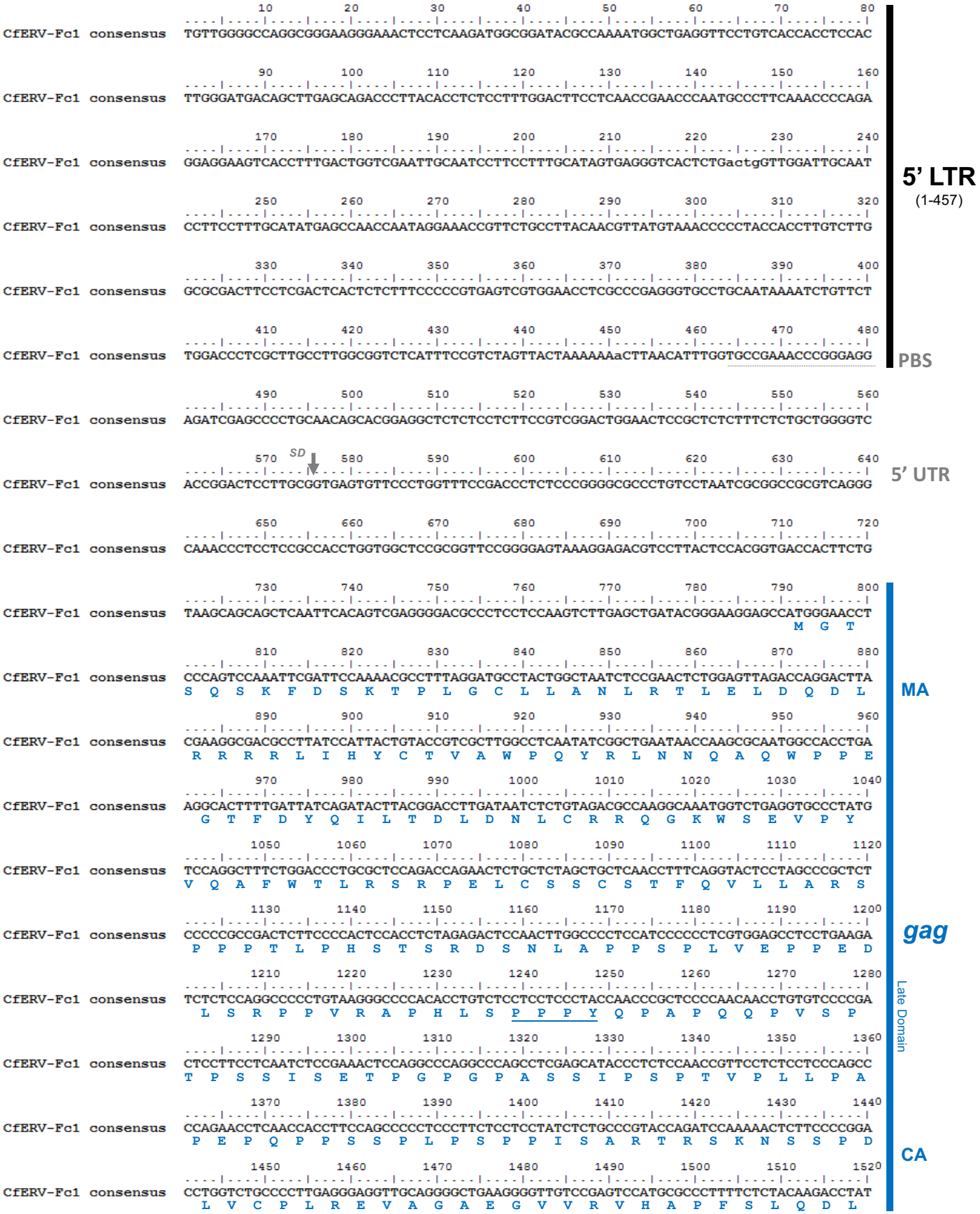
Figure S3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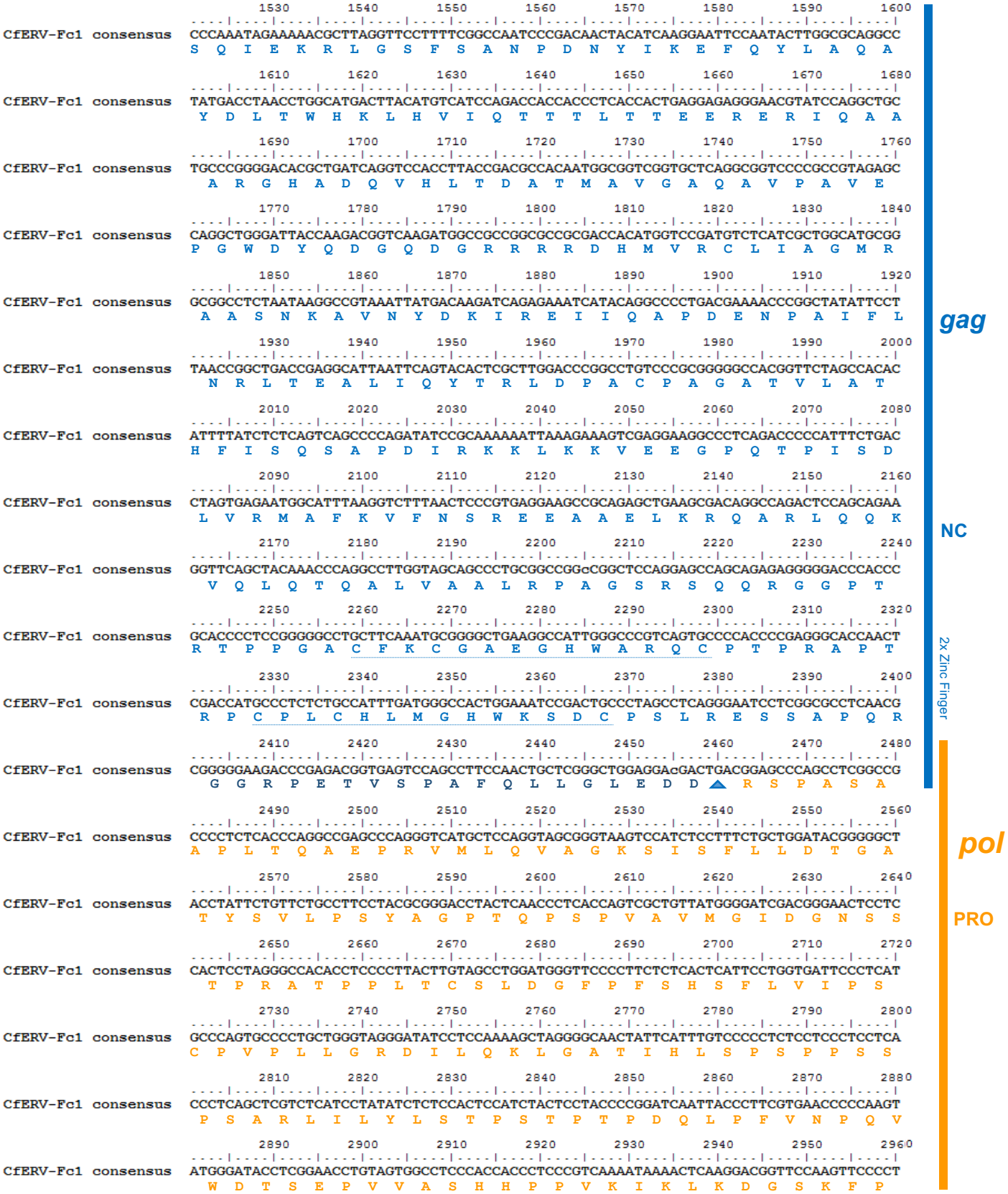
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1610 1620 1630 1640 1650 1660 1670 1680
CfERV-Fc1 consensus TATGACCTAACCTGGCATGACTTACATGTCATCCAGACCACCACCCTCACCACTGAGGAGAGGGAACGTATCCAGGCTGC
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1690 1700 1710 1720 1730 1740 1750 1760
CfERV-Fc1 consensus TGCCCGGGGACACGCTGATCAGGTCCACCTTACCGACGCCACAATGGCGGTCGGTGCTCAGGCGGTCCCCGCCGTAGAGC
A R G H A D Q V H L T D A T M A V G A Q A V P A V E
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CfERV-Fc1 consensus CAGGCTGGGATTACCAAGACGGTCAAGATGGCCGCCGGCGCCGCGACCACATGGTCCGATGTCTCATCGCTGGCATGCGG
P G W D Y Q D G Q D G R R R R D H M V R C L I A G M R
1850 1860 1870 1880 1890 1900 1910 1920
CfERV-Fc1 consensus GCGGCCTCTAATAAGGCCGTAAATTATGACAAGATCAGAGAAATCATACAGGCCCCTGACGAAAACCCGGCTATATTCCT
A A S N K A V N Y D K I R E I I Q A P D E N P A I F L
1930 1940 1950 1960 1970 1980 1990 2000
CfERV-Fc1 consensus TAACCGGCTGACCGAGGCATTAATTCAGTACACTCGCTTGGACCCGGCCTGTCCCGCGGGGGCCACGGTTCTAGCCACAC
N R L T E A L I Q Y T R L D P A C P A G A T V L A T
2010 2020 2030 2040 2050 2060 2070 2080
CfERV-Fc1 consensus ATTTTATCTCTCAGTCAGCCCCAGATATCCGCAAAAAATTAAAGAAAGTCGAGGAAGGCCCTCAGACCCCCATTTCTGAC
H F I S Q S A P D I R K K L K K V E E G P Q T P I S D
2090 2100 2110 2120 2130 2140 2150 2160
CfERV-Fc1 consensus CTAGTGAGAATGGCATTTAAGGTCTTTAACTCCCGTGAGGAAGCCGCAGAGCTGAAGCGACAGGCCAGACTCCAGCAGAA
L V R M A F K V F N S R E E A A E L K R Q A R L Q Q K
2170 2180 2190 2200 2210 2220 2230 2240
CfERV-Fc1 consensus GGTTCAGCTACAAACCCAGGCCTTGGTAGCAGCCCTGCGGCCGGcCGGCTCCAGGAGCCAGCAGAGAGGGGGACCCACCC
V Q L Q T Q A L V A A L R P A G S R S Q Q R G G P T
2250 2260 2270 2280 2290 2300 2310 2320
