Gga1 (67,324,505-67,324,624)

TSD

3'LTR

20 40 60 80 100

Araucana-Mapuche ATTTCACAAACGGGTGTACAAATAGAGCACACTTGCACATTTTCTACCCAATTAATTTTTGACCAGCGTAGATAAACATGTATTTTGGGACCTTCATGTTGCATG

Translation Selection

3'LTR

120 140 160 180 200

Araucana-Mapuche TAGTCTCCGTTCGCTCATCCGGTGTTCGTCCTCTGTCCACATGTAGGGCTTACTGCTGGGCGAAACCGACCCTTTACCAGGTCGGGGCCAGATGCTCACCCAGAC

Translation Selection

3'LTR

220 240 260 280 300

Araucana-Mapuche CCCAGGAGTAAGTGAGGCAAATGGCGTTTATTGCTATAGGCTACGTGTTTAAATACAAGTGTTTCCTCCAATCACGAAGTTACACTTGGCACACACAAGTGGCAT

Translation Selection

3'LTR

PPT

320 340 360 380 400 420

Araucana-Mapuche AACACACAGGTGGCATAGGAACCTGCACGCGTCACACCTCGTTTCCCTCGCTACGCCTACAACACACCTCGTTTCCCTCGCTACGCATACAACATCTCCCCCTCC

Translation Selection

PPT

gag-env

440 460 480 500 520

Araucana-Mapuche CTATGCCGATAGCTCCCGTCACATCGCGTTCGGAACCTACAGCTGCTCCCTAATTCTATGATATTTTATGCGTTCATCCATAAACTGATTCATTGTTCTCAATAG

Translation Selection Stp Leu Gln Glu Arg Ile Arg His Tyr Lys Ile Arg Glu Asp Met Phe Gln Asn Met Thr Arg Leu Leu

ENV polyprotein

gag-env

540 560 580 600 620

Araucana-Mapuche ACAATCCTGAAAGCACTTGATTATACATGGAATGATAGCTAATAGACAGGCTATGACAAGCAAGGCAAACAGTAGCGTCTTAACACCTTTCGCGAGCAACCTTCC

Translation Selection Cys Asp Gln Phe Cys Lys Ile Ile Cys Pro Ile Ile Ala Leu Leu Cys Ala Ile Val Leu Leu Ala Phe Leu Leu Thr Lys Val Gly Lys Ala Leu Leu Arg Gly

ENV polyprotein

gag-env

640 660 680 700 720

Araucana-Mapuche TAGATCACCAAACGTGCGCGTAAACCAGTCCCCTATGGGATCATCTTCCACCCGTATCTTCTCTGTATGTTCCCTCATGGCTTGGAGCGCCTTGTGAATGGACTC

Translation Selection Leu Asp Gly Phe Thr Arg Thr Phe Trp Asp Gly Ile Pro Asp Asp Glu Val Arg Ile Lys Glu Thr His Glu Arg Met Ala Gln Leu Ala Lys His Ile Ser Glu

ENV polyprotein

gag-env

740 760 780 800 820 840

Araucana-Mapuche ACTGTGATCGCTGAGATTGAAGCAACACATCCCTTCCACGTCTTGACACCCGTGTCCCTGCGCCAGGAGTAAGAAATCGATGGCTGCTCGATTCTGCAACACTGC

Translation Selection Ser His Asp Ser Leu Asn Phe Cys Cys Met Gly Glu Val Asp Gln Cys Gly His Gly Gln Ala Leu Leu Leu Phe Asp Ile Ala Ala Arg Asn Gln Leu Val Ala

ENV polyprotein

gag-env

860 880 900 920 940

Araucana-Mapuche GTGCCGGATGCTGCTCGTATCCTCCAGCATCGCATTCAATATTAAAGATGTTAAATTTGCTTGCTTAACCGACCAACATGCCAGTCGTTCGATCTCCTTTAAGGC

