glu	Glu	Lys 3205	Val	Ala	Gln	Gly	Leu 3210	Arg	Lys	Glu
Thr	Glu 3215	Leu	Leu	Leu	Ser	Pro 3220	Arg	Tyr	Phe	Leu	Ser 3225	Leu	Ser	Ser
Leu	Gly 3230	Val	Ala	His	Ala	Glu 3235	Ile	Glu	Leu	Arg	Arg 3240	Gly	Thr	His
His	Asn 3245	Glu	Leu	Thr	Arg	Phe 3250	Arg	Tyr	Asp	Ala	Val 3255	Leu	Ser	Ile
Gly	Gln 3260	Arg	Pro	Glu	Gln	Leu 3265	Glu	Thr	Arg	Trp	Tyr 3270	Glu	Trp	Glu
Thr	His 3275	Pro	Leu	Ser	Gly	Asp 3280	Glu	Leu	Ser	Thr	Lys 3285	Leu	Lys	Gln
Ala	Gly 3290	Glu	Cys	Phe	Gly	Leu 3295	Arg	Ala	Val	Gly	Asn 3300	Ala	Arg	Leu
Ala	Arg 3305	Glu	Arg	Glu	Leu	Leu 3310	Gly	Ala	Arg	Ser	Asp 3315	Glu	Thr	Gln
Gly	Ser 3320	Ala	Gly	Ala	Gly	Ala 3325	Gly	Leu	Asp	Pro	Glu 3330	Gln	Leu	Tyr
Arg	Leu 3335	Ala	Glu	Ala	His	Gly 3340	Tyr	Arg	Ala	Lys	Thr 3345	Ser	Trp	Ala
Ser	Glu 3350	His	Ala	Tyr	Gly	Ala 3355	Phe	Asp	Val	Ala	Phe 3360	Ile	Pro	Ala
Gly	Lys 3365	Asn	Ala	Thr	Pro	Leu 3370	Phe	Glu	Leu	Ala	Gln 3375	Gly	Ser	Ala

G1021PCT\_ST25.txt

Arg Leu Ser Asn Ala Pro Leu Leu Ser Gln Ile Asp Val Arg Val  
 3380 3385 3390

Gly Ala Glu Ile Arg Arg Ala Leu Gln Lys Asn Leu Pro Glu Tyr  
 3395 3400 3405

Met Val Pro Ala Arg Leu Val Leu Leu Asp Ser Met Pro His Thr  
 3410 3415 3420

Pro Asn Gly Lys Val Asp Arg Ser Arg Leu Pro Asp Val Gly Arg  
 3425 3430 3435

Asn Ala Val Ser Ser Glu Phe Val Glu Pro Arg Asn Glu Asn Glu  
 3440 3445 3450

Arg Lys Leu Cys Gln Met Trp Gln Glu Leu Leu Gly Leu Glu Arg  
 3455 3460 3465

Val Gly Val Arg Asp Asp Phe Phe Ala Leu Gly Gly His Ser Leu  
 3470 3475 3480

Leu Ala Thr Gln Leu Ile Thr Arg Ile Asn Lys Gln Phe Glu Cys  
 3485 3490 3495

Asn Leu Ser Leu Arg Ala Leu Phe Asp Phe Pro Thr Ile Glu Gln  
 3500 3505 3510

Leu Val Arg Glu Ile Glu Arg Ser Arg Thr Leu Gln Gly Pro Ala  
 3515 3520 3525

Met Pro Lys Ile Gln Arg Arg Lys Lys Asn  
 3530 3535

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 <211> 5946  
 <212> PRT  
 <213> Artificial

<220>  
 <223> Seq.-ID No. 9: Arg3

<400> 9

Met His Leu Pro Glu Leu Leu Pro Leu Ser Phe Ala Gln Thr Arg Leu  
 1 5 10 15

Trp Phe Leu Glu Gln Leu Phe Pro Gly Arg Ala Thr Tyr His Ile Pro  
 20 25 30

Gln Phe Trp Arg Leu Arg Gly Gly Val Asn Val Ser Ala Leu Val Lys  
 35 40 45

Ala Leu Lys Asn Thr Ala Ala Arg His Glu Ser Leu Arg Thr Thr Phe  
 50 55 60

G1021PCT\_ST25.txt

Val Thr Glu Asn Gly Glu Pro Arg Gln Ala Ile His Glu Asp Met Ala  
 65 70 75 80  
 Leu Asp Phe Glu Cys Glu Thr Leu Asp Glu Arg Gly Gly Glu Thr Leu  
 85 90 95  
 Asp Ser Tyr Leu Ser Ala Leu Thr Ala Arg Thr Phe Ser Val Ser Glu  
 100 105 110  
 Gly Pro Leu Trp Arg Val Arg Leu Val Arg Thr Ser Ala Arg Glu Gln  
 115 120 125  
 Val Leu Ala Val Val Phe His His Ile Ile Cys Asp Gly Trp Ser Met  
 130 135 140  
 Gly Ile Phe Ser Arg Glu Val Ser His His Tyr Asn Gln Ala Ile Gly  
 145 150 155 160  
 Glu Ser Leu Gly Glu Leu Ser Glu Pro Pro Ile Gln Phe Gly Asp Phe  
 165 170 175  
 Ala Gln Trp Gln Arg Glu Trp Leu Gln Gly Glu Arg Leu Glu Leu Gln  
 180 185 190  
 Leu Ser Tyr Trp Ala Glu Lys Leu Lys Gly Ala Pro Asp Leu Leu Ala  
 195 200 205  
 Leu Pro Thr Asp Phe Ser Arg Pro Pro Ala Ala Ser Asn Lys Gly Lys  
 210 215 220  
 Leu Tyr Gly Thr Phe Val Pro Pro Glu Val Val Gln Arg Leu Lys Asp  
 225 230 235 240  
 Leu Ala Arg Gln Glu Lys Ala Thr Leu Phe Met Val Leu Met Ala Ala  
 245 250 255  
 Phe Lys Val Leu Leu Arg Arg Tyr Ser Gly Ser Asp Asp Ile Val Val  
 260 265 270  
 Gly Thr Pro Ile Ala Asn Arg His Tyr Pro Asp Val Glu Glu Val Phe  
 275 280 285  
 Gly Tyr Phe Ala Asn Thr Leu Ala Leu Arg Thr Pro Leu Glu Gly Ser  
 290 295 300  
 Ala Ser Phe Arg Gln Val Leu Gln Arg Val Lys His Ser Thr Leu Glu  
 305 310 315 320  
 Ala Tyr Glu His Gln Asp Leu Pro Leu Glu Leu Val Val Asp Lys Leu  
 325 330 335

G1021PCT\_ST25.txt

Gly Val Glu Arg Asp Leu Ser Arg His Pro Val Phe Gln Val Met Phe  
340 345 350

Ala Leu Leu Thr Glu Gly Arg Ser Thr Leu Gly Val Gly Lys Thr Glu  
355 360 365

Leu Arg Leu Glu Gly Leu Glu Val Glu Ser Leu Arg Gly Val Gly Asp  
370 375 380

Cys Ala Lys Phe Asp Leu Ala Leu Leu Ala Glu Glu Thr Glu Gln Gly  
385 390 395 400

Leu Phe Leu Glu Phe Glu Tyr Ser Thr Asp Leu Phe Glu Gln Ala Thr  
405 410 415

Ile Glu Arg Val Ala Arg His Phe Gln Asn Leu Leu Val Glu Val Val  
420 425 430

Ala Gly Pro Gly Ser Ser Ile Asp Asp Tyr Phe Val Leu Ser Asp Ala  
435 440 445

Glu Ile Ala Glu Arg Ile Ala Cys Leu Asp Gly Tyr Gly Leu Pro His  
450 455 460

Asp Thr Glu Ile Cys Leu His Gln Trp Val Glu Arg Phe Ala Ala Arg  
465 470 475 480

Thr Pro Gln Ala Ile Ala Leu Arg Asp Gln Thr Gly Ser Met Thr Tyr  
485 490 495

Arg Glu Leu Asn Glu Glu Ala Asn Arg Leu Ala Arg Cys Leu Leu Glu  
500 505 510

Arg Gly Leu Gly His Gly Gln Ile Val Gly Leu Ala Leu Pro Arg Thr  
515 520 525

Arg Glu Leu Ile Val Ala Met Val Ala Ala Leu Lys Ala Arg Ala Ala  
530 535 540

Tyr Leu Pro Leu Asp Leu Gly Tyr Pro Ser Gln Arg Leu Arg Phe Ile  
545 550 555 560

