

CLUSTAL 2.1 multiple sequence alignment

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KC470218.1      ATGGCGCGCTTTGAGGATCCAACACGGCGACCCTACAAGCTACCTGATCT
KC470214.1      ATGGCGCGCTTTGAGGATCCAACACGGCGACCCTACAAGCTACCTGATCT
KC470215.1      ATGGCGCGCTTTGAGGATCCAACACGGCGACCCTACAAGCTACCTGATCT
KC470216.1      ATGGCGCGCTTTGAGGATCCAACACGGCGACCCTACAAGCTACCTGATCT
KC470217.1      ATGGCGCGCTTTGAGGATCCAACACGGCGACCCTACAAGCTACCTGATCT
KC470219.1      ATGGCGCGCTTTGAGGATCCAACACGGCGACCCTACAAGCTACCTGATCT
KC470220.1      ATGGCGCGCTTTGAGGATCCAACACGGCGACCCTACAAGCTACCTGATCT
KC470221.1      ATGGCGCGCTTTGAGGATCCAACACGGCGACCCTACAAGCTACCTGATCT
KC470222.1      ATGGCGCGCTTTGAGGATCCAACACGGCGACCCTACAAGCTACCTGATCT
KC470223.1      ATGGCGCGCTTTGAGGATCCAACACGGCGACCCTACAAGCTACCTGATCT
KC470225.1      ATGGCGCGCTTTGAGGATCCAACACGGCGACCCTACAAGCTACCTGATCT
KC470226.1      ATGGCGCGCTTTGAGGATCCAACACGGCGACCCTACAAGCTACCTGATCT
KC470227.1      ATGGCGCGCTTTGAGGATCCAACACGGCGACCCTACAAGCTACCTGATCT
KC470228.1      ATGGCGCGCTTTGAGGATCCAACACGGCGACCCTACAAGCTACCTGATCT
KC470230.1      ATGGCGCGCTTTGAGGATCCAACACGGCGACCCTACAAGCTACCTGATCT
KC470229.1      ATGGCGCGCTTTGAGGATCCAACACGGCGACCCTACAAGCTACCTGATCT
KC470224.1      ATGGCGCGCTTTGAGGATCCAACACGGCGACCCTACAAGCTACCTGATCT
KX514433.1      ATGGCGCGCTTTGAGGATCCAACACGGCGACCCTACAAGCTACCTGATCT
KU298886.1      ATGGCGCGCTTTGAGGATCCAACACGGCGACCCTACAAGCTACCTGATCT
KC470213.1      ATGGCGCGCTTTGAGGATCCAACACGGCGACCCTACAAGCTACCTGATCT
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KC470218.1      GTGCACGGAAGTGAACACTTCACTGCAAGACATAGAAATAACCTGTGTAT
KC470214.1      GTGCACGGAAGTGAACACTTCACTGCAAGACATAGAAATAACCTGTGTAT
KC470215.1      GTGCACGGAAGTGAACACTTCACTGCAAGACATAGAAATAACCTGTGTAT
KC470216.1      GTGCACGGAAGTGAACACTTCACTGCAAGACATAGAAATAACCTGTGTAT
KC470217.1      GTGCACGGAAGTGAACACTTCACTGCAAGACATAGAAATAACCTGTGTAT
KC470219.1      GTGCACGGAAGTGAACACTTCACTGCAAGACATAGAAATAACCTGTGTAT