Translation Selection His Arg Ile Ser Ser Thr Asp Glu Leu Met Ala Asn Leu Ile Leu Ser Thr Leu Asn Ala Gln Lys Val Ser Trp Cys Ala Leu Arg Glu Ile Glu Lys Leu Ala

gag-env

960 980 1,000 1,020 1,040

Araucana-Mapuche CTGTGCTGCTGCTATACCAGGAGCAAAGAAAGAAGCAAATATCCGGGCTGTCACACTCCATAGCTGTAGCTCATCACCGCAGTCAGGCGAGAGACGACTCAGCGA

Translation Selection Gln Ala Ala Ala Ile Gly Pro Ala Phe Phe Ser Ala Phe Ile Arg Ala Thr Val Ser Trp Leu Gln Leu Glu Asp Gly Cys Asp Pro Ser Leu Arg Ser Leu Ser

Avian retrovirus envelope protei...

gag-env

1,060 1,080 1,100 1,120 1,140

Araucana-Mapuche GCGCCTGCTACGGCGGTGACCCGTAATGTTCGGCCCATATGTTATCCAGGTGGTAAAGTTAGGAGAGAGCATAGTCAATTGTCCTAGATAACAGGGCCCTCCCAA

Translation Selection Arg Arg Ser Arg Arg His Gly Thr Ile Asn Pro Gly Tyr Thr Ile Trp Thr Thr Phe Asn Pro Ser Leu Met Thr Leu Gln Gly Leu Tyr Cys Pro Gly Gly Leu

Avian retrovirus envelope protei...

gag-env

1,160 1,180 1,200 1,220 1,240 1,260

Araucana-Mapuche GGCATTACGCGGGATGCCTTGCCAAGCCCTGTCCCCACAAATCAAGAAAATACCTGGTGGGAGTGCCTTAGCAGTCCCATTGTTCCACAACACCTCTGGCTGTTT

Translation Selection Ala Asn Arg Pro Ile Gly Gln Trp Ala Arg Asp Gly Cys Ile Leu Phe Ile Gly Pro Pro Leu Ala Lys Ala Thr Gly Asn Asn Trp Leu Val Glu Pro Gln Lys

Avian retrovirus envelope protei...

gag-env

1,280 1,300 1,320 1,340 1,360

Araucana-Mapuche CCCGAAGGTAAACCCATATGCATAATAATTCCATTCCGTTGTGCAATTACCACCGCAACCCGTCGTGTTGCTGGAACATTTTGTCCCGTTGCTGTACCCCGCTGA

Translation Selection Gly Phe Thr Phe Gly Tyr Ala Tyr Tyr Asn Trp Glu Thr Thr Cys Asn Gly Gly Cys Gly Thr Thr Asn Ser Ser Cys Lys Thr Gly Asn Ser Tyr Gly Ala Ser

Avian retrovirus envelope protei...
gag-env

1,380 1,400 1,420 1,440 1,460

Araucana-Mapuche CCATTTTCCCCTTTTTGAACTACACCAATTAGAAAGGTCCCCTCTATAGTAACGAGTCTCGTTACTGGTGAATCCACAATATCTACGACTTATTGAAAAACTCTC

Translation Selection Trp Lys Gly Arg Lys Ser Ser Cys Trp Asn Ser Leu Asp Gly Arg Tyr Tyr Arg Thr Glu Asn Ser Thr Phe Gly Cys Tyr Arg Arg Ser Ile Ser Phe Ser Glu

Avian retrovirus envelope protei...
gag-env

1,480 1,500 1,520 1,540 1,560

Araucana-Mapuche TACATTTATTGGACTTACCATCGTCCATGATTGGTTGACATAGGGCCTTATAAGAAGGTCATCACTTTTCCATTTTGCTATGAAGTCACGCAATTCTGCTTCCGC

Translation Selection Val Asn Ile Pro Ser Val Met Thr Trp Ser Gln Asn Val Tyr Pro Arg Ile Leu Leu Asp Asp Ser Lys Trp Lys Ala Ile Phe Asp Arg Leu Glu Ala Glu Ala