Leu Glu Asp Ala Glu Thr Ala Ala Val Leu Thr Thr Arg Ala His Val  
565 570 575

Glu Ser Leu Arg Gly His Cys Lys His Ile Ile Ala Leu Glu Asp Val  
580 585 590

Ala Ala Glu Val Ala Gly Gln Ser Ala Gly Asn Leu Asp Leu Asp Tyr  
595 600 605



G1021PCT\_ST25.txt

Ala Ser Gly Asp Leu Ala Tyr Leu Ile Tyr Thr Ser Gly Ser Thr Gly  
610 615 620

Lys Pro Lys Gly Ala Thr Ile Cys His Arg Asn Val Thr Arg Leu Phe  
625 630 635 640

Pro Asp Pro Glu Pro Leu Tyr Arg Phe Arg Pro Asp Asp Cys Trp Thr  
645 650 655

Phe Phe His Ser Cys Ala Phe Asp Leu Ser Val Trp Glu Ile Trp Gly  
660 665 670

Ala Leu Ser His Gly Ser Thr Leu Ser Val Val Pro Ala Glu Val Ala  
675 680 685

Arg Ser Thr Asp Glu Phe Arg Glu Trp Leu Val Ala His Arg Val Thr  
690 695 700

Val Leu Asn Gln Thr Pro Ser Ala Tyr Glu Gln Leu Leu Ser Tyr Ile  
705 710 715 720

Ser Arg Glu Gly Gly Ser Asp Gly Leu Arg Leu His Thr Val Met Leu  
725 730 735

Gly Gly Glu Gly Trp Gly Glu Ala Leu Ala Glu Arg His Arg Gln Leu  
740 745 750

Leu Pro His Val Ser Leu Tyr Asn Glu Tyr Gly Pro Ala Glu Cys Ala  
755 760 765

Val Trp Thr Thr His Gly Cys Val Tyr Asp Ala Glu Thr Val Gln Ser  
770 775 780

Tyr Pro Leu Asp Leu Gly Ile Ala His Ser Gln Ser Leu Ala Leu Ile  
785 790 795 800

Leu Asn Asp Gly His Arg Val Thr Pro Thr Gly Val Val Gly Glu Leu  
805 810 815

Tyr Leu Gly Gly Glu Gly Val Thr Gln Gly Tyr Trp Lys Arg Pro Glu  
820 825 830

Leu Asn Lys Glu Lys Phe Val His Val Ser Leu Pro Gly Lys Gly Asn  
835 840 845

Val Arg Leu Tyr Lys Thr Gly Asp Leu Gly Arg Tyr Lys Ser Asn Gly  
850 855 860

Arg Ile Glu Phe Ile Gly Arg Arg Asp His Gln Val Lys Val Arg Gly  
865 870 875 880

Tyr Arg Ile Glu Leu Gly Glu Ile Glu Ser Ile Leu Arg Ser Leu Pro  
885 890 895 900

Gly Val Arg Asp Ala Leu Val Met Leu Ser Glu Ser Gly Arg Gln Leu  
 900 905 910  
 Val Ala Tyr Val Val Val Gly Glu Gly Gly Thr Leu Thr Gln Glu Thr  
 915 920 925  
 Ile Ala Tyr Gln Leu Lys Asp Ala Leu Pro Ala Tyr Met Val Pro Ser  
 930 935 940  
 Phe Phe Val Leu Leu Glu Arg Phe Pro Met Thr Asn Asn Gly Lys Val  
 945 950 955 960  
 Asp Arg Ala Ala Leu Pro Lys Pro His Ala Thr Thr Gly Gln Ser Val  
 965 970 975  
 Gly Ala Gln Ala Phe Val Ala Pro Ser Gly Pro Leu Glu Glu Gly Ile  
 980 985 990  
 Ala Ser Val Phe Ser Glu Leu Leu Ala Ile Thr Pro Phe Ser Ala Glu  
 995 1000 1005  
 Gly Asn Phe Phe Ser Leu Gly Gly His Ser Leu Leu Ala Thr Gln  
 1010 1015 1020  
 Ala Ala Ala Lys Ile His Gln Arg Leu Gly Ile Ala Cys Pro Val  
 1025 1030 1035  
 Arg Thr Leu Phe Glu Ser Ser Thr Pro Arg Ala Leu Ala Trp Lys  
 1040 1045 1050  
 Leu Gly Gln Glu Gly Thr Lys Gln Ala Val Ala Gly Ala Ala Leu  
 1055 1060 1065  
 Pro Val Leu Gln Pro Asn Glu Gln Asp Arg His Gln Pro Phe Pro  
 1070 1075 1080  
 Leu Thr Asp Ile Gln Glu Ala Tyr Trp Ile Gly Arg Lys Gly Ala  
 1085 1090 1095  
 Leu Thr Leu Gly Glu Val Ser Val His Cys Tyr Ile Glu Tyr Asp  
 1100 1105 1110  
 Met Asp Glu Leu Asp Val Gly Arg Leu Glu Arg Ala Leu Asn Arg  
 1115 1120 1125  
 Leu Val Gln Arg His Glu Ala Met Arg Leu Val Val Glu Glu Ser  
 1130 1135 1140  
 Gly Gln Gln Arg Val Leu Glu Ser Val Pro Phe Tyr Lys Ile Glu  
 1145 1150 1155

## G1021PCT\_ST25.txt

Val	Thr	Glu	Leu	Ser	Arg	Gly	Ser	Arg	Glu	Glu	Glu	Ala	Arg	Ala
	1160					1165					1170			
Leu	Ala	Ser	Val	Arg	Glu	Arg	Met	Ala	His	Gln	Val	Leu	Pro	Ala
	1175					1180					1185			
Asp	Arg	Trp	Pro	Leu	Phe	Glu	Ile	Arg	Ala	Ser	Arg	Ala	His	Gly
	1190					1195					1200			
Phe	Trp	Arg	Leu	His	Val	Ser	Leu	Asp	Ala	Leu	Val	Leu	Asp	Ala
	1205					1210					1215			
Trp	Ser	Leu	Asn	Leu	Ile	Phe	Asn	Glu	Trp	Ala	Arg	Leu	Tyr	Arg
	1220					1225					1230			
Asp	Glu	Glu	Thr	Arg	Leu	Glu	Pro	Leu	Asn	Val	Ser	Phe	Arg	Asp
	1235					1240					1245			
Tyr	Val	Ile	Ala	Glu	Lys	Ala	Phe	Lys	Ser	Thr	Gln	Thr	Trp	Gln
	1250					1255					1260			
Lys	Ala	Lys	Asp	Tyr	Trp	Leu	Ala	Arg	Val	Ala	Thr	Leu	Pro	Asp
	1265					1270					1275			
Ala	Pro	Gln	Leu	Pro	Leu	Ala	Gln	Ser	Gln	Thr	Arg	Leu	Asp	Ala
	1280					1285					1290			
Gln	His	Phe	Asn	Arg	Glu	Gln	Lys	Arg	Leu	Thr	Pro	Glu	Ala	Leu
	1295					1300					1305			
Arg	Ser	Leu	Arg	Lys	Leu	Ala	Asp	Lys	His	Lys	Val	Ser	Leu	Ser
	1310					1315					1320			
Ser	Val	Leu	Gly	Ala	Val	Phe	Ala	Asp	Val	Leu	Ser	Leu	Trp	Ser
	1325					1330					1335			
Ser	Lys	Pro	His	Phe	Thr	Leu	Asn	Met	Thr	Leu	Phe	Asn	Arg	Leu
	1340					1345					1350			
Pro	Val	His	Glu	Gln	Ile	Asn	Asp	Ile	Ala	Gly	Asp	Phe	Thr	Ser
	1355					1360					1365			
Leu	Asn	Leu	Leu	Glu	Val	Asp	Trp	Arg	Gly	Ser	Asp	Val	Pro	Phe
	1370					1375					1380			
Ile	Glu	Arg	Val	Arg	Lys	Val	Gln	Glu	Gln	Leu	Trp	Ser	Asp	Leu
	1385					1390					1395			
Asp	His	Arg	Phe	Phe	Ser	Gly	Val	Gln	Val	Leu	Arg	Glu	Leu	Ala
	1400					1405					1410			