KC470220.1      GTGCACGGAAGTGAACACTTCACTGCAAGACATAGAAATAACCTGTGTAT
KC470221.1      GTGCACGGAAGTGAACACTTCACTGCAAGACATAGAAATAACCTGTGTAT
KC470222.1      GTGCACGGAAGTGAACACTTCACTGCAAGACATAGAAATAACCTGTGTAT
KC470223.1      GTGCACGGAAGTGAACACTTCACTGCAAGACATAGAAATAACCTGTGTAT
KC470225.1      GTGCACGGAAGTGAACACTTCACTGCAAGACATAGAAATAACCTGTGTAT
KC470226.1      GTGCACGGAAGTGAACACTTCACTGCAAGACATAGAAATAACCTGTGTAT
KC470227.1      GTGCACGGAAGTGAACACTTCACTGCAAGACATAGAAATAACCTGTGTAT
KC470228.1      GTGCACGGAAGTGAACACTTCACTGCAAGACATAGAAATAACCTGTGTAT
KC470230.1      GTGCACGGAAGTGAACACTTCACTGCAAGACATAGAAATAACCTGTGTAT
KC470229.1      GTGCACGGAAGTGAACACTTCACTGCAAGACATAGAAATAACCTGTGTAT
KC470224.1      GTGCACGGAAGTGAACACTTCACTGCAAGACATAGAAATAACCTGTGTAT
KX514433.1      GTGCACGGAAGTGAACACTTCACTGCAAGACATAGAAATAACCTGTGTAT
KU298886.1      GTGCACGGAAGTGAACACTTCACTGCAAGACATAGAAATAACCTGTGTAT
KC470213.1      GTGCACGGAAGTGAACACTTCACTGCAAGACATAGAAATAACCTGTGTAT
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KC470218.1      ATTGCAAGACAGTATTGGAACCTTACAGAGGTATTTGAATTTGCATTCAAA
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CLUSTAL 2.1 multiple sequence alignment

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KC470214.1      ATTGCAAGACAGTATTGGAACCTACAGAGGTATTTGAATTTGCATTCAAA
KC470215.1      ATTGCAAGACAGTATTGGAACCTACAGAGGTATTTGAATTTGCATTCAAA
KC470216.1      ATTGCAAGACAGTATTGGAACCTACAGAGGTATTTGAATTTGCATTCAAA
KC470217.1      ATTGCAAGACAGTATTGGAACCTACAGAGGTATTTGAATTTGCATTCAAA
KC470219.1      ATTGCAAGACAGTATTGGAACCTACAGAGGTATTTGAATTTGCATTCAAA
KC470220.1      ATTGCAAGACAGTATTGGAACCTACAGAGGTATTTGAATTTGCATTCAAA
KC470221.1      ATTGCAAGACAGTATTGGAACCTACAGAGGTATTTGAATTTGCATTCAAA
KC470222.1      ATTGCAAGACAGTATTGGAACCTACAGAGGTATTTGAATTTGCATTCAAA
KC470223.1      ATTGCAAGACAGTATTGGAACCTACAGAGGTATTTGAATTTGCATTCAAA
KC470225.1      ATTGCAAGACAGTATTGGAACCTACAGAGGTATTTGAATTTGCATTCAAA
KC470226.1      ATTGCAAGACAGTATTGGAACCTACAGAGGTATTTGAATTTGCATTCAAA