Avian retrovirus envelope protei...
gag-env

1,580 1,600 1,620 1,640 1,660 1,680

Araucana-Mapuche CCCACCAGTCCCATTAAAATTCCCATCAAAATTGTGACAGACTCTACTGCGATTGTTCTCTTTATAGCACACCGAACCAAAGGTAACACACGTACGTGTTGTTCC

Translation Selection Gly Gly Thr Gly Asn Phe Asn Gly Asp Phe Asn His Cys Val Arg Ser Arg Asn Asn Glu Lys Tyr Cys Val Ser Gly Phe Thr Val Cys Thr Arg Thr Thr Gly

Avian retrovirus envelope protei... gag-env

1,700 1,720 1,740 1,760 1,780

Araucana-Mapuche GTTCTTGATCATCTGGGACCCTAAAATATCCAATTCTTGGGGGTCCCAAGGGAGGGTTGTATTTAGAGCCTTTATCAAGCATGCTGTTTGGCTGGCTAAATCGGC

Translation Selection Asn Lys Ile Met Gln Ser Gly Leu Ile Asp Leu Glu Gln Pro Asp Trp Pro Leu Thr Thr Asn Leu Ala Lys Ile Leu Cys Ala Thr Gln Ser Ala Leu Asp Ala

Retroviral aspartyl protease
gag-env

1,800 1,820 1,840 1,860 1,880

Araucana-Mapuche ATCGTTATCACAAGCAGTAACATTAGTGACGTATCCCTTGAAGGTGTTCAGAGGATACTGTGGAATGCCTATCTGTCGCAAGAAATCCCGCCCCAGAAGAGTTCC

Translation Selection Asp Asn Asp Cys Ala Thr Val Asn Thr Val Tyr Gly Lys Phe Thr Asn Leu Pro Tyr Gln Pro Ile Gly Ile Gln Arg Leu Phe Asp Arg Gly Leu Leu Thr Gly

Retroviral aspartyl protease
gag-env

1,900 1,920 1,940 1,960 1,980

Araucana-Mapuche GGGGACACGCGCCACCAATGGTGTAAGCAACGCCGGTTTCTCTAAGGAGCCATCCCTGTTAATCACAACCACTTGTACCTCATTGGTAGACCGGCGTGAGGGGGT

Translation Selection Pro Val Arg Ala Val Leu Pro Thr Leu Leu Ala Pro Lys Glu Leu Ser Gly Asp Arg Asn Ile Val Val Val Gln Val Glu Asn Thr Ser Arg Arg Ser Pro Thr

Retroviral aspartyl protease
gag-env

2,000 2,020 2,040 2,060 2,080 2,100

Araucana-Mapuche CGCCCCTCCAACCCCCATAATAGACTGCGAGGCCTCCGCGGGCCACGAGGATGGCCATTCTGTTTCCGTGACCACAGTAACGTCGGCGCCGGAATCTATGAGGGC

Translation Selection Ala Gly Gly Val Gly Met Ile Ser Gln Ser Ala Glu Ala Pro Trp Ser Ser Pro Trp Glu Thr Glu Thr Val Val Thr Val Asp Ala Gly Ser Asp Ile Leu Ala

Retroviral aspartyl protease gag-env

2,120 2,140 2,160 2,180 2,200

Araucana-Mapuche AGTGACAAAGATAGATAGAGGGCCTTGAAAATCCGGCGGGAGGTTGGTGCAAGAAATAGTGGCTTTCACCACAGGGCGCTCATGGGTACTTAGAGACAGCGCCGC

Translation Selection Thr Val Phe Ile Ser Leu Pro Gly Gln Phe Asp Pro Pro Leu Asn Thr Cys Ser Ile Thr Ala Lys Val Val Pro Arg Glu His Thr Ser Leu Ser Leu Ala Ala

gag-env

2,220 2,240 2,260 2,280 2,300

Araucana-Mapuche CATGGGTAAACTTAGGTGAGGGGCCCGCACCGATCGAGAAATGAAGTTGCCGTGCGTGGACGGTCTCCCGTTGTTATTTCCCTGGCGTGGAGGCCTACGGGCCCT