## G1021PCT\_ST25.txt

Arg	Ala	Arg	Asn	Asn	Pro	Ala	Val	Ala	Met	Pro	Val	Val	Phe	Thr
	1415					1420					1425			
Cys	Leu	Leu	Gly	Ser	Thr	Glu	Gly	Glu	Gly	Gln	Ala	His	Glu	Trp
	1430					1435					1440			
Glu	Arg	Leu	Phe	Pro	Asn	Glu	Val	Phe	Asn	Ile	Thr	Gln	Thr	Pro
	1445					1450					1455			
Gln	Val	Trp	Leu	Asp	Tyr	Gln	Val	Tyr	Glu	Ser	Gln	Gly	Glu	Leu
	1460					1465					1470			
Val	Val	Cys	Trp	Asp	Tyr	Val	Glu	Gly	Leu	Phe	Pro	Glu	Gly	Leu
	1475					1480					1485			
Val	Gly	Ala	Met	His	Glu	Ala	Tyr	Ile	Thr	Ser	Leu	Glu	Arg	Leu
	1490					1495					1500			
Leu	Arg	Glu	Glu	Ser	Ala	Trp	Asn	Glu	Thr	Arg	Leu	Thr	Asn	Leu
	1505					1510					1515			
Pro	Glu	Ser	Gln	Arg	Ile	Arg	Arg	Glu	Glu	Ala	Asn	Ala	Thr	Ala
	1520					1525					1530			
Trp	Arg	Glu	Pro	Glu	Leu	Leu	Met	His	Gln	Leu	Phe	Glu	Arg	Gln
	1535					1540					1545			
Val	Gly	Val	Ala	Pro	Asp	Ala	Thr	Ala	Val	Ile	Asp	Ser	Glu	Gly
	1550					1555					1560			
Ser	Tyr	Thr	Tyr	Arg	Gln	Leu	Asn	Val	Ala	Ala	Asn	Arg	Ile	Ala
	1565					1570					1575			
Arg	Arg	Leu	Ala	Ser	Leu	Gly	Leu	Glu	Pro	Asn	Glu	Arg	Val	Ala
	1580					1585					1590			
Val	Leu	Ala	Pro	Lys	Gly	Trp	Arg	Gln	Val	Val	Ala	Cys	Leu	Gly
	1595					1600					1605			
Ile	Gln	Lys	Ala	Gly	Ala	Ala	Tyr	Leu	Pro	Val	Asp	Gly	Ser	Ala
	1610					1615					1620			
Pro	Ala	Glu	Arg	Ile	Asn	Lys	Val	Leu	Glu	Leu	Gly	Arg	Val	Arg
	1625					1630					1635			
Ala	Ala	Val	Val	Ala	Ser	Leu	Glu	Tyr	Gly	Gly	Ala	Phe	Gly	Ser
	1640					1645					1650			
Asn	Ala	Leu	Ile	Val	Leu	Asp	Asp	Gly	Leu	Leu	Ala	Pro	Ala	Ser
	1655					1660					1665			

Gly Thr Glu Asp Val Ser Asn Pro Ala Pro Lys Gln Thr Leu Ala  
 1670 1675 1680  
 Asp Leu Ala Tyr Val Ile Phe Thr Ser Gly Ser Thr Gly Thr Pro  
 1685 1690 1695  
 Lys Gly Val Met Ile Asp His Arg Gly Ala Val Asn Thr Leu Leu  
 1700 1705 1710  
 Asp Ile Asn Glu Arg Phe Gly Val Arg Gln Asp Asp Arg Val Leu  
 1715 1720 1725  
 Ala Leu Ser Ser Leu Thr Phe Asp Leu Ser Val Tyr Asp Ile Phe  
 1730 1735 1740  
 Gly Leu Leu Ala Ala Gly Gly Ala Val Val Ile Pro Pro Glu Ala  
 1745 1750 1755  
 His Val Lys Glu Pro Ala Glu Trp Cys His Trp Leu Val Gln His  
 1760 1765 1770  
 Gln Val Thr Val Trp Asn Thr Val Pro Met Phe Met Gln Met Leu  
 1775 1780 1785  
 Met Glu Phe Val Gly Ala Leu Pro Val Ala Glu Arg Glu Ala Leu  
 1790 1795 1800  
 Ser Arg Thr Leu Arg Leu Val Met Met Ser Gly Asp Trp Ile Pro  
 1805 1810 1815  
 Val Glu Leu Pro Asn Thr Ile Lys Arg Val Phe Gln Arg Glu Asp  
 1820 1825 1830  
 Leu Arg Val Met Ser Leu Gly Gly Ala Thr Glu Ala Ser Ile Trp  
 1835 1840 1845  
 Ser Ile Ala Tyr Glu Ile Lys Asp Val Ala Lys Asp Trp Thr Ser  
 1850 1855 1860  
 Ile Pro Tyr Gly Lys Pro Leu Arg Asn Gln Thr Phe His Val Leu  
 1865 1870 1875  
 Asp Glu Gly Met Arg Pro Arg Pro Asp Phe Val Pro Gly Gln Leu  
 1880 1885 1890  
 Tyr Ile Gly Gly Met Gly Val Ala Leu Gly Tyr Phe Gly Asp Glu  
 1895 1900 1905  
 Ala Lys Thr Ala Ala Ser Phe Leu Arg His Pro His Thr Gly Glu  
 1910 1915 1920  
 Arg Leu Tyr Arg Thr Gly Asp Leu Gly Arg Tyr Leu Ala Asp Gly

1925		1930		1935
Asn Ile 1940	Glu Phe Leu Gly	Arg 1945	Glu Asp Leu Gln Val 1950	Lys Val Gly
Gly His 1955	Arg Ile Glu Leu	Gly 1960	Glu Ile Asp His 1965	Leu His Lys
Cys Gly 1970	Trp Ile Arg Gln	Gly 1975	Leu Thr His Val 1980	Lys Pro Asp
Gly Arg 1985	Asn Pro Gln Leu	Val 1990	Ala Tyr Leu Val 1995	Glu Gly Val
Thr Gly 2000	Lys Ser Glu Gln	Glu 2005	Arg Ala Glu Glu 2010	Ser Phe Lys
Leu Ala 2015	Gly His Asn Leu	Arg 2020	Lys Thr Gly Gly 2025	Gly His Arg
Leu Val 2030	Thr Glu Leu Glu	Pro 2035	Lys Val Tyr Phe 2040	Arg Lys Ser
Tyr Arg 2045	Val Phe Ala Gly	Glu 2050	Glu Ser Arg Leu 2055	Gln Leu Glu
Ala Trp 2060	Leu Arg Ser Ala	Leu 2065	Leu Pro Gly Lys 2070	Leu Ala Thr
Glu Arg 2075	Arg Glu Trp Thr	Val 2080	Ala Glu Met Leu 2085	Pro Leu Leu
Ala Leu 2090	Arg Glu Asp Gly	Leu 2095	Leu Leu Pro Lys 2100	Arg Tyr Gly
Ser Ala 2105	Gly Ser Leu Tyr	Pro 2110	Val Gln Thr Tyr 2115	Val Met Gly
Glu Gly 2120	Arg Lys Glu Leu	Ala 2125	Pro Gly Val Tyr 2130	Leu Asp Pro
Val Lys 2135	His Glu Leu Val	Arg 2140	Leu Ala Asp Gly 2145	Leu Ala Cys
Ser Trp 2150	Leu Ser Arg Arg	Gly 2155	Val Pro Leu Ala 2160	Cys Phe Val
Glu Lys 2165	Arg Ser Ala Ile	Glu 2170	Pro Leu Tyr Gly 2175	Arg Ser Asp
Leu Tyr 2180	Ser Ala Ile Glu	Ala 2185	Gly Ser Met Ala 2190	Leu Val Ala

## G1021PCT\_ST25.txt

Ser	Ser	Thr	Ala	Ala	Ala	Gly	Ile	Ser	Trp	Arg	Thr	Arg	Ser	Ala
	2195					2200					2205			
Pro	Asp	Leu	Glu	Glu	Leu	Ala	Pro	Val	Val	Leu	Glu	Ser	Ala	Asp
	2210					2215					2220			
Cys	Ser	Ala	Ile	Ala	Val	Leu	Glu	Pro	Arg	Glu	Leu	Gln	Ala	Leu
	2225					2230					2235			
Asp	Glu	Arg	Gly	Lys	Asp	Ser	Asp	Val	Ser	Val	Leu	Met	Tyr	Val
	2240					2245					2250			
Met	Arg	Gly	Ser	Glu	His	Gly	Pro	Arg	Thr	Gly	Trp	Tyr	Arg	Trp
	2255					2260					2265			
Ser	Gly	Asp	His	Phe	Glu	Ala	Phe	Ser	Ala	Pro	Ala	Leu	Ser	Met
	2270					2275					2280			
Val	Pro	Ser	Asn	Pro	Ala	Asn	Trp	Ser	Ile	Cys	Gln	Asn	Ala	Ser
	2285					2290					2295			
Phe	Ala	Leu	Phe	Val	Met	Glu	Gly	Lys	Ala	Gln	Pro	Arg	Thr	Ser
	2300					2305					2310			
Ser	Ala	Leu	Phe	Thr	Gly	Arg	Leu	Ile	Gln	Ser	Leu	Met	Glu	Lys
	2315					2320					2325			
Gly	Val	Gly	Leu	Gly	Leu	Gly	Gly	Cys	Ser	Ile	Gly	Glu	Met	Asp
	2330					2335					2340			
Pro	Glu	Gly	Gly	Arg	Leu	Leu	Arg	Glu	Val	His	Asp	Gly	Glu	Phe
	2345					2350					2355			
Val	His	Ala	Phe	Phe	Gly	Gly	Pro	Val	Asp	Ser	Ala	Gln	Ile	Ser
	2360					2365					2370			
Ala	Val	Gly	Thr	Ser	Glu	Ala	Glu	Pro	Phe	Glu	Gln	Leu	Val	Lys
	2375					2380					2385			
Arg	Lys	Thr	Arg	Ser	Val	Leu	Glu	Gly	Ser	Leu	Pro	Gly	Tyr	Met
	2390					2395					2400			
Val	Pro	Asp	His	Tyr	Val	Leu	Leu	Asp	Ser	Phe	Pro	Leu	Ser	Ser
	2405					2410					2415			
Asn	Gly	Lys	Val	Asp	Arg	Ser	Arg	Leu	Ala	Ala	Pro	Glu	Leu	Glu
	2420					2425					2430			
Arg	Pro	Gln	Lys	Gln	Asp	Ala	Leu	Val	Arg	Pro	Trp	Asn	Ser	Thr
	2435					2440					2445			