KC470227.1      ATTGCAAGACAGTATTGGAACCTACAGAGGTATTTGAATTTGCATTCAAA
KC470228.1      ATTGCAAGACAGTATTGGAACCTACAGAGGTATTTGAATTTGCATTCAAA
KC470230.1      ATTGCAAGACAGTATTGGAACCTACAGAGGTATTTGAATTTGCATTCAAA
KC470229.1      ATTGCAAGACAGTATTGGAACCTACAGAGGTATTTGAATTTGCATTCAAA
KC470224.1      ATTGCAAGACAGTATTGGAACCTACAGAGGTATTTGAATTTGCATTCAAA
KX514433.1      ATTGCAAGACAGTATTGGAACCTACAGAGGTATTTGAATTTGCATTTAAA
KU298886.1      ATTGCAAGACAGTATTGGAACCTACAGAGGTATTTGAATTTGCATTTAAA
KC470213.1      ATTGCAAGACAGTATTGGAACCTACAGAGGTATTTGAATTTGCATTTAAA

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KC470218.1      GATTTATTTGTAGTGTATAGAGACAGTATACCGCATGCTGCATGCCATAA
KC470214.1      GATTTATTTGTAGTGTATAGAGACAGTATACCGCATGCTGCATGCCATAA
KC470215.1      GATTTATTTGTAGTGTATAGAGACAGTATACCGCATGCTGCATGCCATAA
KC470216.1      GATTTATTTGTAGTGTATAGAGACAGTATACCGCATGCTGCATGCCATAA
KC470217.1      GATTTATTTGTAGTGTATAGAGACAGTATACCGCATGCTGCATGCCATAA
KC470219.1      GATTTATTTGTAGTGTATAGAGACAGTATACCGCATGCTGCATGCCATAA
KC470220.1      GATTTATTTGTAGTGTATAGAGACAGTATACCGCATGCTGCATGCCATAA
KC470221.1      GATTTATTTGTAGTGTATAGAGACAGTATACCGCATGCTGCATGCCATAA
KC470222.1      GATTTATTTGTAGTGTATAGAGACAGTATACCGCATGCTGCATGCCATAA
KC470223.1      GATTTATTTGTAGTGTATAGAGACAGTATACCGCATGCTGCATGCCATAA
KC470225.1      GATTTATTTGTAGTGTATAGAGACAGTATACCGCATGCTGCATGCCATAA
KC470226.1      GATTTATTTGTAGTGTATAGAGACAGTATACCGCATGCTGCATGCCATAA
KC470227.1      GATTTATTTGTAGTGTATAGAGACAGTATACCGCATGCTGCATGCCATAA
KC470228.1      GATTTATTTGTAGTGTATAGAGACAGTATACCGCATGCTGCATGCCATAA
KC470230.1      GATTTATTTGTAGTGTATAGAGACAGTATACCGCATGCTGCATGCCATAA
KC470229.1      GATTTATTTGTAGTGTATAGAGACAGTATACCGCATGCTGCATGCCATAA
KC470224.1      GATTTATTTGTAGTGTATAGAGACAGTATACCGCATGCTGCATGCCATAA
KX514433.1      GATTTATTTGTGGTGTATAGAGACAGTATACCGCATGCTGCATGCCATAA
KU298886.1      GATTTATTTGTGGTGTATAGAGACAGTATACCGCATGCTGCATGCCATAA