CfERV-Fc1 consensus GCACCCCTCCGGGGGCCTGCTTCAAATGCGGGGCTGAAGGCCATTGGGCCCGTCAGTGCCCCACCCCGAGGGCACCAACT
R T P P G A C F K C G A E G H W A R Q C P T P R A P T
2330 2340 2350 2360 2370 2380 2390 2400
CfERV-Fc1 consensus CGACCATGCCCTCTCTGCCATTTGATGGGCCACTGGAAATCCGACTGCCCTAGCCTCAGGGAATCCTCGGCGCCTCAACG
R P C P L C H L M G H W K S D C P S L R E S S A P Q R
2410 2420 2430 2440 2450 2460 2470 2480
CfERV-Fc1 consensus CGGGGGAAGACCCGAGACGGTGAGTCCAGCCTTCCAACTGCTCGGGCTGGAGGAcGACTGACGGAGCCCAGCCTCGGCCG
G G R P E T V S P A F Q L L G L E D D R S P A S A
2490 2500 2510 2520 2530 2540 2550 2560
CfERV-Fc1 consensus CCCCTCTCACCCAGGCCGAGCCCAGGGTCATGCTCCAGGTAGCGGGTAAGTCCATCTCCTTTCTGCTGGATACGGGGGCT
A P L T Q A E P R V M L Q V A G K S I S F L L D T G A
2570 2580 2590 2600 2610 2620 2630 2640
CfERV-Fc1 consensus ACCTATTCTGTTCTGCCTTCCTACGCGGGACCTACTCAACCCTCACCAGTCGCTGTTATGGGGATCGACGGGAACTCCTC
T Y S V L P S Y A G P T Q P S P V A V M G I D G N S S
2650 2660 2670 2680 2690 2700 2710 2720
CfERV-Fc1 consensus CACTCCTAGGGCCACACCTCCCCTTACTTGTAGCCTGGATGGGTTCCCCTTCTCTCACTCATTCCTGGTGATTCCCTCAT
T P R A T P P L T C S L D G F P F S H S F L V I P S
2730 2740 2750 2760 2770 2780 2790 2800
CfERV-Fc1 consensus GCCCAGTGCCCCTGCTGGGTAGGGATATCCTCCAAAAGCTAGGGGCAACTATTCATTTGTCCCCCTCTCCTCCCTCCTCA
C P V P L L G R D I L Q K L G A T I H L S P S P P S S
2810 2820 2830 2840 2850 2860 2870 2880
CfERV-Fc1 consensus CCCTCAGCTCGTCTCATCCTATATCTCTCCACTCCATCTACTCCTACCCCGGATCAATTACCCTTCGTGAACCCCCAAGT
P S A R L I L Y L S T P S T P T P D Q L P F V N P Q V
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CfERV-Fc1 consensus ATGGGATACCTCGGAACCTGTAGTGGCCTCCCACCACCCTCCCGTCAAAATAAAACTCAAGGACGGTTCCAAGTTCCCCT
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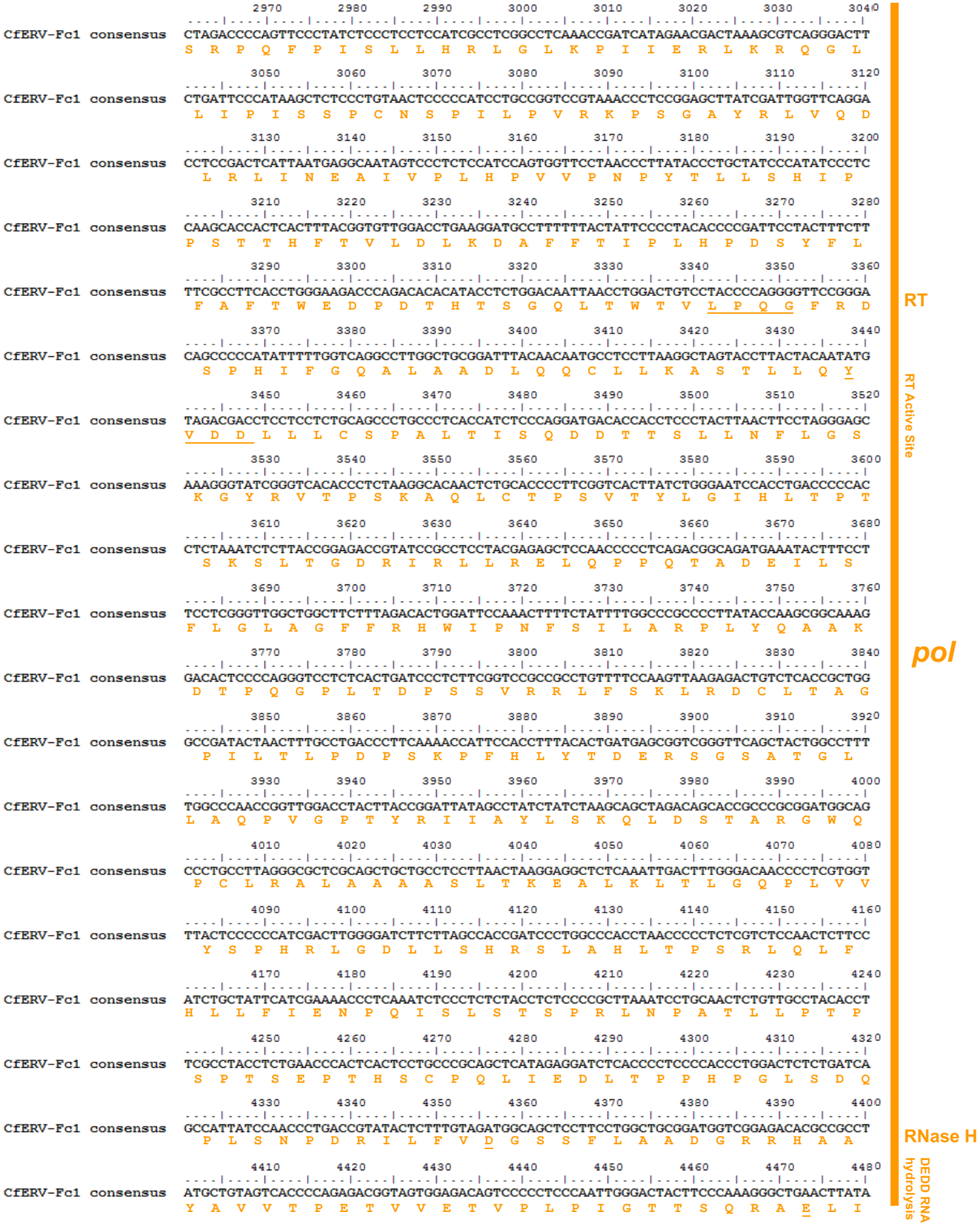
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CfERV-Fc1 consensus CTAGACCCCAGTTCCCTATCTCCCTCCTCCATCGCCTCGGCCTCAAACCGATCATAGAACGACTAAAGCGTCAGGGACTT