## G1021PCT\_ST25.txt

Glu Ala Val Ile Ala Ser Ile Trp Ala Gln Leu Leu Gly Val Glu  
 2450 2455 2460  
 Pro Asp Ala Ala Asp Asn Phe Phe Ala Leu Gly Gly His Ser Leu  
 2465 2470 2475  
 Thr Ala Thr Gln Leu Cys Thr Arg Leu Arg Glu Ala Phe Gly Val  
 2480 2485 2490  
 Glu Val Pro Leu Arg Glu Val Phe Gly Arg Ala Asp Val Arg Ser  
 2495 2500 2505  
 Gln Ala Ser Met Val Glu Gly Leu Leu Lys Gln His Val Gly Arg  
 2510 2515 2520  
 Gly Ala Ser Ile Pro Arg Arg Ala Gly Thr Gly Arg Ser Val Ala  
 2525 2530 2535  
 Ser Tyr Ala Gln Lys Arg Leu Trp Phe Val Glu Gln Leu Ala Glu  
 2540 2545 2550  
 Asn Gly Ser Val Tyr Gly Met Pro Val Ala Val Ala Leu Gln Gly  
 2555 2560 2565  
 Pro Met Asp Trp Asp Ala Phe Lys Lys Ala Leu Ala Gly Val Val  
 2570 2575 2580  
 Ala Arg His Glu Ile Leu Arg Thr Thr Phe His Met Glu Gln Gly  
 2585 2590 2595  
 Glu Leu Trp Gln Val Ile His Glu Glu Ile Thr Ala Pro Phe Glu  
 2600 2605 2610  
 Thr Glu Gln Cys Pro Glu Gly Ser Val Met Glu Lys Arg Ala Tyr  
 2615 2620 2625  
 Val Arg Lys Arg Met Arg Glu Leu Ala Arg Val Pro Phe Asp Leu  
 2630 2635 2640  
 Ser Thr Gly Pro Leu Leu Arg Phe His Ala Phe Ala Leu Ser Arg  
 2645 2650 2655  
 Glu Gln His Ile Leu Phe Gly Ala Met His His Ile Ile Ser Asp  
 2660 2665 2670  
 Gly Trp Ser Val Asp Val Phe Gln Ser Glu Leu Ser Ala Leu Tyr  
 2675 2680 2685  
 Asn Ala Ala Leu Ser Gly Ser Thr Pro Gln Phe Gln Glu Leu Ser  
 2690 2695 2700



Ile Gln Tyr Ala Asp Phe Ala Ala Trp Gln Arg Asp Trp Leu Arg  
 2705 2710 2715  
 Gly Pro Arg Ser Glu Lys Gln Leu Gln Phe Trp Lys Asp Ser Leu  
 2720 2725 2730  
 Ala Gly Ala Pro Glu Leu Leu Gln Leu Pro Thr Asp Leu Pro Arg  
 2735 2740 2745  
 Pro Glu Arg Gln Ser Phe Arg Gly Gly Val Val Arg Arg Thr Leu  
 2750 2755 2760  
 Asp Ala Gln Leu Thr Ala Glu Ile Asp Ser Arg Cys Arg Glu Trp  
 2765 2770 2775  
 Gly Val Thr Pro Phe Met Phe Tyr Leu Ala Ala Tyr Lys Val Leu  
 2780 2785 2790  
 Leu Ser Lys Leu Ser Gly Gln Ala Asp Ile Leu Val Gly Thr Pro  
 2795 2800 2805  
 Ala Ala Asn Arg His Tyr Ser Gln Val Glu Arg Leu Ile Gly Tyr  
 2810 2815 2820  
 Phe Ala Asn Thr Leu Ala Ile Arg Ser Arg Val Glu Gly Gln Arg  
 2825 2830 2835  
 Ser Phe Ala Glu Tyr Val Gln Ala Val Arg Glu Gly Val Leu Ala  
 2840 2845 2850  
 Ala Asn Glu Asn Gln Asp Val Pro Phe Glu Gln Val Val Glu Ser  
 2855 2860 2865  
 Leu Gln Leu Arg Arg Ser Leu Ala Tyr Gln Pro Val Phe Gln Val  
 2870 2875 2880  
 Met Phe Val Phe Glu Asn Glu Gly Arg Ser Ser Leu Ser Leu Asn  
 2885 2890 2895  
 Gly Val Ser Val Gln Pro Val Ser Leu Asp Ala Gln Val Ala Arg  
 2900 2905 2910  
 Phe Asp Leu Thr Leu Leu Ile Arg Asn Ala Gly Asp Ala Arg Glu  
 2915 2920 2925  
 Ile Ser Phe Glu Tyr Ser Glu Asp Leu Phe Lys Arg Glu Thr Ala  
 2930 2935 2940  
 Ala Glu Trp Leu Asp Gly Val Ile Ser Leu Val Glu Ala Ala Thr  
 2945 2950 2955  
 Arg Asp Ser Ser Gln Pro Leu Ala Ala Leu Pro Ser Met Ser Glu  
 Seite 73

2960		2965		2970	
Ala Thr	Leu Glu Lys Val	Leu Gly Gln Phe Ser	Arg Gly Glu Arg		
2975		2980		2985	
Thr Ala	Ser Pro Lys Leu	Cys Leu His Glu Gln	Phe Glu Arg Val		
2990		2995		3000	
Val Ala	Arg Gln Gly Glu	Leu Cys Ala Ile Gln	Thr Pro Arg Ser		
3005		3010		3015	
Glu Ile	Thr Tyr Glu Gln	Leu Asn Asp Arg Ala	Asn Arg Val Ala		
3020		3025		3030	
Arg Leu	Leu Ser Ser His	Gly Ile Arg Lys Gly	Asp Val Val Ala		
3035		3040		3045	
Leu Cys	Leu Lys Arg Ser	Pro Asp Leu Phe Ala	Cys Tyr Leu Ala		
3050		3055		3060	
Val Leu	Lys Leu Gly Ala	Val Tyr Val Ala Ile	Asp Gly Glu Tyr		
3065		3070		3075	
Pro Glu	Arg Arg Ile Gln	His Met Leu Thr Asp	Ala Gly Ala Lys		
3080		3085		3090	
Leu Val	Val Ala Ser Pro	Val Tyr Ala Asp Lys	Leu Gly Thr Ala		
3095		3100		3105	
Pro Val	Leu Val Thr Leu	Glu Glu Cys Glu Asp	Arg Leu Glu Ser		
3110		3115		3120	
Met Ala	Gly Ser Asn Leu	Ser Val Lys Val Ser	Pro Glu Asp Val		
3125		3130		3135	
Ala Tyr	Ile Ile Tyr Thr	Ser Gly Thr Thr Gly	Leu Pro Lys Gly		
3140		3145		3150	
Ala Arg	Val Lys His Arg	Gly Val Ser Asn Leu	Val Leu Ala Gln		
3155		3160		3165	
Gln Glu	Tyr Phe Val Ala	Gly Pro Gly Lys Arg	Leu Leu Gln Phe		
3170		3175		3180	
Ala Ser	Cys Ser Phe Asp	Gly Ala Ile Trp Glu	Trp Thr Thr Ala		
3185		3190		3195	
Leu Leu	Asn Gly Ala Thr	Leu Cys Leu Val Ala	Glu Ser Ser Ala		
3200		3205		3210	
Glu Val	Val Ser Arg Leu	Thr Arg Arg Asp Glu	Gln Pro Arg Ile		
3215		3220		3225	