Translation Selection Met Pro Leu Ser Leu His Pro Ala Arg Val Ser Arg Ser Ile Phe Asn Gly His Thr Ser Pro Arg Gly Asn Asn Asn Gly Gln Arg Pro Pro Arg Arg Ala Arg

Zinc knuckle
gag-env

2,320 2,340 2,360 2,380 2,400

Araucana-Mapuche GCATTGTGGTGCTGTATGACCCTTCCGCCCACACTGCTGACATGTTACACCTCCACCCGTGCCCATTCTGCATTGGGCCCTAATATGGCCCAACTGGCCACATTT

Translation Selection Cys Gln Pro Ala Thr His Gly Lys Arg Gly Cys Gln Gln Cys Thr Val Gly Gly Gly Thr Gly Met Arg Cys Gln Ala Arg Ile His Gly Leu Gln Gly Cys Lys

Zinc knuckle gag-env

2,420 2,440 2,460 2,480 2,500 2,520

Araucana-Mapuche AAAGCAAGGTCCTAACTGTCGGTCCGCACTACGATGGTCCGCCTCCCTACAGGCCATCATCACTCCTGCTACCGCCGCAGCTACCTCCCCTGCCACAGACGGACA

Translation Selection Phe Cys Pro Gly Leu Gln Arg Asp Ala Ser Arg His Asp Ala Glu Arg Cys Ala Met Met Val Gly Ala Val Ala Ala Ala Val Glu Gly Ala Val Ser Pro Cys

gag gene protein p24
gag-env

2,540 2,560 2,580 2,600 2,620

Araucana-Mapuche GGCCTTTTGCTTATCTAAGACATACTTGATGGCCTCACCAGGGGTTTGGAGCCTCCCCGGCGCCGCTCGCAAAATCCCCTGCACCCCTTCACTGGACTTCTGATA

Translation Selection Ala Lys Gln Lys Asp Leu Val Tyr Lys Ile Ala Glu Gly Pro Thr Gln Leu Arg Gly Pro Ala Ala Arg Leu Ile Gly Gln Val Gly Glu Ser Ser Lys Gln Tyr

gag gene protein p24
gag-env

2,640 2,660 2,680 2,700 2,720

Araucana-Mapuche CAAGCAATCCAGGATGACGGGACCGTGAACCGCTCTGGGCAGATCGGAGCCTTCCACTGCCTTAATTAATCTGTCTGCAAACTCCTGAAACGGCTCTGTGGGGCC

Translation Selection Leu Cys Asp Leu Ile Val Pro Gly His Val Ala Arg Pro Leu Asp Ser Gly Glu Val Ala Lys Ile Leu Arg Asp Ala Phe Glu Gln Phe Pro Glu Thr Pro Gly

gag gene protein p24
gag-env

HindIII

2,740 2,760 2,780 2,800 2,820

Araucana-Mapuche TTGCGCGATCTCTGTCCACGGAGTAGTGGGCTCAGCGCTCCTTGCAAGCTTTCGGAACGCGTCTATTGCAGCGTCCGTAGTTGCTATCAACTCTCCTGGTCTAAG

Translation Selection Gln Ala Ile Glu Thr Trp Pro Thr Thr Pro Glu Ala Ser Arg Ala Leu Lys Arg Phe Ala Asp Ile Ala Ala Asp Thr Thr Ala Ile Leu Glu Gly Pro Arg Leu

gag gene protein p24
gag-env

2,840 2,860 2,880 2,900 2,920 2,940

Araucana-Mapuche TTGACAAACTTGTGCTTGAGGGGTCAGCAGACCTGGTGCATTGCCCGTTAATCTCTGTATATCGGACCCATATATGGGGTTTCTTTGATCACCCTGCGCCGTAAT