S R P Q F P I S L L H R L G L K P I I E R L K R Q G L
3050 3060 3070 3080 3090 3100 3110 3120
CfERV-Fc1 consensus CTGATTCCCATAAGCTCTCCCTGTAACTCCCCCATCCTGCCGGTCCGTAAACCCTCCGGAGCTTATCGATTGGTTCAGGA
L I P I S S P C N S P I L P V R K P S G A Y R L V Q D
3130 3140 3150 3160 3170 3180 3190 3200
CfERV-Fc1 consensus CCTCCGACTCATTAATGAGGCAATAGTCCCTCTCCATCCAGTGGTTCCTAACCCTTATACCCTGCTATCCCATATCCCTC
L R L I N E A I V P L H P V V P N P Y T L L S H I P
3210 3220 3230 3240 3250 3260 3270 3280
CfERV-Fc1 consensus CAAGCACCACTCACTTTACGGTGTTGGACCTGAAGGATGCCTTTTTTACTATTCCCCTACACCCCGATTCCTACTTTCTT
P S T T H F T V L D L K D A F F T I P L H P D S Y F L
3290 3300 3310 3320 3330 3340 3350 3360
CfERV-Fc1 consensus TTCGCCTTCACCTGGGAAGACCCAGACACACATACCTCTGGACAATTAACCTGGACTGTCCTACCCCAGGGGTTCCGGGA
F A F T W E D P D T H T S G Q L T W T V L P Q G F R D
3370 3380 3390 3400 3410 3420 3430 3440
CfERV-Fc1 consensus CAGCCCCCATATTTTTGGTCAGGCCTTGGCTGCGGATTTACAACAATGCCTCCTTAAGGCTAGTACCTTACTACAATATG
S P H I F G Q A L A A D L Q Q C L L K A S T L L Q Y
3450 3460 3470 3480 3490 3500 3510 3520
CfERV-Fc1 consensus TAGACGACCTCCTCCTCTGCAGCCCTGCCCTCACCATCTCCCAGGATGACACCACCTCCCTACTTAACTTCCTAGGGAGC
V D D L L L L C S P A L T I S Q D D T T S L L N F L G S
3530 3540 3550 3560 3570 3580 3590 3600
CfERV-Fc1 consensus AAAGGGTATCGGGTCACACCCTCTAAGGCACAACTCTGCACCCCTTCGGTCACTTATCTGGGAATCCACCTGACCCCCAC
K G Y R V T P S K A Q L C T P S V T Y L G I H L T P T
3610 3620 3630 3640 3650 3660 3670 3680
CfERV-Fc1 consensus CTCTAAATCTCTTACCGGAGACCGTATCCGCCTCCTACGAGAGCTCCAACCCCCTCAGACGGCAGATGAAATACTTTCCT
S K S L T G D R I R L L R E L Q P P Q T A D E I L S
3690 3700 3710 3720 3730 3740 3750 3760
CfERV-Fc1 consensus TCCTCGGGTTGGCTGGCTTCTTTAGACACTGGATTCCAAACTTTTCTATTTTGGCCCGCCCCTTATACCAAGCGGCAAAG