## G1021PCT\_ST25.txt

Asp	Ile	Ala	Ala	Leu	Pro	Pro	Ser	Val	Val	Ala	Ser	Leu	Pro	Asp
	3230					3235					3240			
Asp	Cys	Leu	Pro	Gly	Leu	Glu	Val	Leu	Leu	Val	Ala	Gly	Glu	Ser
	3245					3250					3255			
Cys	Pro	Arg	Gly	Val	Val	Asp	Arg	Trp	Ser	Arg	Arg	Thr	Arg	Met
	3260					3265					3270			
Phe	Asn	Ala	Tyr	Gly	Pro	Cys	Glu	Ala	Ser	Val	Thr	Ser	Thr	Met
	3275					3280					3285			
Phe	Glu	Phe	Asp	Gly	Thr	Arg	Gly	Ala	Ser	Thr	Ile	Gly	Arg	Pro
	3290					3295					3300			
Leu	Arg	Asn	Cys	Asp	Val	Tyr	Ile	Leu	Asp	Glu	Arg	Met	Leu	Pro
	3305					3310					3315			
Val	Pro	Pro	Gly	Val	Ala	Gly	Glu	Leu	Cys	Ile	Ala	Gly	Leu	Gly
	3320					3325					3330			
Leu	Ala	Glu	Gly	Tyr	His	Asn	Arg	Ala	Glu	Glu	Thr	Glu	Arg	Arg
	3335					3340					3345			
Phe	Val	Glu	Ala	Ser	Ile	Gly	Ser	Glu	Thr	Val	Arg	Met	Tyr	Arg
	3350					3355					3360			
Thr	Gly	Asp	Arg	Gly	Arg	Trp	Ala	Ser	Asp	Gly	Asn	Ile	Glu	Phe
	3365					3370					3375			
Leu	Gly	Arg	Leu	Asp	Asn	Gln	Ile	Lys	Ile	Arg	Gly	Ile	Arg	Val
	3380					3385					3390			
Glu	Pro	Asp	Glu	Val	Arg	Thr	Gln	Leu	Leu	Gln	Val	Pro	Gly	Val
	3395					3400					3405			
Ala	Gln	Ala	Ala	Val	Val	Val	Asp	Arg	Glu	Gly	Gln	Glu	Thr	Arg
	3410					3415					3420			
Leu	Leu	Ala	Tyr	Val	Val	Ala	Ser	Pro	Glu	Val	Pro	Leu	Asp	Leu
	3425					3430					3435			
Glu	His	Val	Arg	Lys	Arg	Leu	Arg	Ala	Ala	Leu	Pro	Glu	Ala	Leu
	3440					3445					3450			
Val	Pro	Ser	Trp	Phe	Cys	Pro	Val	Ala	Thr	Leu	Pro	Met	Thr	Leu
	3455					3460					3465			
Asn	Gly	Lys	Leu	Asp	Val	Glu	Ala	Leu	Pro	Arg	Pro	Gly	Glu	Glu
	3470					3475					3480			

## G1021PCT\_ST25.txt

Arg	Thr	Glu	Ala	Arg	Phe	Glu	Glu	Gly	Ala	Thr	Glu	Val	Glu	Arg
	3485					3490					3495			
Lys	Leu	Gln	Ala	Leu	Ile	Ala	Gly	Val	Leu	Glu	Gly	Arg	Arg	Leu
	3500					3505					3510			
Gly	Arg	His	Asp	Asp	Phe	Phe	Arg	Asn	Gly	Gly	His	Ser	Leu	Lys
	3515					3520					3525			
Ala	Ile	His	Leu	Val	Ala	Glu	Ile	Arg	Lys	Glu	Leu	Gly	Ala	Glu
	3530					3535					3540			
Leu	Ala	Val	Lys	Thr	Ile	Phe	Asp	Ala	Pro	Thr	Val	Ala	Glu	Leu
	3545					3550					3555			
Ala	Arg	Val	Ile	Glu	Ser	Glu	Arg	Arg	Gln	Glu	Gly	Pro	Thr	Ala
	3560					3565					3570			
Ser	Arg	Pro	Arg	Leu	Glu	Gly	Ser	Arg	Phe	Thr	Leu	Ser	Ala	Leu
	3575					3580					3585			
Gln	Arg	Gln	Met	Trp	Leu	Ala	Glu	Lys	Val	Leu	Gln	Arg	Ser	Gly
	3590					3595					3600			
Ala	Tyr	Asn	Met	Pro	Leu	Cys	Leu	Glu	Leu	Arg	Gly	Ala	Pro	Asp
	3605					3610					3615			
Ala	Ser	Ala	Leu	Gln	Asn	Ala	Val	Asp	Met	Leu	Leu	Gln	Arg	His
	3620					3625					3630			
Gly	Val	Leu	Arg	Trp	Gln	Phe	Lys	Glu	Glu	Ser	Gly	Glu	Pro	Tyr
	3635					3640					3645			
Ala	Glu	Asp	Cys	Gly	Val	Asp	Thr	Val	Thr	Leu	Ala	Thr	Leu	Asp
	3650					3655					3660			
Trp	Arg	Glu	Leu	Gly	Gln	Gln	Glu	Lys	Asp	Thr	Ala	Leu	Ala	Gly
	3665					3670					3675			
Leu	Ile	Ala	Thr	Pro	Phe	Asn	Leu	Ser	Gln	Gly	Pro	Leu	Trp	Arg
	3680					3685					3690			
Gly	Ala	Leu	Ile	Arg	Ile	Gly	Glu	Glu	Arg	Phe	Trp	Leu	Leu	Leu
	3695					3700					3705			
Cys	Ala	His	His	Leu	Leu	Ala	Asp	Gly	Trp	Ser	Leu	Gly	Leu	Leu
	3710					3715					3720			
Leu	Gly	Glu	Leu	Ala	Glu	Leu	Tyr	Asn	Ala	Arg	Val	Gly	His	Gly
	3725					3730					3735			

Thr Ala Arg Leu Pro Ala Pro Gly Thr Glu Tyr Ser Arg Tyr Val  
 3740 3745 3750  
 Glu Gln Ser Val Gly Asp Glu Arg Glu Leu Glu Arg Gln Leu Glu  
 3755 3760 3765  
 Phe Trp Arg His Gln Leu Glu Gly Ala Pro Gln Arg Leu Ala Leu  
 3770 3775 3780  
 Pro Met Glu Leu Lys Arg Ser Leu Ser Pro Gly Lys Ala Gly Ala  
 3785 3790 3795  
 Val Asp Phe Glu Val Gly Pro Glu Leu Thr Ala Arg Leu Arg Glu  
 3800 3805 3810  
 Leu Ala Glu Gln Arg Gly Ser Ser Leu Val Met Val Leu Met Ser  
 3815 3820 3825  
 Thr Tyr Gln Ala Val Leu Ala Arg Phe Ala Gly Ala Asp Asp Val  
 3830 3835 3840  
 Leu Ile Gly Thr Pro Val Ala Cys Arg His Lys Pro Glu Leu Leu  
 3845 3850 3855  
 Asn Thr Ile Gly Leu Leu Val Asn Thr Leu Pro Ile Arg Leu Ser  
 3860 3865 3870  
 Leu Thr Pro Arg Thr Thr Phe Ala Glu Ala Leu Ala Gln Val Arg  
 3875 3880 3885  
 Gln Arg Leu Leu Glu Gly Met Ala His Met Asp Val Pro Phe Glu  
 3890 3895 3900  
 Arg Ile Val Ser Ala Val Ala Gln Glu Arg Glu Pro Gly Val Pro  
 3905 3910 3915  
 Ala Leu Cys Gln Ala Met Phe Val Trp Glu Glu Gly Ala Arg Gly  
 3920 3925 3930  
 Asp Leu Lys Leu Arg Gly Leu Asp Val Ser Leu Lys Ala Thr Pro  
 3935 3940 3945  
 Val Thr Ser Ala Lys Tyr Asp Leu Ala Leu Leu Ala Ser Glu Gln  
 3950 3955 3960  
 Asp Gly Arg Val Thr Gly Arg Leu Glu Tyr Pro Glu Gly Leu Tyr  
 3965 3970 3975  
 Asp Arg Ala Ser Val Glu Gln Leu Ala Leu Ser Tyr Val Lys Leu  
 3980 3985 3990  
 Leu Ser Glu Met Ala Lys Asp Leu Glu Gly Ile Val Ala Gln Ala

