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<150> GB1620968.6
<151> 2016-12-09

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<170> PatentIn version 3.5

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Pro Gly Val Leu Ser
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Gly Met Leu Ala Leu
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Gly Asn Leu Thr Ser
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Gln Asp Ile Thr Thr Ala Ser Pro Pro Leu Lys
Lys Thr Lys Thr Asn
                85   90
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Leu Ser Leu Glu Thr Ser Ser Pro Leu Thr Val
Ser Thr Ser Gly Ala
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Ala Gly Thr Ser Leu
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Asp Ala Lys Leu Thr
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Gly Lys Leu Ala Leu
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Gln Thr Ser Ala Pro Leu Thr Ala Ala Asp Ser
Ser Thr Leu Thr Val
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Ser Ala Thr Pro Pro Ile Asn Val Ser Ser Gly
Ser Leu Gly Leu Asp
180 185
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Met Glu Asp Pro Met Tyr Thr His Asn Gly Lys
Leu Gly Ile Arg Ile
195 200
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Gly Gly Pro Leu Arg Val Val Asp Ser Leu His
Thr Leu Thr Val Val
210 215
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Thr Gly Asn Gly Leu Thr Val Asp Asn Asn Ala
Leu Gln Thr Lys Val
225 230 235
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Thr Gly Ala Leu Gly Tyr Asp Thr Ser Gly Asn
Leu Gln Leu Arg Ala
245 250
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Ala Gly Gly Met Arg Ile Asp Ala Asn Gly Gln
Leu Ile Leu Asn Val
260 265
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Ala Tyr Pro Phe Asp Ala Gln Asn Asn Leu Ser
Leu Arg Leu Gly Gln
275 280
285

Gly Pro Leu Tyr Ile Asn Thr Asp His Asn Leu
Asp Leu Asn Cys Asn
290 295
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Arg Gly Leu Thr Thr Thr Thr Thr Asn Asn Thr
Lys Lys Leu Glu Thr
305 310 315
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Lys Ile Ser Ser Gly Leu Asp Tyr Asp Thr Asn
Gly Ala Val Ile Ile
325 330
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Lys Leu Gly Thr Gly Leu Ser Phe Asp Asn Thr
Gly Ala Leu Thr Val
340 345
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Gly Asn Thr Gly Asp Asp Lys Leu Thr Leu Trp
Thr Thr Pro Asp Pro
355 360
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Ser Pro Asn Cys Arg Ile His Ser Asp Lys Asp
Cys Lys Phe Thr Leu
370 375
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Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala
Ser Val Ala Ala Leu
385 390 395
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Ala Val Ser Gly Asn Leu Ala Ser Ile Thr Gly
Thr Val Ala Ser Val
405 410
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Thr Ile Phe Leu Arg Phe Asp Gln Asn Gly Val
Leu Met Glu Asn Ser
420 425
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Ser Leu Asp Arg Gln Tyr Trp Asn Phe Arg Asn

Gly Asn Ser Thr Asn
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445

Ala Ala Pro Tyr Thr Asn Ala Val Gly Phe Met
Pro Asn Leu Ala Ala
450 455
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Tyr Pro Lys Thr Gln Ser Gln Thr Ala Lys Asn
Asn Ile Val Ser Gln
465 470 475
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Val Tyr Leu Asn Gly Asp Lys Ser Lys Pro Met
Thr Leu Thr Ile Thr
485 490
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Leu Asn Gly Thr Asn Glu Ser Ser Glu Thr Ser
Gln Val Ser His Tyr
500 505
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Ser Met Ser Phe Thr Trp Ala Trp Glu Ser Gly
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acacaaaaaa acttgagact 960