Translation Selection Gln Cys Val Gln Ala Gln Pro Thr Leu Leu Gly Pro Ala Asn Gly Thr Leu Arg Gln Ile Asp Ser Gly Tyr Ile Pro Asn Arg Gln Asp Gly Gln Ala Thr Ile

gag gene protein p24
gag-env

2,960 2,980 3,000 3,020 3,040

Araucana-Mapuche CAGCATTTGTTTTAATTTAGTATGCCACTCCTCTCTCCAGAGCGTATACTGCACTGGTTTCAACACCATGCGCATTAAATTTTCAATATCATAAGGCAGCATTGG

Translation Selection Leu Met Gln Lys Leu Lys Thr His Trp Glu Glu Arg Trp Leu Thr Tyr Gln Val Pro Lys Leu Val Met Arg Met Leu Asn Glu Ile Asp Tyr Pro Leu Met Pro

gag gene protein p24 gag-env

3,060 3,080 3,100 3,120 3,140

Araucana-Mapuche GCCCGATGCTGTGAGGGCCTCAAGGGCATTCATCGTCAATGGCGACTTCAGCCCTTTCTTTTCTACTGCCTCAATCATCCTTGCTACCCCCTTTGGGTCCAACGG

Translation Selection Gly Ser Ala Thr Leu Ala Glu Leu Ala Asn Met Thr Leu Pro Ser Lys Leu Gly Lys Lys Glu Val Ala Glu Ile Met Arg Ala Val Gly Lys Pro Asp Leu Pro

HindIII

3,160 3,180 3,200 3,220 3,240

Araucana-Mapuche GACCCAGATTGGGCCTCCCTCCTCCGAGACAACAACTGGGAGTGTATAAGTTGCCGCCAGACCTTTCTGTGCCACTTCCTCTTTGATCTGCCCCCAATCAGTAAG

Translation Selection Val Trp Ile Pro Gly Gly Glu Glu Ser Val Val Val Pro Leu Thr Tyr Thr Ala Ala Leu Gly Lys Gln Ala Val Glu Glu Lys Ile Gln Gly Trp Asp Thr Leu

gag-env

3,260 3,280 3,300 3,320 3,340 3,360

Araucana-Mapuche CTTAAGTCTCCCCTCCCCCTTTCCTTTTGGGGATGGTCCCGCCCCCTGCTCCGATGTCGTTGCCAAGGAAGGATATAACGGCTGCTTAGGGTAGGGCGGGGGCGG

Translation Selection Lys Leu Arg Gly Glu Gly Lys Gly Lys Pro Ser Pro Gly Ala Gly Gln Glu Ser Thr Thr Ala Leu Ser Pro Tyr Leu Pro Gln Lys Pro Tyr Pro Pro Pro Pro

gag-env

3,380 3,400 3,420 3,440 3,460

Araucana-Mapuche CGACAGCGCAATAGAATTAGGAGGGGCCGTCGGCGCCGTTGCACCCCCCCCGAGCCTCTGCGACTCTTCGTTGTCCTTCTCGCAATCTTCCTCTCTCTCCGTCGC

Translation Selection Ser Leu Ala Ile Ser Asn Pro Pro Ala Thr Pro Ala Thr Ala Gly Gly Gly Leu Arg Gln Ser Glu Glu Asn Asp Lys Glu Cys Asp Glu Glu Arg Glu Thr Ala

gag-env

3,480 3,500 3,520 3,540 3,560

Araucana-Mapuche CGTTTTATTCGCTGTCGTCTGAGCGCCGGTCTGAGCGCCGGTCTGAGCGCCGGTCTGAGCGCCGGTCTGAGCGCCGGTCCTGCAAAACTCCAAAGACCCGCTCCC

Translation Selection Thr Lys Asn Ala Thr Thr Gln Ala Gly Thr Gln Ala Gly Thr Gln Ala Gly Thr Gln Ala Gly Thr Arg Cys Phe Glu Leu Ser Gly Ser Gly