Glu 4010	Met	Ser	Gln	Glu	Gln 4015	Arg	Arg	Gln	Leu	Glu 4020	Ala	Trp	Phe	
Glu 4025	Tyr	Arg	Pro	Glu	Phe	Leu 4030	Glu	Ala	Pro	Asn	Leu 4035	His	Thr	Leu
Ile 4040	Glu	Arg	Gln	Ala	Ala	Thr 4045	Ala	Pro	Ala	Ser	Ser 4050	Ala	Leu	Arg
Tyr 4055	Lys	Gly	Glu	Ser	Tyr	Ser 4060	Tyr	Glu	Trp	Leu	Asn 4065	Thr	Gln	Ala
Asn 4070	Arg	Leu	Ala	Arg	Tyr	Leu 4075	Gly	Ala	Arg	Gly	Ile 4080	Gly	Arg	Gly
Ser 4085	Val	Val	Ala	Leu	Cys	Leu 4090	Ala	Arg	Ser	Pro	Glu 4095	Leu	Val	Val
Ala 4100	Trp	Val	Ala	Val	Leu	Lys 4105	Ser	Gly	Ala	Ala	Phe 4110	Val	Ser	Leu
Asp 4115	Pro	His	Met	Pro	Gln	Ala 4120	Arg	Arg	Arg	Phe	Ile 4125	Leu	Asp	Asp
Ser 4130	Arg	Thr	Ala	Leu	Val	Leu 4135	Ser	His	Ala	Ala	Phe 4140	Ala	Glu	Glu
Leu 4145	Gly	Thr	Gly	Thr	Asp	Ile 4150	Ala	Val	Trp	Glu	Glu 4155	Val	Ala	Lys
Gln 4160	Leu	Thr	Gly	Leu	Pro	Ala 4165	Glu	Asn	Leu	Glu	Leu 4170	Glu	Val	Arg
Gln 4175	Glu	Glu	Leu	Ala	Tyr	Leu 4180	Ile	Tyr	Thr	Ser	Gly 4185	Thr	Thr	Gly
Asn 4190	Pro	Lys	Gly	Thr	Met	Leu 4195	Ala	His	Arg	Gly	Met 4200	Ile	Asn	Leu
Ala 4205	Val	Ser	Glu	Lys	Gln	Arg 4210	Ser	Gly	Met	Gly	Pro 4215	Gln	Ser	Lys
Val 4220	Leu	Gln	Phe	Thr	Thr	Ala 4225	Thr	Cys	Asp	Gly	Ser 4230	Ile	Trp	Glu
Trp 4235	Thr	Ser	Ala	Leu	Val	Asn 4240	Gly	Ala	Glu	Leu	Trp 4245	Leu	Leu	Asp
Ala 4250	Ser	Asn	Pro	Gln	Glu	Gln 4255	Val	Ala	Gln	Ala	Met 4260	Gln	Leu	Leu

## G1021PCT\_ST25.txt

Ser Glu Pro Gly Ile Thr Thr Val Ala Leu Thr Pro Ser Val Val  
 4265 4270 4275  
 Glu Leu Leu Pro Pro Glu Ala Met Pro Thr Val Gln Ser Leu Thr  
 4280 4285 4290  
 Leu Ala Gly Glu Ala Cys Pro Leu Ala Leu Leu Glu Lys Trp Ser  
 4295 4300 4305  
 Ala Arg Ile Pro Gly Val Ala Asn Val Tyr Gly Pro Thr Glu Ala  
 4310 4315 4320  
 Thr Val Thr Thr Ala Thr Phe Pro Phe Arg Pro Gly Tyr Pro Ala  
 4325 4330 4335  
 Asn Thr Ile Gly Lys Pro Leu Ala Asn Val Gln Val Tyr Ile Leu  
 4340 4345 4350  
 Asp Glu His Gly Lys Leu Leu Pro Pro Gly Val Ile Gly Glu Leu  
 4355 4360 4365  
 Cys Ile Ala Gly Val Gly Leu Ala Leu Gly Tyr Leu Asp Arg Asp  
 4370 4375 4380  
 Glu Leu Thr Gln Arg Lys Phe Val Thr His Pro Ile Gly Pro Arg  
 4385 4390 4395  
 Gly Glu Pro Val Arg Val Tyr Arg Ser Gly Asp Leu Ala Arg Tyr  
 4400 4405 4410  
 Leu Pro Asp Gly His Ile Val Phe Glu Gly Arg Arg Asp Asn Gln  
 4415 4420 4425  
 Val Lys Val Arg Gly Tyr Arg Val Glu Leu Asp Glu Val Ala Trp  
 4430 4435 4440  
 Val Leu Lys Gln His Pro Gln Val Gln Gln Ala Ser Val Ile Val  
 4445 4450 4455  
 Ser Gln Ala Gly Lys Arg Tyr Pro Tyr Leu Val Ala Tyr Val Val  
 4460 4465 4470  
 Pro Arg Thr Pro Pro Ser Ser Pro Ala Ser Leu Arg Ala Glu Leu  
 4475 4480 4485  
 Arg Ala Tyr Met Ala Glu Arg Leu Ser His Tyr Met Val Pro Glu  
 4490 4495 4500  
 Ala Tyr Val Phe Ile Glu Ser Leu Pro Leu Asn Arg Ser Ser Met  
 4505 4510 4515

## G1021PCT\_ST25.txt

Lys Val Glu Val Ser Leu Leu Pro Pro Pro Glu Gly Asp Ser Phe  
 4520 4525 4530  
 Val Arg Asp Thr Leu Val Pro Pro Glu Thr Ala Val Glu Lys Glu  
 4535 4540 4545  
 Leu Ala Thr Leu Trp Met Glu Leu Leu Gly Val Gly Ser Thr Gly  
 4550 4555 4560  
 Arg His Asp Ser Phe Phe Arg Leu Gly Gly Asn Ser Leu Leu Ala  
 4565 4570 4575  
 Val Lys Leu Gly His Ala Ile Gly Glu Arg Trp Gly Cys Asp Ile  
 4580 4585 4590  
 Ser Leu Pro Arg Ile Phe Glu Asn Asp Thr Leu Ala Ala Leu Ala  
 4595 4600 4605  
 Arg Cys Ile Glu Ala Asp Glu Arg Arg Ser His Asp Leu Gln Leu  
 4610 4615 4620  
 Ala Arg Ala Ser Glu Arg Glu Ser Trp Pro Leu Ser Phe Ala Gln  
 4625 4630 4635  
 Gly Arg Met Trp Phe Leu Glu His Leu Thr Gln Gly Ser Ser Ala  
 4640 4645 4650  
 Tyr His Val Pro Leu Val Leu Arg Leu Ile Gly Lys Val Ser Phe  
 4655 4660 4665  
 Glu Arg Leu Ala Gln Ala Leu Ser Ala Leu Val Val Arg His Glu  
 4670 4675 4680  
 Val Leu Arg Thr Ala Tyr Val Glu Asp Gly Asn Thr Leu Ser Gln  
 4685 4690 4695  
 Lys Ile Leu Asp Ala Val Ala Val Glu Met Ala Ser Ser Asp Leu  
 4700 4705 4710  
 Ser Pro Ile Ala Pro Ser Glu Arg Gln Ala Ala Val Asp Arg Leu  
 4715 4720 4725  
 Leu Gly Ala Asp Leu Ala Arg Pro Phe Ala Leu Ala Ala Gly Glu  
 4730 4735 4740  
 Asn Val Arg Ala Arg Leu Val Arg Phe Ser Glu Asp Glu His Leu  
 4745 4750 4755  
 Leu Cys Leu Cys Leu His His Ile Ala Leu Asp Gly Trp Ser Ile  
 4760 4765 4770



Ser Val Leu Leu Arg Glu Leu Gly Ser Leu Tyr Arg Gly Gln Pro  
 4775 4780 4785  
 Leu Gln Pro Leu Pro Leu Arg Tyr Val Asp Phe Ala Cys Trp Gln  
 4790 4795 4800  
 Arg Asp Val Leu Glu Lys Arg Phe Ala Glu Gln Leu Asp Tyr Trp  
 4805 4810 4815  
 Lys Ala Glu Leu Arg Glu Leu Pro Arg Gln Leu Glu Leu Pro Trp  
 4820 4825 4830  
 Asp His Pro Arg Pro Pro Arg Gln Asp Tyr Arg Gly Ala Ser Ala  
 4835 4840 4845  
 Arg Arg Pro Leu Ser Gly Glu Leu Arg Ala Ala Leu Lys Gln Val  
 4850 4855 4860  
 Ala Glu Arg Tyr Asp Val Thr Asp Phe Met Leu Tyr Leu Thr Ser  
 4865 4870 4875  
 Phe Gln Leu Trp Leu Gly Arg Leu Ser Asn Ser Cys Asp Val Val  
 4880 4885 4890  
 Val Gly Thr Pro Val Ala Asn Arg His Tyr Asn Gly Val Glu Ser  
 4895 4900 4905  
 Ile Val Gly Leu Phe Val Asn Thr Leu Pro Leu Arg Leu Arg Tyr  
 4910 4915 4920  
 Asp Gly Ser Glu Thr Phe Gly Gly Val Val Arg Arg Met Lys Ser  
 4925 4930 4935  
 Lys Val Leu Glu Ala Tyr Ser His Gln Asp Val Pro Phe Glu Tyr  
 4940 4945 4950  
 Leu Val Asp His Leu Glu Val Pro Arg Glu Leu Ser His Ala Pro  
 4955 4960 4965  
 Ile Phe Gln Ala Met Phe Leu Leu Gln Asp Glu Ser Gly Arg Glu  
 4970 4975 4980  
 Ile Asp Leu Gly Asp Val Gln Gly Arg Ile Ala Pro Val Ala Gly  
 4985 4990 4995  
 Thr Val Ala Arg Phe Asp Val Ser Leu Leu Val Glu Phe Asp Glu  
 5000 5005 5010  
 Glu Gly Ala Glu Leu Asn Leu Glu Tyr Ala Ser Ala Leu Phe Arg  
 5015 5020 5025  
 Pro Glu Thr Ile Asp Glu Trp Leu Glu Ser Phe Glu Leu Phe Leu