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tcattattaa acttggcact 1020

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acactggtga tgataaactg 1080

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Tyr Leu Arg Pro Thr
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Ala Pro Leu Phe Asp
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Ala Asp Val Ala Ser
65 70 75
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Leu Asn Tyr Gln Asn Asp His Ser Asn Phe Leu
Thr Thr Val Ile Gln
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Asn Asn Asp Tyr Ser Pro Ser Glu Ala Ser Thr
Gln Thr Ile Asn Leu
100 105
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Asp Asp Arg Ser His Trp Gly Gly Asp Leu Lys
Thr Ile Leu His Thr
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Asp Arg Val Glu Leu
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Lys Tyr Glu Trp Val Glu Phe Glu Leu Pro Glu
Gly Asn Tyr Ser Glu
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Val Glu His Tyr Leu
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Asp Ile Gly Val Lys
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Phe Asp Thr Arg Asn Phe Arg Leu Gly Leu Asp
Pro Val Thr Gly Leu
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Val Met Pro Gly Val Tyr Thr Asn Glu Ala Phe
His Pro Asp Ile Ile
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Leu Leu Pro Gly Cys Gly Val Asp Phe Thr Tyr
Ser Arg Leu Ser Asn
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Leu Leu Gly Ile Arg Lys Arg Gln Pro Phe Gln
Glu Gly Phe Arg Ile
260 265
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Thr Tyr Glu Asp Leu Glu Gly Gly Asn Ile Pro
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Glu Ala Tyr Gln Asp Ser Leu Lys Glu Asn Glu
Ala Gly Gln Glu Asp
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Thr Ala Pro Ala Ala Ser Ala Ala Ala Glu Gln
Gly Glu Asp Ala Ala
305 310 315
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Asp Thr Ala Ala Ala Asp Gly Ala Glu Ala Asp

Pro Ala Met Val Val
325 330
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Glu Ala Ala Glu Gln Glu Glu Asp Met Asn Asp
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340 345
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Asp Thr Phe Val Thr Arg Gly Glu Glu Lys Gln
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Ala Ala Ala Glu Ala Glu Ser Glu Gly Thr Lys
Pro Ala Lys Glu Pro
385 390 395
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Val Ile Lys Pro Leu Thr Glu Asp Ser Lys Lys
Arg Ser Tyr Asn Leu
405 410
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Leu Lys Asp Ser Thr Asn Thr Ala Tyr Arg Ser
Trp Tyr Leu Ala Tyr

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Asn Tyr Gly Asp Pro Ser Thr Gly Val Arg Ser
Trp Thr Leu Leu Cys
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Thr Pro Asp Val Thr Cys Gly Ser Glu Gln Val
Tyr Trp Ser Leu Pro
450 455
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Asp Met Met Gln Asp Pro Val Thr Phe Arg Ser
Thr Arg Gln Val Ser
465 470 475
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Asn Phe Pro Val Val Gly Ala Glu Leu Leu Pro
Val His Ser Lys Ser
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Phe Tyr Asn Asp Gln Ala Val Tyr Ser Gln Leu
Ile Arg Gln Phe Thr
500 505
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Ser Leu Thr His Val Phe Asn Arg Phe Pro Glu
Asn Gln Ile Leu Ala
515 520

525

Arg Pro Pro Ala Pro Thr Ile Thr Thr Val Ser
Glu Asn Val Pro Ala
    530   535
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Leu Thr Asp His Gly Thr Leu Pro Leu Arg Asn
Ser Ile Gly Gly Val
545   550   555
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Gln Arg Val Thr Val Thr Asp Ala Arg Arg Arg
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Tyr Lys Ala Leu Gly Ile Val Ser Pro Arg Val
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tgctggagcc gccgtacgtg 120

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accggtcgca ctggggcggc 360

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acgagttcat gttcaccaat 420

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aggaagaccg ggtggagctg 480

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actccgagac catgaccatt 540

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tgggcaggca gaacggggtc 600

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tccgcctggg gctggacccc 660

gtgaccgggc tggttatgcc cggggtgtac accaacgagg
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gcttgaagga aaatgaggcg 900

ggacaggagg ataccgcccc cgccgcctcc gccgccgccg
agcagggcga ggatgctgct 960

gacaccgcgg ccgcggacgg ggcggaggcc gaccccgcta
tggtggtgga ggctgccgag 1020

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ccaagcccgc caaggagccc 1200

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acaacctgct caaggacagc 1260

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acggcgaccc gtcgacgggg 1320

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gcggctcgga gcaggtgtac 1380

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ccatcaccac cgtcagtgaa 1620

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Arg Ala Thr Glu Ser Tyr Phe Ser Leu Ser Asn