Retroviral M domain
gag-env

3,580 3,600 3,620 3,640 3,660

Araucana-Mapuche CGGAGCTCCCTCCCCGCTCATGACCGCGCCAAGTTTGTGCTCTGCCCTGGCCGCCTTAAGGGCTCCTAACATCAGTCCCCACGTTTTAAGTTCCGTAGCCTTCTG

Translation Selection Pro Ala Gly Glu Gly Ser Met Val Ala Gly Leu Lys His Glu Ala Arg Ala Ala Lys Leu Ala Gly Leu Met Leu Gly Trp Thr Lys Leu Glu Thr Ala Lys Gln

Retroviral M domain
gag-env

3,680 3,700 3,720 3,740 3,760 3,780

Araucana-Mapuche ACTGGCCATGGCGCGCTGGCATAGCGCCAAGGTGAGCAAGTCCCACCTACTCGAATCCAAAACGTAGCGGGGAGAGTCCAGCTCCCCCAGCTCATTTAACAGCGA

Translation Selection Ser Ala Met Ala Arg Gln Cys Leu Ala Leu Thr Leu Leu Asp Trp Arg Ser Ser Asp Leu Val Tyr Arg Pro Ser Asp Leu Glu Gly Leu Glu Asn Leu Leu Ser

Retroviral M domain
gag-env

3,800 3,820 3,840 3,860 3,880

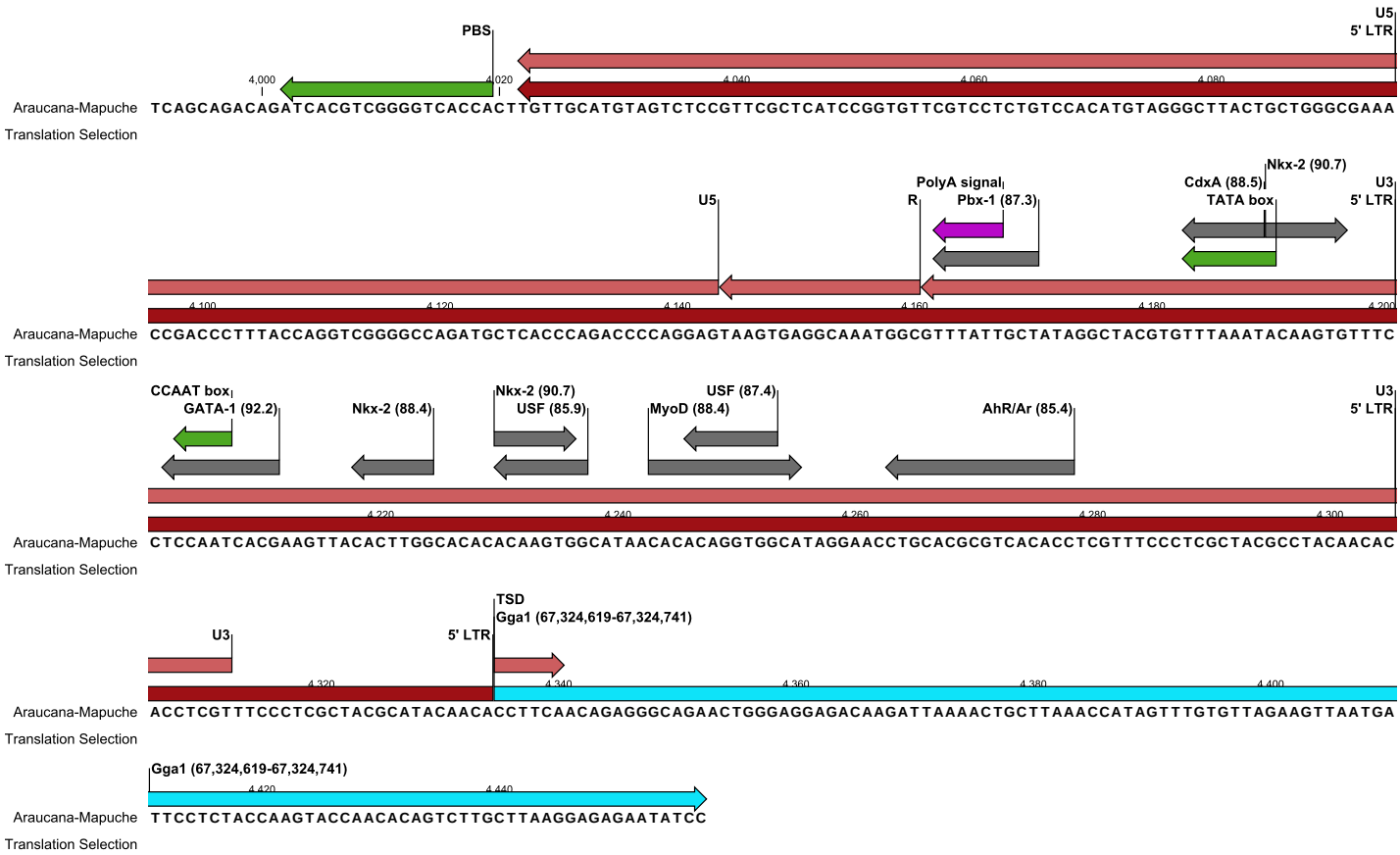
Araucana-Mapuche CAAAACTGCCGCGATCTCCTTCCCGGAAGGAGTAGATTTTCCACAGTAGTCCTTACAAAACTGCACAAGTACCTTAATGACTTGGTCCATTGTTACGTATGCGAC

