

Fri Jan 24, 2014 15:16 -0500  
synthesis wt P99 ORF.xdna from 1 to 1185  
Alignment to

P99-L139E-A-T7.seq-- Matches:843; Mismatches:7; Gaps:397; Unattempted:0  
P99-L139W-A-T7.seq-- Matches:859; Mismatches:10; Gaps:378; Unattempted:0  
P99-L139Y-B-T7.seq-- Matches:838; Mismatches:23; Gaps:383; Unattempted:0

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1>~~~~~ATGATGCGTAAATCTCTTTGTTGTGCATTACTCTTAGG>38
1>NNNNNNNNNNNNNNNNNNCTAGAATAATTTTGTAACTTTAAGAAGGAGATATACATATGATGATGCGTAAATCTCTTTGTTGTGCATTACTCTTAGG>100
1>NNNNNNNNNNNNNTCCNCCTAGAATAATTTTGTAACTTTAAGAAGGAGATATACATATGATGATGCGTAAATCTCTTTGTTGTGCATTACTCTTAGG>100
1>NNNNNNNNNNNNNNCTAGAATAATTTTGTAACTTTAAGAAGGAGATATACATATG-----ATGATGCGTAAATCTCTTTGTTGTGCATTACTCTTAGG>95

      *      *      *      *      *      *      *      *      *      *
39>TATCTCTTGTTCAGCATTAGCCACGCCCCTCTCAGAAAAACAATTAGCCGAAGTTGTAGCAAACACCATCACCCCTTAATGAAAGCCCAATCCGTACCA>138
101>TATCTCTTGTTCAGCATTAGCCACGCCCCTCTCAGAAAAACAATTAGCCGAAGTTGTAGCAAACACCATCACCCCTTAATGAAAGCCCAATCCGTACCA>200
101>TATCTCTTGTTCAGCATTAGCCACGCCCCTCTCAGAAAAACAATTAGCCGAAGTTGTAGCAAACACCATCACCCCTTAATGAAAGCCCAATCCGTACCA>200
96>TATCTCTTGTTCAGCATTAGCCACGCCCCTCTCAGAAAAACAATTAGCCGAAGTTGTAGCAAACACCATCACCCCTTAATGAAAGCCCAATCCGTACCA>195

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139>GGCATGGCCGTGCGAGTCATTTATCAAGCAAACCCCATTTATATACTTTTGGCAAAGCAGATATCGCAGTAATAAACCTGTCACTCCGCAAACGTTGT>238
201>GGCATGGCCGTGCGAGTCATTTATCAAGCAAACCCCATTTATATACTTTTGGCAAAGCAGATATCGCAGTAATAAACCTGTCACTCCGCAAACGTTGT>300
201>GGCATGGCCGTGCGAGTCATTTATCAAGCAAACCCCATTTATATACTTTTGGCAAAGCAGATATCGCAGTAATAAACCTGTCACTCCGCAAACGTTGT>300
196>GGCATGGCCGTGCGAGTCATTTATCAAGCAAACCCCATTTATATACTTTTGGCAAAGCAGATATCGCAGTAATAAACCTGTCACTCCGCAAACGTTGT>295

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239>TCGAACTGGGTTCTATCTCAAAAACTTTCACTGGTGTACTGGGTGGAGATGCAATCGCGCGTGGTGAATCTCACTGGATGATGCAGTTACCCGCTACTG>338
301>TCGAACTGGGTTCTATCTCAAAAACTTTCACTGGTGTACTGGGTGGAGATGCAATCGCGCGTGGTGAATCTCACTGGATGATGCAGTTACCCGCTACTG>400
301>TCGAACTGGGTTCTATCTCAAAAACTTTCACTGGTGTACTGGGTGGAGATGCAATCGCGCGTGGTGAATCTCACTGGATGATGCAGTTACCCGCTACTG>400
296>TCGAACTGGGTTCTATCTCAAAAACTTTCACTGGTGTACTGGGTGGAGATGCAATCGCGCGTGGTGAATCTCACTGGATGATGCAGTTACCCGCTACTG>395

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339>GCCTCAACTGACTGGAAAAACAATGGCAAGGCATCCGATGTTAGATCTCGCAACCTATACCGCCGGTGGTCTCCCGTta-CAAGTCCCAGTGAAGTTAC>437
401>GCCTCAACTGACTGGAAAAACAATGGCAAGGCATCCGATGTTAGATCTCGCAACCTATACCGCCGGTGGTCTCCCGGaa-CAAGTCCCAGTGAAGTTAC>499
401>GCCTCAACTGACTGGAAAAACAATGGCAAGGCATCCGATGTTAGATCTCGCAACCTATACCGCCGGTGGTCTCCCGTsg-CAAGTCCCAGTGAAGTTAC>499
396>GCCTCAACTGACTGGAAAAACAATGGCAAGGCATCCGATGTTAGATCTCGCAACCTATACCGCCGGTGGTCTCCCGT-ATCAAGTCCCAGTGAAGTTAC>494