5030						5035						5040
Arg	Ala	Ile	Ala	Ala	Asp	Ala	Glu	Ala	Pro	Val	Arg	Arg
5045						5050					5055	Phe
												Glu
Leu	Leu	Pro	Pro	Arg	Met	Arg	Ser	Phe	Leu	Ser	Glu	Val
5060						5065					5070	Gly
												Thr
Gly	Pro	Arg	Arg	Glu	Tyr	Gly	Ser	Leu	Pro	Leu	Pro	Glu
5075						5080					5085	Leu
												Val
Ala	Glu	Gln	Ala	Lys	His	Gly	Gly	Gln	Arg	Ile	Ala	Val
5090						5095					5100	Glu
												Gly
Val	Arg	Glu	Ser	Trp	Thr	Tyr	Gly	Glu	Leu	Leu	Ala	Ala
5105						5110					5115	Ala
												Glu
Arg	Val	Ala	Ala	Gly	Leu	Gln	Arg	Arg	Gly	Val	Arg	Pro
5120						5125					5130	Gly
												Asp
Gly	Val	Ala	Ile	Ala	Leu	Pro	Arg	Asp	His	Arg	Leu	Pro
5135						5140					5145	Ser
												Ala
Met	Leu	Gly	Val	Leu	Lys	Ala	Gly	Ala	Phe	Tyr	Val	Pro
5150						5155					5160	Leu
												Asp
Leu	Thr	His	Pro	Glu	Arg	Arg	Leu	Gln	Tyr	Ile	Ala	Gly
5165						5170					5175	Asp
												Ala
Lys	Ala	Arg	Phe	Val	Ile	Thr	Gly	Gly	Glu	Thr	Arg	Phe
5180						5185					5190	Gly
												Phe
Asp	Ile	Pro	Arg	Val	Asn	Leu	Asp	Glu	Leu	Leu	Glu	Glu
5195						5200					5205	Thr
												Ser
Glu	Ala	Arg	Pro	Val	Pro	Ile	Ala	Pro	Ser	Ser	Leu	Ala
5210						5215					5220	Tyr
												Val
Ile	Tyr	Thr	Ser	Gly	Ser	Thr	Gly	Glu	Pro	Lys	Gly	Val
5225						5230					5235	Met
												Val
Ser	His	Ala	Ser	Leu	Ser	Asn	Phe	Leu	His	Ala	Met	Val
5240						5245					5250	Glu
												Glu
Leu	Gly	Phe	Gly	Pro	Asp	Glu	Arg	Leu	Leu	Ala	Ile	Thr
5255						5260					5265	Thr
												Ile
Ala	Phe	Asp	Ile	Ser	Gly	Leu	Glu	Leu	Phe	Leu	Pro	Leu
5270						5275					5280	Ile
												Arg
Gly	Ala	Arg	Val	Val	Ile	Ala	Asp	Glu	Asp	Ser	Thr	Arg
5285						5290					5295	Asp
												Pro

## G1021PCT\_ST25.txt

Arg	Leu	Leu	Ser	Arg	Trp	Ile	Asp	Glu	Arg	Arg	Ile	Ser	Val	Met
	5300					5305					5310			
Gln	Ala	Thr	Pro	Ala	Thr	Trp	Arg	Met	Leu	Met	Asp	Ala	Ser	Trp
	5315					5320					5325			
Val	Ala	Pro	Gly	Ser	Phe	Lys	Ala	Leu	Val	Gly	Gly	Glu	Ala	Leu
	5330					5335					5340			
Pro	Arg	Asn	Leu	Ala	Asp	Phe	Met	Thr	Ser	Arg	Val	Ser	Gln	Val
	5345					5350					5355			
Trp	Asn	Val	Tyr	Gly	Pro	Thr	Glu	Ala	Thr	Ile	Trp	Ser	Thr	Ile
	5360					5365					5370			
Ala	Arg	Leu	Lys	Ser	Gly	Glu	Arg	Val	His	Ile	Gly	Arg	Pro	Leu
	5375					5380					5385			
Ala	Asn	Thr	Glu	Ala	Phe	Val	Leu	Asp	Asp	Gly	Leu	Arg	Ala	Val
	5390					5395					5400			
Pro	Arg	Gly	Thr	Leu	Gly	Glu	Leu	His	Leu	Gly	Gly	Ser	Gly	Leu
	5405					5410					5415			
Ala	Thr	Gly	Tyr	Leu	Gly	Arg	Glu	Glu	Leu	Thr	Arg	Gln	Lys	Phe
	5420					5425					5430			
Val	His	His	Pro	Glu	Leu	Gly	Arg	Arg	Leu	Tyr	Lys	Thr	Gly	Asp
	5435					5440					5445			
Leu	Ala	Arg	Val	Leu	Pro	Ser	Gly	Asp	Ile	Glu	Phe	Val	Ala	Arg
	5450					5455					5460			
Arg	Asp	Ala	Gln	Leu	Lys	Ile	Arg	Gly	Phe	Arg	Ile	Glu	Pro	Gly
	5465					5470					5475			
Glu	Val	Glu	Ala	Val	Leu	Ser	Arg	Val	Pro	Gly	Val	Ala	Arg	Val
	5480					5485					5490			
Thr	Val	Leu	Pro	Val	Gly	Glu	Gly	Glu	Gly	Thr	Gln	Leu	Ala	Ala
	5495					5500					5505			
Phe	Leu	Leu	Thr	Gly	Asp	Glu	Arg	Leu	Gln	Ala	Gln	Ala	Arg	Ala
	5510					5515					5520			
Leu	Ala	Glu	Gln	Gln	Leu	Pro	Glu	Tyr	Met	Arg	Pro	Ala	Arg	Tyr
	5525					5530					5535			
Val	Val	Val	Pro	Glu	Phe	Pro	Leu	Thr	Pro	Asn	Gly	Lys	Val	Asp
	5540					5545					5550			

## G1021PCT\_ST25.txt

Thr	Lys 5555	Ala	Leu	Arg	Ala	Leu 5560	Val	Ser	Glu	Gln	Val 5565	Glu	Glu	Ala
Ala	Gly 5570	Ser	Ala	Pro	Lys	Asn 5575	Pro	Ile	Glu	Phe	Arg 5580	Ile	Ser	Arg
Leu	Trp 5585	Ser	Ala	Leu	Leu	Gly 5590	Val	Arg	His	Pro	Gly 5595	Thr	Arg	Asp
Asn	Phe 5600	Phe	Ala	Leu	Gly	Gly 5605	Thr	Ser	Leu	Ala	Ala 5610	Val	Arg	Leu
Ala	Arg 5615	Glu	Leu	Glu	Ser	Glu 5620	Phe	Gly	Ile	Glu	Val 5625	Arg	Val	Gly
Asp	Ile 5630	Phe	Arg	Lys	Pro	Thr 5635	Ile	Ala	Glu	Leu	Ala 5640	Gly	Leu	Val
Glu	Thr 5645	Gln	Gly	Ser	Glu	Arg 5650	Val	Leu	Glu	Pro	Leu 5655	Val	Leu	Leu
Ser	Arg 5660	Glu	Gln	Gln	Lys	Pro 5665	Pro	Leu	Phe	Val	Ile 5670	His	Pro	Ala
Gly	Gly 5675	Met	Ala	Tyr	Cys	Tyr 5680	Ala	Gly	Leu	Ala	Gln 5685	Glu	Leu	Ser
Gly	Phe 5690	Thr	Val	His	Gly	Leu 5695	Asn	Gln	Pro	His	Tyr 5700	Tyr	Glu	Leu
Glu	His 5705	Arg	Phe	Glu	Thr	Leu 5710	Ala	Glu	Met	Ala	Ala 5715	Asp	Tyr	Val
Ala	Arg 5720	Ile	Lys	Arg	Leu	Gln 5725	Pro	Thr	Gly	Pro	Tyr 5730	Arg	Leu	Leu
Gly	Trp 5735	Ser	Phe	Gly	Gly	Thr 5740	Leu	Ala	Tyr	Glu	Met 5745	Ala	Arg	Gln
Leu	Glu 5750	Gln	Ala	Gly	Glu	Ala 5755	Ile	Ser	Gly	Val	Val 5760	Met	Leu	Asp
Ala	His 5765	His	Val	Ser	Pro	Leu 5770	Gly	Ala	Asn	Leu	Pro 5775	Thr	Val	Asp
Val	Ser 5780	Ala	Met	Leu	Ala	Asn 5785	Leu	Gly	Leu	Gly	Gly 5790	Glu	Met	Ala
Asp	Pro 5795	Tyr	Leu	Glu	Lys	Asp 5800	Ile	Arg	Glu	Ser	Glu 5805	Arg	Leu	Ser