Lys Phe Arg Asn Pro
35 40
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Thr Val Ala Pro Thr His Asp Val Thr Thr Asp
Arg Ser Gln Arg Leu
50 55 60

Thr Leu Arg Phe Ile Pro Val Asp Arg Glu Asp
Thr Ala Tyr Ser Tyr
65 70 75
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Lys Ala Arg Phe Thr Leu Ala Val Gly Asp Asn
Arg Val Leu Asp Met
85 90
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Ala Ser Thr Tyr Phe Asp Ile Arg Gly Val Leu
Asp Arg Gly Pro Thr
100 105
110

Phe Lys Pro Tyr Ser Gly Thr Ala Tyr Asn Ser
Leu Ala Pro Lys Gly
115 120
125

Ala Pro Asn Ser Cys Glu Trp Glu Gln Leu Glu
Glu Ala Gln Ala Ala
130 135

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Val Glu Asp Glu Glu Leu Glu Asp Glu Asp Glu
Glu Pro Gln Asp Glu
145 150 155
160

Ala Pro Val Lys Lys Thr His Val Tyr Ala Gln
Ala Pro Leu Ser Gly
165 170
175

Glu Glu Ile Thr Lys Asn Gly Leu Gln Ile Gly
Ser Asp Asn Thr Glu
180 185
190

Ala Gln Ser Lys Pro Ile Tyr Ala Asp Pro Thr
Phe Gln Pro Glu Pro
195 200
205

Gln Ile Gly Glu Ser Gln Trp Asn Glu Ala Asp
Ala Thr Val Ala Gly
210 215
220

Gly Arg Val Leu Lys Lys Ser Thr Pro Met Lys
Pro Cys Tyr Gly Ser
225 230 235
240

Tyr Ala Arg Pro Thr Asn Ser Asn Gly Gly Gln
Gly Val Leu Val Ala
245 250
255

Asp Asp Lys Gly Val Leu Gln Ser Lys Val Glu
Leu Gln Phe Phe Ser
260 265
270

Asn Thr Thr Thr Leu Asn Gln Arg Glu Gly Asn
Asp Thr Lys Pro Lys
275 280
285

Val Val Leu Tyr Ser Glu Asp Val His Met Glu
Thr Pro Asp Thr His
290 295
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Ile Ser Tyr Lys Pro Thr Lys Ser Asp Asp Asn
Ser Lys Ile Met Leu
305 310 315
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Gly Gln Gln Ser Met Pro Asn Arg Pro Asn Tyr
Ile Gly Phe Arg Asp
325 330
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Asn Phe Ile Gly Leu Met Tyr Tyr Asn Ser Thr
Gly Asn Met Gly Val
340 345
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Leu Ala Gly Gln Ala Ser Gln Leu Asn Ala Val
Val Asp Leu Gln Asp
355 360
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Arg Asn Thr Glu Leu Ser Tyr Gln Leu Leu Leu
Asp Ser Met Gly Asp
370 375
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Arg Thr Arg Tyr Phe Ser Met Trp Asn Gln Ala
Val Asp Ser Tyr Asp
385 390 395
400

Pro Asp Val Arg Ile Ile Glu Asn His Gly Thr
Glu Asp Glu Leu Pro
405 410
415

Asn Tyr Cys Phe Pro Leu Gly Gly Ile Gly Val
Thr Asp Thr Tyr Gln
420 425
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Ala Ile Lys Thr Asn Gly Asn Gly Gln Glu Asn