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438>AGATAATGCGTCCTTATTACGTTTTTTACCAGAATTTGGCAACCACAGTGGAAACCCGGTACAACCTCGTTTATACGCCAACGCCTCAATCGGTCCTTTTCGGA>537
500>AGATAATGCGTCCTTATTACGTTTTTTACCAGAATTTGGCAACCACAGTGGAAACCCGGTACAACCTCGTTTATACGCCAACGCCTCAATCGGTCCTTTTCGGA>599
500>AGATAATGCGTCCTTATTACGTTTTTTACCAGAATTTGGCAACCACAGTGGAAACCCGGTACAACCTCGTTTATACGCCAACGCCTCAATCGGTCCTTTTCGGA>599
495>AGATAATGCGTCCTTATTACGTTTTTTACCAGAATTTGGCAACCACAGTGGAAACCCGGTACAACCTCGTTTATACGCCAACGCCTCAATCGGTCCTTTTCGGA>594

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538>GCTCTCGCAGTCAAACCTAGTGGCATGCCATACGAACAAGCCATGACAACCCCGCTACTCAAACCCCTTAAAAATTAGATCACACTTGGATTAACGTCCTTA>637
600>GCTCTCGCAGTCAAACCTAGTGGCATGCCATACGAACAAGCCATGACAACCCCGCTACTCAAACCCCTTAAAAATTAGATCACACTTGGATTAACGTCCTTA>699
600>GCTCTCGCAGTCAAACCTAGTGGCATGCCATACGAACAAGCCATGACAACCCCGCTACTCAAACCCCTTAAAAATTAGATCACACTTGGATTAACGTCCTTA>699
595>GCTCTCGCAGTCAAACCTAGTGGCATGCCATACGAACAAGCCATGACAACCCCGCTACTCAAACCCCTTAAAAATTAGATCACACTTGGATTAACGTCCTTA>694

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638>AAGCAGAAGAAGCCCACTATGCATGGGGTTACC GCGATGGAAAAGCGGTTCTGTGTAGCTCAAGCCtatGGAGTTAAAAACAAA>737
700>AAGCAGAAGAAGCCCACTATGCATGGGGTTACC GCGATGGAAAAGCGGTTCTGTGTAGCTCAAGCCGaatGTTAGATGCTCAAGCCTATGGAGTTAAAAACAAA>799
700>AAGCAGAAGAAGCCCACTATGCATGGGGTTACC GCGATGGAAAAGCGGTTCTGTGTAGCTCAAGCCtatGGAGTTAAAAACAAA>799
695>AAGCAGAAGAAGCCCACTATGCATGGGGTTACC GCGATGGAAAAGCGGTTCTGTGTAGCTCAAGCCtatGGAGTTAAAAACAAA>794

      *      *      *      *      *      *      *      *      *      *
738>CGTACAAGATATGGCAAATTTGGTAATGGCAAATATGGCCCAAGAAACGTTGCAGATGCGTCTTTAAAAACAAGGTTATGCAC-TCGCACAGTCACGCTA>836
800>CGTACAAGATATGGCAAATTTGGTAATGGCAAATATGGCCCAAGAAACGTTGCAGATGCGTCTTTAAAAACAAGGTTATGCAC-TCGCACAGTCACGCTA>898
800>CGTACAAGATATGGCAAATTTGGTAATGGCAAATATGGCCCAAGAAACGTTGCAGATGCGTCTTTAAAAACAAGGTTATGCAC-TCGCACAGTCACGCTA>898
795>CGTACAAGATATGGCAAATTTGGTAATGGCAAATATGGCCCAAGAAACGTTGCAGATGCGTCTTTAAAAACAAGGTTATGCAC-TCGCACAGTCACGCTA>893

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837>CTGGCGCATTTGCTCTATGTATCAAGGTCCTCGTTGGGAAATGTTGAACTGGCCCGTCAAGCTAACACAGTAGTAGAAGGTAGCGATTGAAAGTGGCA>936
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899>CTGGCGCATTGG----->910
899>CTGGCNCATTGGCTCTATGTATCAAGGT----->926
894>CTGGNCATTGGNNNNNTG----->912
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937>TTAGCTCCCTTACCCGTAGCAGAAAGTCAATCCCCCGCTCCTCCTGTCAAAGCATCTGGGTTCATAAGACTGGGtcaACCGGTGGTTTCGGTTCCTATG>1036
910>----->910
926>----->926
912>----->912
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* * * * *
1037>TTGCGTTTATTCCAGAAAAACAAATGGTATTGTTATGCTTGCTAACACCTCTTATCCAaatCCAGCTCGTGTAGAAGCGGCCTACCATATTCTCGAAGC>1136
910>----->910
926>----->926
912>----->912
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* * * * *
1137>ACTGCAAAGCTTGGCGCCGCACTCGAGCACCACCACCACCACCTGA>1185
911>-----NN>912
927>-----NNNNN>931
913>-----NNNNNNNN>920
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