KC470213.1      GATTTATTTGTGGTGTATAGAGACAGTATACCGCATGCTGCATGCCATAA

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KC470218.1      ATGTATAGATTTCTATTCTAGAATTAGAGAATTAAGACATTATTCAGACT
KC470214.1      ATGTATAGATTTCTATTCTAGAATTAGAGAATTAAGACATTATTCAGACT
KC470215.1      ATGTATAGATTTCTATTCTAGAATTAGAGAATTAAGACATTATTCAGACT
KC470216.1      ATGTATAGATTTCTATTCTAGAATTAGAGAATTAAGACATTATTCAGACT

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CLUSTAL 2.1 multiple sequence alignment

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KC470217.1      ATGTATAGATTTCTATTCTAGAATTAGAGAATTAAGACATTATTCAGACT
KC470219.1      ATGTATAGATTTCTATTCTAGAATTAGAGAATTAAGACATTATTCAGACT
KC470220.1      ATGTATAGATTTCTATTCTAGAATTAGAGAATTAAGACATTATTCAGACT
KC470221.1      ATGTATAGATTTCTATTCTAGAATTAGAGAATTAAGACATTATTCAGACT
KC470222.1      ATGTATAGATTTTATTCTAGAATTAGAGAATTAAGACATTATTCAGACT
KC470223.1      ATGTATAGATTTTATTCTAGAATTAGAGAATTAAGACATTATTCAGACT
KC470225.1      ATGTATAGATTTTATTCTAGAATTAGAGAATTAAGACATTATTCAGACT
KC470226.1      ATGTATAGATTTTATTCTAGAATTAGAGAATTAAGACATTATTCAGACT
KC470227.1      ATGTATAGATTTTATTCTAGAATTAGAGAATTAAGACATTATTCAGACT
KC470228.1      ATGTATAGATTTTATTCTAGAATTAGAGAATTAAGACATTATTCAGACT
KC470230.1      ATGTATAGATTTTATTCTAGAATTAGAGAATTAAGACATTATTCAGACT
KC470229.1      ATGTATAGATTTTATTCTAGAATTAGAGAATTAAGACATTATTCAGACT
KC470224.1      ATGTATAGATTTTATTCTAGAATTAGAGAATTAAGACATTATTCAGACT
KX514433.1      ATGTATAGATTTTATTCTAGAATTAGAGAATTAAGACATTATTCAGACT
KU298886.1      ATGTATAGATTTTATTCTAGAATTAGAGAATTAAGACATTATTCAGACT
KC470213.1      ATGTATAGATTTTATTCTAGAATTAGAGAATTAAGACATTATTCAGACT
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KC470218.1      CTGTGTATGGAGACACATTAGAAAACTAACTAACACTGGGTTATACAAT
KC470214.1      CTGTGTATGGAGACACATTAGAAAACTAACTAACACTGGGTTATACAAT
KC470215.1      CTGTGTATGGAGACACATTAGAAAACTAACTAACACTGGGTTATACAAT
KC470216.1      CTGTGTATGGAGACACATTAGAAAACTAACTAACACTGGGTTATACAAT