F L G L A G F F R H W I P N F S I L A R P L Y Q A A K
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CfERV-Fc1 consensus GACACTCCCCAGGGTCCTCTCACTGATCCCTCTTCGGTCCGCCGCCTGTTTTCCAAGTTAAGAGACTGTCTCACCGCTGG
D T P Q G P L T D P S S V R R L F S K L R D C L T A G
3850 3860 3870 3880 3890 3900 3910 3920
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CfERV-Fc1 consensus TGGCCCAACCGGTTGGACCTACTTACCGGATTATAGCCTATCTATCTAAGCAGCTAGACAGCACCGCCCGCGGATGGCAG
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4010 4020 4030 4040 4050 4060 4070 4080
CfERV-Fc1 consensus CCCTGCCTTAGGGCGCTCGCAGCTGCTGCCTCCTTAACTAAGGAGGCTCTCAAATTGACTTTGGGACAACCCCTCGTGGT
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CfERV-Fc1 consensus TTACTCCCCCCATCGACTTGGGGATCTTCTTAGCCACCGATCCCTGGCCCACCTAACCCCCTCTCGTCTCCAACTCTTCC
Y S P H R L G D L L S H R S L A H L T P S R L Q L F
4170 4180 4190 4200 4210 4220 4230 4240
CfERV-Fc1 consensus ATCTGCTATTCATCGAAAACCCTCAAATCTCCCTCTCTACCTCTCCCCGCTTAAATCCTGCAACTCTGTTGCCTACACCT
H L L F I E N P Q I S L S T S P R L N P A T L L P T P
4250 4260 4270 4280 4290 4300 4310 4320
CfERV-Fc1 consensus TCGCCTACCTCTGAACCCACTCACTCCTGCCCGCAGCTCATAGAGGATCTCACCCCTCCCCACCCTGGACTCTCTGATCA
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4330 4340 4350 4360 4370 4380 4390 4400
CfERV-Fc1 consensus GCCATTATCCAACCCTGACCGTATACTCTTTGTAGATGGCAGCTCCTTCCTGGCTGCGGATGGTCGGAGACACGCCGCCT
P L S N P D R I L F V D G S S F L A A D G R R H A A
4410 4420 4430 4440 4450 4460 4470 4480
CfERV-Fc1 consensus ATGCTGTAGTCACCCCAGAGACGGTAGTGGAGACAGTCCCCCTCCCAATTGGGACTACTTCCCAAAGGGCTGAACTTATA
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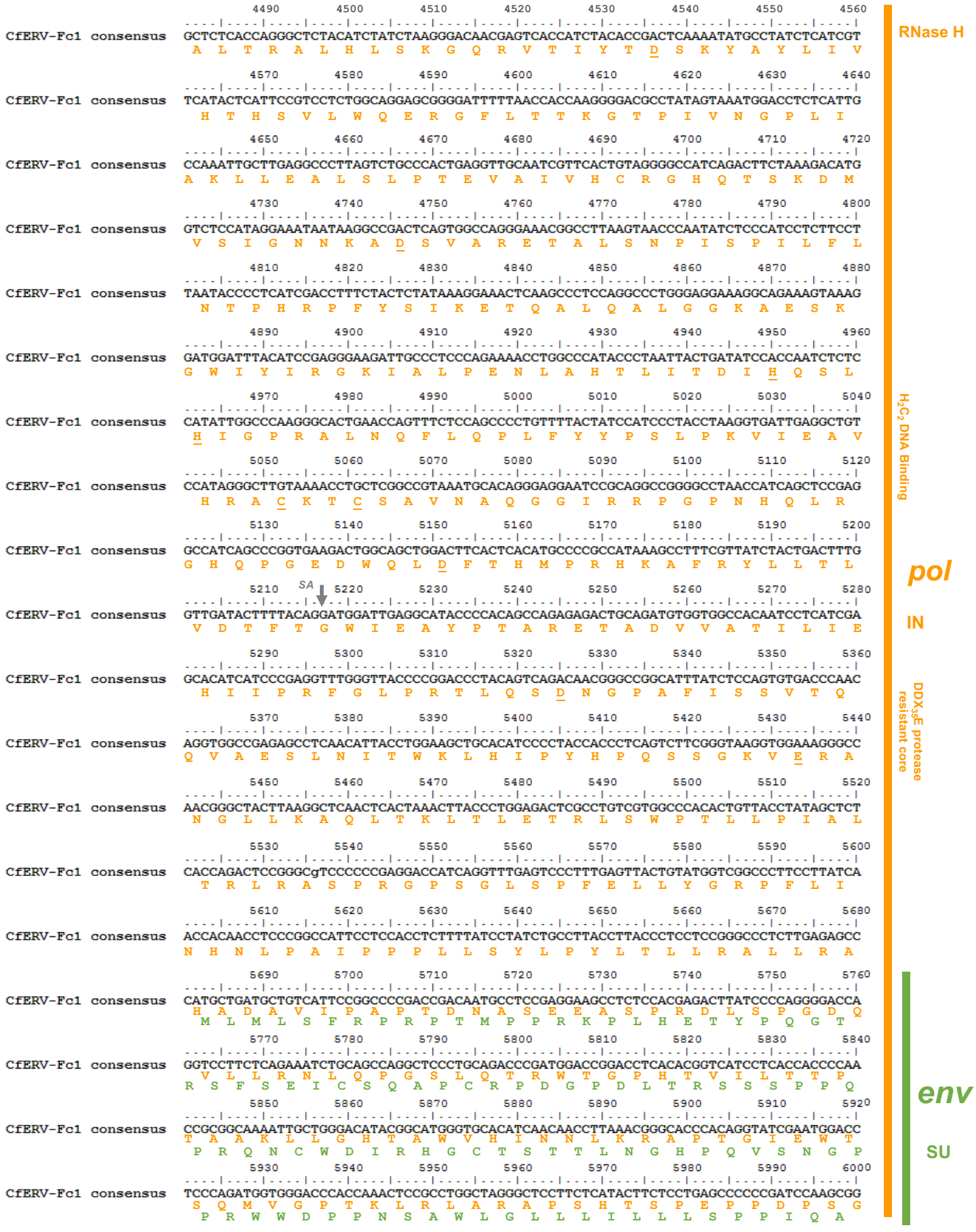
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CfERV-Fc1 consensus GCTCTCACCAGGGCTCTACATCTATCTAAGGGACAACGAGTCACCATCTACACCGACTCAAAATATGCCTATCTCATCGT