Translation Selection Leu Val Ala Ala Ile Glu Lys Gly Ser Pro Thr Ser Lys Gly Cys Tyr Asp Lys Cys Phe Gln Val Leu Val Lys Ile Val Gln Asp Met

3,900 3,920 3,940 3,960 3,980

Araucana-Mapuche CTGCCGCCACCTCGCAGGCTCTTAACCGCAATACGTCTTCCGTGCGCGACCTGCCGCCACCTCACAGGCTCTTCTCCGCGTCACGGGCACGCCGGGCAGCTACCC

Translation Selection


PBS
U5
5' LTR
4,000
4,020
4,040
4,060
4,080
Araucana-Mapuche
TCAGCAGACAGATCACGTCGGGGTCACCACTTGTTGCATGTAGTCTCCGTTCGCTCATCCGGTGTTCGTCCTCTGTCCACATGTAGGGCTTACTGCTGGGCGAAA
Translation Selection
Nkx-2 (90.7)
PolyA signal
CdxA (88.5)
U3
U5
R
Pbx-1 (87.3)
TATA box
5' LTR
4,100
4,120
4,140
4,160
4,180
4,200
Araucana-Mapuche
CCGACCCTTTACCAGGTCGGGGCCAGATGCTCACCCAGACCCCAGGAGTAAGTGAGGCAAATGGCGTTTATTGCTATAGGCTACGTGTTTAAATACAAGTGTTTC
Translation Selection
CCAAT box
GATA-1 (92.2)
Nkx-2 (88.4)
Nkx-2 (90.7)
USF (85.9)
USF (87.4)
MyoD (88.4)
AhR/Ar (85.4)
U3
5' LTR
4,220
4,240
4,260
4,280
4,300
Araucana-Mapuche
CTCCAATCACGAAGTTACACTTGGCACACACAAGTGGCATAACACACAGGTGGCATAGGAACCTGCACGCGTCACACCTCGTTTCCCTCGCTACGCCTACAACAC
Translation Selection
TSD
Gga1 (67,324,619-67,324,741)
U3
5' LTR
4,320
4,340
4,360
4,380
4,400
Araucana-Mapuche
ACCTCGTTTCCCTCGCTACGCATACAACACCTTCAACAGAGGGCAGAACTGGGAGGAGACAAGATTAAAACTGCTTAAACCATAGTTTGTGTTAGAAGTTAATGA
Translation Selection
Gga1 (67,324,619-67,324,741)
4,420
4,440
Araucana-Mapuche
TTCCTCTACCAAGTACCAACACAGTCTTGCTTAAGGAGAGAATATCC
Translation Selection