KC470217.1      CTGTGTATGGAGACACATTAGAAAACTAACTAACACTGGGTTATACAAT
KC470219.1      CTGTGTATGGAGACACATTAGAAAACTAACTAACACTGGGTTATACAAT
KC470220.1      CTGTGTATGGAGACACATTAGAAAACTAACTAACACTGGGTTATACAAT
KC470221.1      CTGTGTATGGAGACACATTAGAAAACTAACTAACACTGGGTTATACAAT
KC470222.1      CTGTGTATGGAGACACATTAGAAAACTAACTAACACTGGGTTATACAAT
KC470223.1      CTGTGTATGGAGACACATTAGAAAACTAACTAACACTGGGTTATACAAT
KC470225.1      CTGTGTATGGAGACACATTAGAAAACTAACTAACACTGGGTTATACAAT
KC470226.1      CTGTGTATGGAGACACATTAGAAAACTAACTAACACTGGGTTATACAAT
KC470227.1      CTGTGTATGGAGACACATTAGAAAACTAACTAACACTGGGTTATACAAT
KC470228.1      CTGTGTATGGAGACACATTAGAAAACTAACTAACACTGGGTTATACAAT
KC470230.1      CTGTGTATGGAGACACATTAGAAAACTAACTAACACTGGGTTATACAAT
KC470229.1      CTGTGTATGGAGACACATTAGAAAACTAACTAACACTGGGTTATACAAT
KC470224.1      CTGTGTATGGAGACACATTAGAAAACTAACTAACACTGGGTTATACAAT
KX514433.1      CTGTGTATGGAGACACATTGAAAACTAACTAACACTGGGTTATACAAT
KU298886.1      CTGTGTATGGAGACACATTGAAAACTAACTAACACTGGGTTATACAAT
KC470213.1      CTGTGTATGGAGACACATTGAAAACTAACTAACACTGGGTTATACAAT
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KC470218.1      TTATTAATAAGGTGCCTGCGGTGCCAGAAACCGTTGAATCCAGCAGAAAA
KC470214.1      TTATTAATAAGGTGCCTGCGGTGCCAGAAACCGTTGAATCCAGCAGAAAA
KC470215.1      TTATTAATAAGGTGCCTGCGGTGCCAGAAACCGTTGAATCCAGCAGAAAA
KC470216.1      TTATTAATAAGGTGCCTGCGGTGCCAGAAACCGTTGAATCCAGCAGAAAA
KC470217.1      TTATTAATAAGGTGCCTGCGGTGCCAGAAACCGTTGAATCCAGCAGAAAA
KC470219.1      TTATTAATAAGGTGCCTGCGGTGCCAGAAACCGTTGAATCCAGCAGAAAA
KC470220.1      TTATTAATAAGGTGCCTGCGGTGCCAGAAACCGTTGAATCCAGCAGAAAA
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CLUSTAL 2.1 multiple sequence alignment

KC470221.1	TTATTAATAAGGTGCCTGCGGTGCCAGAAACCGTTGAATCCAGCAGAAAA
KC470222.1	TTATTAATAAGGTGCCTGCGGTGCCAGAAACCGTTGAATCCAGCAGAAAA
KC470223.1	TTATTAATAAGGTGCCTGCGGTGCCAGAAACCGTTGAATCCAGCAGAAAA
KC470225.1	TTATTAATAAGGTGCCTGCGGTGCCAGAAACCGTTGAATCCAGCAGAAAA