Pro Thr Trp Glu Lys
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Asp Thr Glu Phe Ala Asp Arg Asn Glu Ile Gly
Val Gly Asn Asn Phe
    450   455
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Ala Met Glu Ile Asn Leu Ser Ala Asn Leu Trp
Arg Asn Phe Leu Tyr
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480

Ser Asn Val Ala Leu Tyr Leu Pro Asp Lys Leu
Lys Tyr Asn Pro Ser
                485   490
495

Asn Val Asp Ile Ser Asp Asn Pro Asn Thr Tyr
Asp Tyr Met Asn Lys
            500   505
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Arg Val Val Ala Pro Gly Leu Val Asp Cys Tyr
Ile Asn Leu Gly Ala
        515   520
525

Arg Trp Ser Leu Asp Tyr Met Asp Asn Val Asn
Pro Phe Asn His His

530 535
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Arg Asn Ala Gly Leu Arg Tyr Arg Ser Met Leu
Leu Gly Asn Gly Arg
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Tyr Val Pro Phe His Ile Gln Val Pro Gln Lys
Phe Phe Ala Ile Lys
565 570
575

Asn Leu Leu Leu Leu Pro Gly Ser Tyr Thr Tyr
Glu Trp Asn Phe Arg
580 585
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Lys Asp Val Asn Met Val Leu Gln Ser Ser Leu
Gly Asn Asp Leu Arg
595 600
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Val Asp Gly Ala Ser Ile Lys Phe Glu Ser Ile
Cys Leu Tyr Ala Thr
610 615
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Phe Phe Pro Met Ala His Asn Thr Ala Ser Thr
Leu Glu Ala Met Leu
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Arg Asn Asp Thr Asn Asp Gln Ser Phe Asn Asp
Tyr Leu Ser Ala Ala
645 650
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Asn Met Leu Tyr Pro Ile Pro Ala Asn Ala Thr
Asn Val Pro Ile Ser
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Ile Pro Ser Arg Asn Trp Ala Ala Phe Arg Gly
Trp Ala Phe Thr Arg
675 680
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Leu Lys Thr Lys Glu Thr Pro Ser Leu Gly Ser
Gly Phe Asp Pro Tyr
690 695
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Tyr Thr Tyr Ser Gly Ser Ile Pro Tyr Leu Asp
Gly Thr Phe Tyr Leu
705 710 715
720

Asn His Thr Phe Lys Lys Val Ser Val Thr Phe
Asp Ser Ser Val Ser
725 730
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Trp Pro Gly Asn Asp Arg Leu Leu Thr Pro Asn
Glu Phe Glu Ile Lys
740 745
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Arg Ser Val Asp Gly Glu Gly Tyr Asn Val Ala
Gln Cys Asn Met Thr
755 760
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Lys Asp Trp Phe Leu Val Gln Met Leu Ala Asn
Tyr Asn Ile Gly Tyr
770 775
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Gln Gly Phe Tyr Ile Pro Glu Ser Tyr Lys Asp
Arg Met Tyr Ser Phe
785 790 795
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Phe Arg Asn Phe Gln Pro Met Ser Arg Gln Val
Val Asp Gln Thr Lys
805 810
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Tyr Lys Asp Tyr Gln Glu Val Gly Ile Ile His
Gln His Asn Asn Ser
820 825
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Gly Phe Val Gly Tyr Leu Ala Pro Thr Met Arg
Glu Gly Gln Ala Tyr
835 840
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Pro Ala Asn Phe Pro Tyr Pro Leu Ile Gly Lys
Thr Ala Val Asp Ser
850 855
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Ile Thr Gln Lys Lys Phe Leu Cys Asp Arg Thr
Leu Trp Arg Ile Pro
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Phe Ser Ser Asn Phe Met Ser Met Gly Ala Leu
Ser Asp Leu Gly Gln
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Asn Leu Leu Tyr Ala Asn Ser Ala His Ala Leu
Asp Met Thr Phe Glu
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Val Leu Phe Glu Val
915 920
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