G1021PCT\_ST25.txt

Arg Asp Tyr Lys Ala Ser Pro Val Arg Phe Pro Val Leu Leu Phe  
5810 5815 5820

Lys Pro Thr Glu Arg Asn Gly Phe Glu Glu Arg Leu Tyr Ala Asp  
5825 5830 5835

Leu Tyr Asn Gly Trp Arg Glu Cys Ala Glu Asn Ser Val Val Arg  
5840 5845 5850

Ser Val Thr Gly Asp His Gly Gly Val Leu Asp Arg Arg Asn Val  
5855 5860 5865

Ser Glu Leu Ala Arg Val Val Glu Ala Phe Leu Ser Gly Gly Tyr  
5870 5875 5880

Gly Val Leu Leu Arg Glu Ala Val Gln Pro Ala Leu Ala Phe Ala  
5885 5890 5895

Leu Ala Glu Arg Asp Arg Phe Val Ala Arg Arg Leu Val Glu Gln  
5900 5905 5910

Leu Pro Arg Asp Leu Val Glu Arg Trp Leu Lys Ser Ala Ile Asp  
5915 5920 5925

Cys Leu Pro Glu Ser Val Arg Pro Glu Gly Ser Phe Val Gln Ala  
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Leu Leu Glu  
5945

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Met Ile Pro Ser Ser Leu Glu Lys Ala Ile Tyr Gly Val Tyr Ala Thr  
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His Ala Leu His Leu Ala Asp Lys His Asn Val Phe Ala Tyr Leu Ala  
20 25 30

Glu Lys Gly Ala Ala Ala Pro Gly Glu Ile Ala Lys Ala Val Ala Val  
35 40 45

Asp Gly Glu Thr Leu Glu Arg Leu Met Leu Val Leu Gly Ala Leu Glu  
50 55 60

Leu Val Gln Ala Gly Ser Asp Gly Lys Tyr Arg Leu Arg Glu Gly Met  
65 70 75 80

## G1021PCT\_ST25.txt

Gly Pro Tyr Leu Asp<sub>85</sub> Lys Lys Asp Pro Arg<sub>90</sub> Tyr Val Gly Gly Phe<sub>95</sub> Val  
 Thr His Leu Ile<sub>100</sub> Asn Ser Thr Ser Gly<sub>105</sub> Arg Met Gly His Leu<sub>110</sub> Asp Ala  
 Tyr Leu Ser<sub>115</sub> Lys Gly Lys Ala Val<sub>120</sub> Val Asp Ala Ala Leu<sub>125</sub> Pro Ser Pro  
 Phe Asp<sub>130</sub> Val Ile Tyr Lys Asp<sub>135</sub> Glu Ala Ser Thr Lys<sub>140</sub> Glu Phe Met Asp  
 Ala<sub>145</sub> Met Trp Gln Leu Ser<sub>150</sub> Phe Asp Val Ser Arg<sub>155</sub> Glu Leu Val Lys Leu<sub>160</sub>  
 Ala Gly Leu Asp Ser<sub>165</sub> Cys Arg Gln Leu Val<sub>170</sub> Asp Val Gly Gly Ala<sub>175</sub> Ser  
 Gly Pro Phe Ser<sub>180</sub> Val Ala Ala Leu Gln<sub>185</sub> His Ser Arg Glu Leu<sub>190</sub> Arg Ser  
 Thr Leu Phe<sub>195</sub> Asp Leu Pro Lys Val<sub>200</sub> Gly Arg Tyr Val Asp<sub>205</sub> Glu Thr Arg  
 Arg Thr<sub>210</sub> Tyr Gly Leu Glu Glu<sub>215</sub> Arg Leu Arg Phe Val<sub>220</sub> Pro Gly Asp Phe  
 Phe<sub>225</sub> Arg Glu Glu Leu Pro<sub>230</sub> Glu Gly Asp Cys Phe<sub>235</sub> Ala Phe Gly Tyr Ile<sub>240</sub>  
 Leu Ser Asp Trp Asp<sub>245</sub> Asp Ala Thr Cys Leu<sub>250</sub> Glu Leu Leu Arg Lys<sub>255</sub> Ala  
 His Arg Ala Cys<sub>260</sub> Arg Ala Gly Gly Arg<sub>265</sub> Val Leu Val Met Glu<sub>270</sub> Arg Leu  
 Phe Asp Glu<sub>275</sub> Asp Lys Arg Gly Pro<sub>280</sub> Phe Ala Thr Val Phe<sub>285</sub> Met Asn Leu  
 Ser Met<sub>290</sub> His Val Glu Thr Gln<sub>295</sub> Gly Arg His Arg Thr<sub>300</sub> Ala Arg Glu Tyr  
 Val<sub>305</sub> Gly Leu Leu Glu Ala<sub>310</sub> Ala Gly Phe Arg Gly<sub>315</sub> Cys Glu Val Arg Arg<sub>320</sub>  
 Ser Ser Arg Asp Lys<sub>325</sub> His Leu Val Ile Gly<sub>330</sub> Leu Lys His Val Thr<sub>335</sub> Thr

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Lys Arg Ala Gly Arg Ala Ala Leu Leu Glu Ser Glu Cys Glu Ala Leu  
20 25 30

Ser Leu Leu Tyr Asp Arg Val Ser Val Glu Gly Pro Ser Glu Glu Glu  
35 40 45

Glu Ile Leu Ala Leu Leu Thr Arg Pro Phe Ser Arg Arg Leu Ala Ile  
50 55 60

Pro Glu Tyr Tyr Gln Tyr Thr Ser Leu His Val Tyr Gly Trp Phe Leu  
65 70 75 80

Ser His Tyr Arg Arg Asp Pro Leu Arg Gly Ser Leu Val Ala Leu His  
85 90 95

Thr Thr Leu Val Asp Leu Leu Ser Val Glu Glu Gln Gly Ala Arg Leu  
100 105 110

Gly Glu Ala Thr Pro Ala Tyr Ile His Glu Arg Ile Arg Gly Leu Arg  
115 120 125

Gly Leu Leu Gly Gln Leu Asp Glu Ile Pro Val Asp Arg Asn Gly Pro  
130 135 140

Leu Phe Val Ala Asp Val Leu Lys Gly Ser Lys Lys Asp Ala Gln Glu  
145 150 155 160

Gln Trp Arg Ala Phe Val Leu Ala Arg Cys Thr Gly Phe Pro Lys Ser  
165 170 175

Gln Val His Asp Glu Tyr Ile Phe Leu Arg Ser Val His Ala Cys Glu  
180 185 190

Ile Val Phe Phe Gln Val Arg Trp Leu Ala Leu Arg Ile Ser Glu Met  
195 200 205

Ile Ala Val Asp Arg Lys Glu Ala Val Phe Leu Leu Gly Gln Leu Thr  
210 215 220

Ser Phe Ala Glu Leu Leu Asn Lys Ile Phe Asp Val Leu Lys Thr Met  
225 230 235 240

Ser Pro Glu Arg Phe Met Ser Phe Arg Ala Gln Thr Gly Asn Ala Ser  
245 250 255

G1021PCT\_ST25.txt

Ala Val Gln Ser Leu Asn His His Ala Met Glu Ile Ala Val Phe Gly  
260 265 270

Phe Asp Pro Gly Arg Ala Ser Val Phe Asp Gly Phe Glu His Leu Lys  
275 280 285

Arg Leu Asn Glu Pro Leu Phe Arg Glu His Ala Ser Leu Arg Ser Val  
290 295 300

Val Glu Ala Thr Ala Asp Gly Ala Leu Ala Glu Gly Phe Ala Lys Leu  
305 310 315 320

Asp Arg Cys Leu Leu Arg Trp Arg Gly Gly His Tyr Gly Phe Ala Arg  
325 330 335

Lys Tyr Leu Pro Val Asp Ile Lys Gly Ser Gly Gly Thr Glu Gly Ala  
340 345 350

Pro Tyr Leu Lys Arg Phe Ile Lys Lys Asp Asp Cys Gln Ser Gly Gly  
355 360 365

Gln Arg Pro Gly Thr Asp Ser Glu Leu Ala Arg Phe Phe Phe Cys  
370 375 380

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27

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ctcggatccg gtcggaacc atgtacc

27