KC470226.1	TTATTAATAAGGTGCCTGCGGTGCCAGAAACCGTTGAATCCAGCAGAAAA
KC470227.1	TTATTAATAAGGTGCCTGCGGTGCCAGAAACCGTTGAATCCAGCAGAAAA
KC470228.1	TTATTAATAAGGTGCCTGCGGTGCCAGAAACCGTTGAATCCAGCAGAAAA
KC470230.1	TTATTAATAAGGTGCCTGCGGTGCCAGAAACCATTTGAATCCAGCAGAAAA
KC470229.1	TTATTAATAAGGTGCCTGCGGTGCCAGAAACCATTTGAATCCAGCAGAAAA
KC470224.1	TTATTAATAAGGTGCCTGCGGTGCCAGAAACCGTTGAATCCAGCAGAAAA
KX514433.1	TTATTAATAAGGTGCCTGCGGTGCCAGAAACCGTTGAATCCAGCAGAAAA
KU298886.1	TTATTAATAAGGTGCCTGCGGTGCCAGAAACCGTTGAATCCAGCAGAAAA
KC470213.1	TTATTAATAAGGTGCCTGCGGTGCCAGAAACCGTTGAATCCAGCAGAAAA

KC470218.1	ACTTAGACACCTTAATGAAAAACGACGATTCCACAAAATAGCTGGGCACT
KC470214.1	ACTTAGACACCTTAATGAAAAACGACGATTCCACAAAATAGCTGGGCACT
KC470215.1	ACTTAGACACCTTAATGAAAAACGACGATTCCACAAAATAGCTGGGCACT
KC470216.1	ACTTAGACACCTTAATGAAAAACGACGATTCCACAAAATAGCTGGGCACT
KC470217.1	ACTTAGACACCTTAATGAAAAACGACGATTCCACAAAATAGCTGGGCACT
KC470219.1	ACTTAGACACCTTAATGAAAAACGACGATTCCACAAAATAGCTGGGCACT
KC470220.1	ACTTAGACACCTTAATGAAAAACGACGATTCCACAAAATAGCTGGGCACT
KC470221.1	ACTTAGACACCTTAATGAAAAACGACGATTCCACAAAATAGCTGGGCACT
KC470222.1	ACTTAGACACCTTAATGAAAAACGACGATTCCACAAAATAGCTGGGCACT
KC470223.1	ACTTAGACACCTTAATGAAAAACGACGATTCCACAAAATAGCTGGGCACT
KC470225.1	ACTTAGACACCTTAATGAAAAACGACGATTCCACAAAATAGCTGGGCACT
KC470226.1	ACTTAGACACCTTAATGAAAAACGACGATTCCACAAAATAGCTGGGCACT
KC470227.1	ACTTAGACACCTTAATGAAAAACGACGATTCCACAAAATAGCTGGGCACT
KC470228.1	ACTTAGACACCTTAATGAAAAACGACGATTCCACAAAATAGCTGGGCACT
KC470230.1	ACTTAGACACCTTAATGAAAAACGACGATTCCACAACATAGCTGGGCACT
KC470229.1	ACTTAGACACCTTAATGAAAAACGACGATTCCACAACATAGCTGGGCACT
KC470224.1	ACTTAGACACCTTAATGAAAAACGACGATTCCACAACATAGCTGGGCACT
KX514433.1	ACTTAGACACCTTAATGAAAAACGACGATTCCACAACATAGCTGGGCACT
KU298886.1	ACTTAGACACCTTAATGAAAAACGACGATTCCACAACNNNGCTGGGCACT
KC470213.1	ACTTAGACACCTTAATGAAAAACGACGATTCCACAACATAGCTGGGCACT

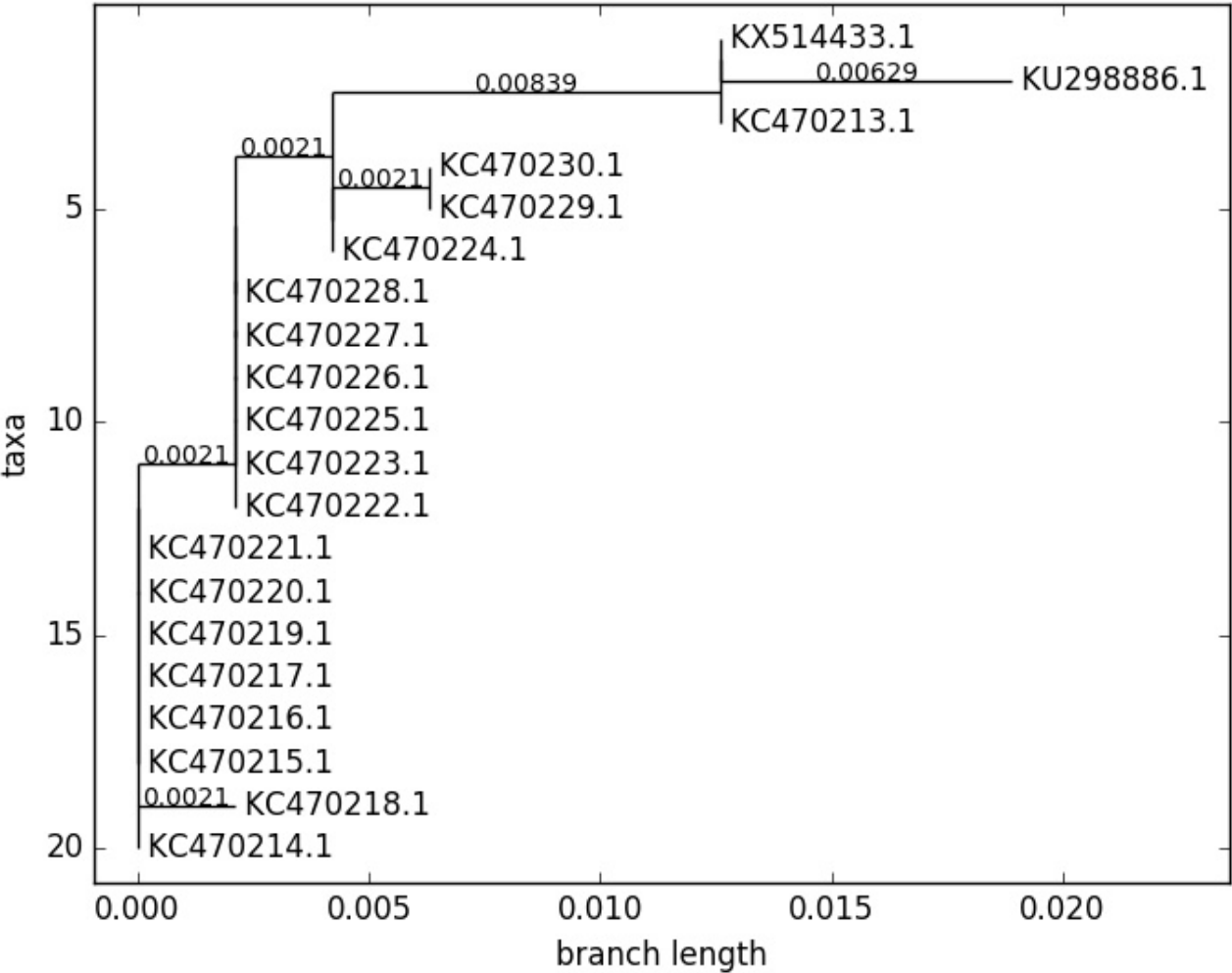
KC470218.1	ATAGAGGCCAGTGCCATTTCGTGCTGCAACCAAGCACGACAGGAGAGACTC