A L T R A L H L S K G Q R V T I Y T D S K Y A Y L I V
4570 4580 4590 4600 4610 4620 4630 4640
CfERV-Fc1 consensus TCATACTCATTCCGTCCTCTGGCAGGAGCGGGGATTTTTAACCACCAAGGGGACGCCTATAGTAAATGGACCTCTCATTG
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4650 4660 4670 4680 4690 4700 4710 4720
CfERV-Fc1 consensus CCAAATTGCTTGAGGCCCTTAGTCTGCCCACTGAGGTTGCAATCGTTCACTGTAGGGGCCATCAGACTTCTAAAGACATG
A K L L E A L S L P T E V A I V H C R G H Q T S K D M
4730 4740 4750 4760 4770 4780 4790 4800
CfERV-Fc1 consensus GTCTCCATAGGAAATAATAAGGCCGACTCAGTGGCCAGGGAAACGGCCTTAAGTAACCCAATATCTCCCATCCTCTTCCT
V S I G N N K A D S V A R E T A L S N P I S P I L F L
4810 4820 4830 4840 4850 4860 4870 4880
CfERV-Fc1 consensus TAATACCCCTCATCGACCTTTCTACTCTATAAAGGAAACTCAAGCCCTCCAGGCCCTGGGAGGAAAGGCAGAAAGTAAAG
N T P H R P F Y S I K E T Q A L Q A L G G K A E S K
4890 4900 4910 4920 4930 4940 4950 4960
CfERV-Fc1 consensus GATGGATTTACATCCGAGGGAAGATTGCCCTCCCAGAAAACCTGGCCCATACCCTAATTACTGATATCCACCAATCTCTC
G W I Y I R G K I A L P E N L A H T L I T D I H Q S L
4970 4980 4990 5000 5010 5020 5030 5040
CfERV-Fc1 consensus CATATTGGCCCAAGGGCACTGAACCAGTTTCTCCAGCCCCTGTTTTACTATCCATCCCTACCTAAGGTGATTGAGGCTGT
H I G P R A L N Q F L Q P L F Y Y P S L P K V I E A V
5050 5060 5070 5080 5090 5100 5110 5120
CfERV-Fc1 consensus CCATAGGGCTTGTAAAACCTGCTCGGCCGTAAATGCACAGGGAGGAATCCGCAGGCCGGGGCCTAACCATCAGCTCCGAG
H R A C K T C S A V N A Q G G I R R P G P N H Q L R
5130 5140 5150 5160 5170 5180 5190 5200
CfERV-Fc1 consensus GCCATCAGCCCGGTGAAGACTGGCAGCTGGACTTCACTCACATGCCCCGCCATAAAGCCTTTCGTTATCTACTGACTTTG
G H Q P G E D W Q L D F T H M P R H K A F R Y L L T L
SA
5210 5220 5230 5240 5250 5260 5270 5280
CfERV-Fc1 consensus GTTGATACTTTTACAGGATGGATTGAGGCATACCCCACAGCCAGAGAGACTGCAGATGTGGTGGCCACAATCCTCATCGA
V D T F T G W I E A Y P T A R E T A D V V A T I L I E
5290 5300 5310 5320 5330 5340 5350 5360
CfERV-Fc1 consensus GCACATCATCCCGAGGTTTGGGTTACCCCGGACCCTACAGTCAGACAACGGGCCGGCATTTATCTCCAGTGTGACCCAAC
H I I P R F G L P R T L Q S D N G P A F I S S V T Q
5370 5380 5390 5400 5410 5420 5430 5440
CfERV-Fc1 consensus AGGTGGCCGAGAGCCTCAACATTACCTGGAAGCTGCACATCCCCTACCACCCTCAGTCTTCGGGTAAGGTGGAAAGGGCC
Q V A E S L N I T W K L H I P Y H P Q S S G K V E R A
5450 5460 5470 5480 5490 5500 5510 5520
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5530 5540 5550 5560 5570 5580 5590 5600
CfERV-Fc1 consensus CACCAGACTCCGGGCgTCCCCCCGAGGACCATCAGGTTTGAGTCCCTTTGAGTTACTGTATGGTCGGCCCTTCCTTATCA
T R L R A S P R G P S G L S P F E L L Y G R P F L I
5610 5620 5630 5640 5650 5660 5670 5680
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N H N L P A I P P P L L S Y L P Y L T L L R A L L R A
5690 5700 5710 5720 5730 5740 5750 5760
CfERV-Fc1 consensus CATGCTGATGCTGTCATTCCGGCCCCGACCGACAATGCCTCCGAGGAAGCCTCTCCACGAGACTTATCCCCAGGGGACCA
H A D A V I P A P T D N A S E E A S P R D L S P G D Q
M L M L S F R P R P T M P P R K P L H E T Y P Q G T
5770 5780 5790 5800 5810 5820 5830 5840
CfERV-Fc1 consensus GGTCCTTCTCAGAAATCTGCAGCCAGGCTCCCTGCAGACCCGATGGACCGGACCTCACACGGTCATCCTCACCACCCCAA
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R S F S E I C S Q A P C R P D G P D L T R S S S P P Q
5850 5860 5870 5880 5890 5900 5910 5920
CfERV-Fc1 consensus CCGCGGCAAAATTGCTGGGACATACGGCATGGGTGCACATCAACAACCTTAAACGGGCACCCACAGGTATCGAATGGACC
T A A K L L G H T A W V H I N N L K R A P T G I E W T
P R Q N C W D I R H G C T S T T L N G H P Q V S N G P
5930 5940 5950 5960 5970 5980 5990 6000
CfERV-Fc1 consensus TCCCAGATGGTGGGACCCACCAAACTCCGCCTGGCTAGGGCTCCTTCTCATACTTCTCCTGAGCCCCCCGATCCAAGCGG
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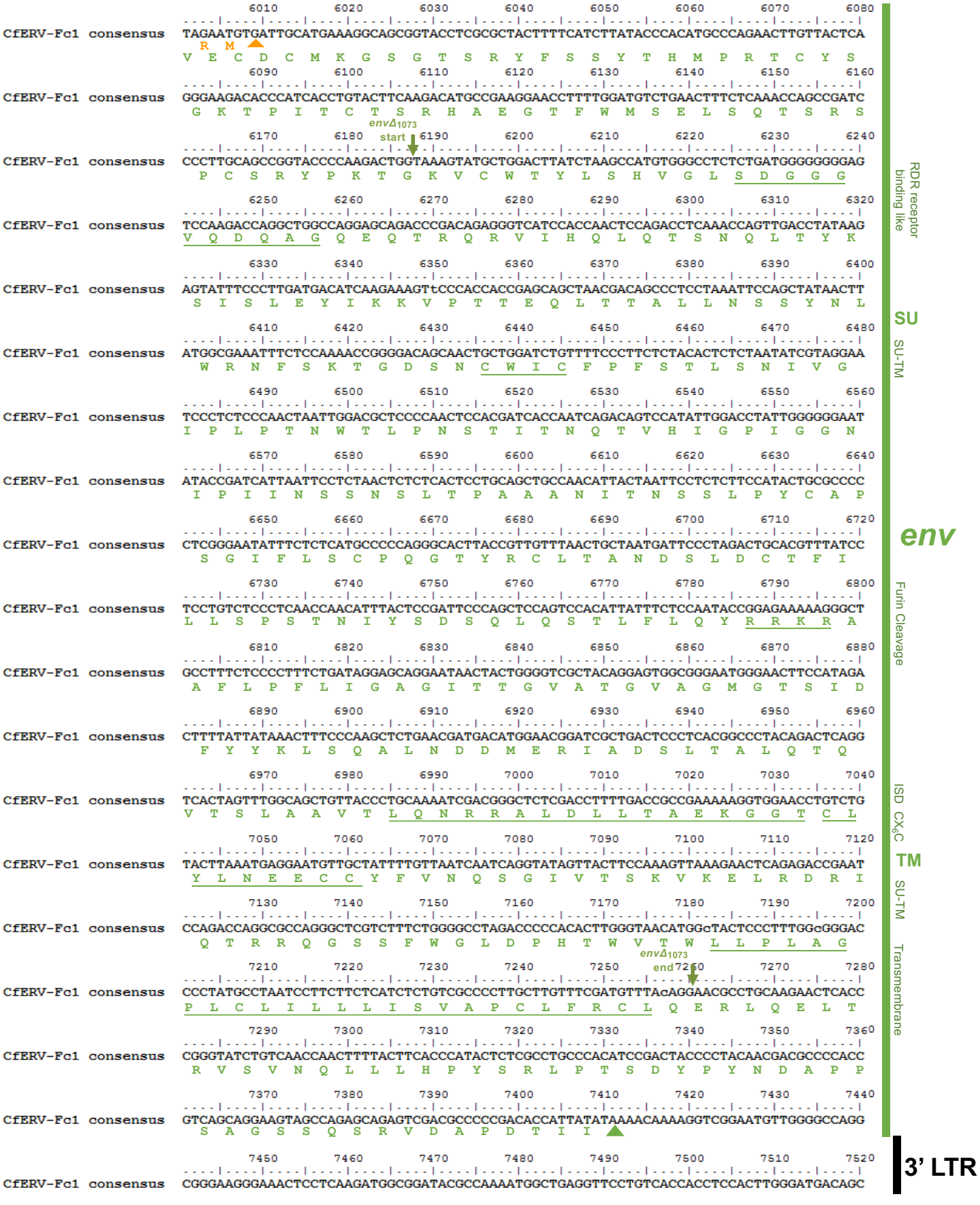
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CfERV-Fc1 consensus TAGAATGTGATTGCATGAAAGGCAGCGGTACCTCGCGCTACTTTTCATCTTATACCCACATGCCCAGAACTTGTTACTCA
R M
V E C D C M K G S G T S R Y F S S Y T H M P R T C Y S
6090 6100 6110 6120 6130 6140 6150 6160
CfERV-Fc1 consensus GGGAAGACACCCATCACCTGTACTTCAAGACATGCCGAAGGAACCTTTTGGATGTCTGAACTTTCTCAAACCAGCCGATC
G K T P I T C T S R H A E G T F W M S E L S Q T S R S
envΔ1073
6170 6180 start 6190 6200 6210 6220 6230 6240
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P C S R Y P K T G K V C W T Y L S H V G L S D G G G
6250 6260 6270 6280 6290 6300 6310 6320
CfERV-Fc1 consensus TCCAAGACCAGGCTGGCCAGGAGCAGACCCGACAGAGGGTCATCCACCAACTCCAGACCTCAAACCAGTTGACCTATAAG
V Q D Q A G Q E Q T R Q R V I H Q L Q T S N Q L T Y K
6330 6340 6350 6360 6370 6380 6390 6400
CfERV-Fc1 consensus AGTATTTCCCTTGATGACATCAAGAAAGTtCCCACCACCGAGCAGCTAACGACAGCCCTCCTAAATTCCAGCTATAACTT
S I S L E Y I K K V P T T E Q L T T A L L N S S Y N L
6410 6420 6430 6440 6450 6460 6470 6480
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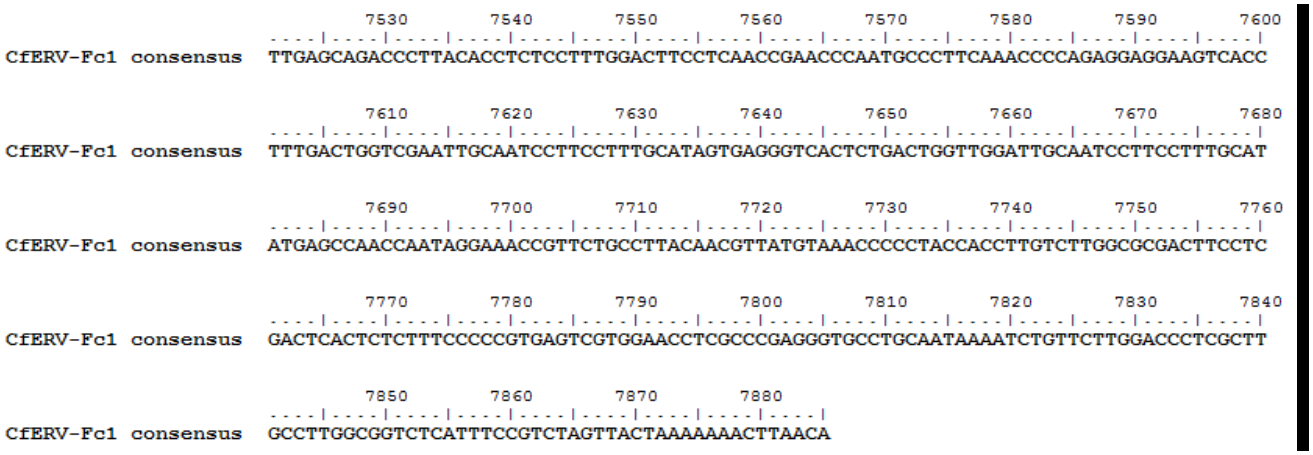
W R N F S K T G D S N C W I C F P F S T L S N I V G
6490 6500 6510 6520 6530 6540 6550 6560
CfERV-Fc1 consensus TCCCTCTCCCAACTAATTGGACGCTCCCCAACTCCACGATCACCAATCAGACAGTCCATATTGGACCTATTGGGGGGAAT
I P L P T N W T L P N S T I T N Q T V H I G P I G G N
6570 6580 6590 6600 6610 6620 6630 6640
CfERV-Fc1 consensus ATACCGATCATTAATTCCTCTAACTCTCTCACTCCTGCAGCTGCCAACATTACTAATTCCTCTCTTCCATACTGCGCCCC
I P I I N S S N S L T P A A A N I T N S S L P Y C A P
6650 6660 6670 6680 6690 6700 6710 6720
CfERV-Fc1 consensus CTCGGGAATATTTCTCTCATGCCCCCAGGGCACTTACCGTTGTTTAACTGCTAATGATTCCCTAGACTGCACGTTTATCC
S G I F L S C P Q G T Y R C L T A N D S L D C T F I
6730 6740 6750 6760 6770 6780 6790 6800
CfERV-Fc1 consensus TCCTGTCTCCCTCAACCAACATTTACTCCGATTCCCAGCTCCAGTCCACATTATTTCTCCAATACCGGAGAAAAAGGGCT
L L S P S T N I Y S D S Q L Q S T L F L Q Y R R K R A
6810 6820 6830 6840 6850 6860 6870 6880
CfERV-Fc1 consensus GCCTTTCTCCCCTTTCTGATAGGAGCAGGAATAACTACTGGGGTCGCTACAGGAGTGGCGGGAATGGGAACTTCCATAGA
A F L P F L I G A G I T T G V A T G V A G M G T S I D
6890 6900 6910 6920 6930 6940 6950 6960
CfERV-Fc1 consensus CTTTTATTATAAACTTTCCCAAGCTCTGAACGATGACATGGAACGGATCGCTGACTCCCTCACGGCCCTACAGACTCAGG
F Y Y K L S Q A L N D D M E R I A D S L T A L Q T Q
6970 6980 6990 7000 7010 7020 7030 7040
CfERV-Fc1 consensus TCACTAGTTTGGCAGCTGTTACCCTGCAAAATCGACGGGCTCTCGACCTTTTGACCGCCGAAAAAGGTGGAACCTGTCTG
V T S L A A V T L Q N R R A L D L L T A E K G G T C L
7050 7060 7070 7080 7090 7100 7110 7120
CfERV-Fc1 consensus TACTTAAATGAGGAATGTTGCTATTTTGTTAATCAATCAGGTATAGTTACTTCCAAAGTTAAAGAACTCAGAGACCGAAT
Y L N E E C C Y F V N Q S G I V T S K V K E L R D R I
7130 7140 7150 7160 7170 7180 7190 7200
CfERV-Fc1 consensus CCAGACCAGGCGCCAGGGCTCGTCTTTCTGGGGCCTAGACCCCCACACTTGGGTAACATGGcTACTCCCTTTGGcGGGAC
Q T R R Q G S S F W G L D P H T W V T W L L P L A G
envΔ1073
7210 7220 7230 7240 7250 end 7260 7270 7280
CfERV-Fc1 consensus CCCTATGCCTAATCCTTCTTCTCATCTCTGTCGCCCCTTGCTTGTTTCGATGTTTAcAGGAACGCCTGCAAGAACTCACC
P L C L I L L L I S V A P C L F R C L Q E R L Q E L T
7290 7300 7310 7320 7330 7340 7350 7360
CfERV-Fc1 consensus CGGGTATCTGTCAACCAACTTTTACTTCACCCATACTCTCGCCTGCCCACATCCGACTACCCCTACAACGACGCCCCACC
R V S V N Q L L L H P Y S R L P T S D Y P Y N D A P P
7370 7380 7390 7400 7410 7420 7430 7440
CfERV-Fc1 consensus GTCAGCAGGAAGTAGCCAGAGCAGAGTCGACGCCCCCGACACCATTATATAAAACAAAAGGTCGGAATGTTGGGGCCAGG
S A G S S Q S R V D A P D T I I
7450 7460 7470 7480 7490 7500 7510 7520
CfERV-Fc1 consensus CGGGAAGGGAAACTCCTCAAGATGGCGGATACGCCAAAATGGCTGAGGTTCCTGTCACCACCTCCACTTGGGATGACAGC
RDR receptor binding like
SU
SU-TM
env
Furin Cleavage
ISD CX6C
TM
SU-TM
Transmembrane
3' LTR



3' LTR
(7428-7885)