KC470214.1	ATAGAGGCCAGTGCCATTTCGTGCTGCAACCGAGCACGACAGGAGAGACTC
KC470215.1	ATAGAGGCCAGTGCCATTTCGTGCTGCAACCGAGCACGACAGGAGAGACTC
KC470216.1	ATAGAGGCCAGTGCCATTTCGTGCTGCAACCGAGCACGACAGGAGAGACTC
KC470217.1	ATAGAGGCCAGTGCCATTTCGTGCTGCAACCGAGCACGACAGGAGAGACTC
KC470219.1	ATAGAGGCCAGTGCCATTTCGTGCTGCAACCGAGCACGACAGGAGAGACTC
KC470220.1	ATAGAGGCCAGTGCCATTTCGTGCTGCAACCGAGCACGACAGGAGAGACTC
KC470221.1	ATAGAGGCCAGTGCCATTTCGTGCTGCAACCGAGCACGACAGGAGAGACTC
KC470222.1	ATAGAGGCCAGTGCCATTTCGTGCTGCAACCGAGCACGACAGGAGAGACTC
KC470223.1	ATAGAGGCCAGTGCCATTTCGTGCTGCAACCGAGCACGACAGGAGAGACTC

CLUSTAL 2.1 multiple sequence alignment

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KC470225.1      ATAGAGGGCCAGTGCCATTCGTGCTGCAACCGAGCACGACAGGAGAGACTC
KC470226.1      ATAGAGGGCCAGTGCCATTCGTGCTGCAACCGAGCACGACAGGAGAGACTC
KC470227.1      ATAGAGGGCCAGTGCCATTCGTGCTGCAACCGAGCACGACAGGAGAGACTC
KC470228.1      ATAGAGGGCCAGTGCCATTCGTGCTGCAACCGAGCACGACAGGAGAGACTC
KC470230.1      ATAGAGGGCCAGTGCCATTCGTGCTGCAACCGAGCACGACAGGAGAGACTC
KC470229.1      ATAGAGGGCCAGTGCCATTCGTGCTGCAACCGAGCACGACAGGAGAGACTC
KC470224.1      ATAGAGGGCCAGTGCCATTCGTGCTGCAACCGAGCACGACAGGAGAGACTC
KX514433.1      ATAGAGGGCCAGTGCCATTCGTGCTGCAACCGAGCACGACAGGAAAAGACTC
KU298886.1      ATAGAGGGCCAGTGCCATTCGTGCTGCAACCGAGCACGACAGGAAAAGACTC
KC470213.1      ATAGAGGGCCAGTGCCATTCGTGCTGCAACCGAGCACGACAGGAAAAGACTC
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KC470218.1      CAACGACGCAGAGAAAACACAAGTATAA
KC470214.1      CAACGACGCAGAGAAAACACAAGTATAA
KC470215.1      CAACGACGCAGAGAAAACACAAGTATAA
KC470216.1      CAACGACGCAGAGAAAACACAAGTATAA
KC470217.1      CAACGACGCAGAGAAAACACAAGTATAA
KC470219.1      CAACGACGCAGAGAAAACACAAGTATAA
KC470220.1      CAACGACGCAGAGAAAACACAAGTATAA
KC470221.1      CAACGACGCAGAGAAAACACAAGTATAA
KC470222.1      CAACGACGCAGAGAAAACACAAGTATAA
KC470223.1      CAACGACGCAGAGAAAACACAAGTATAA
KC470225.1      CAACGACGCAGAGAAAACACAAGTATAA
KC470226.1      CAACGACGCAGAGAAAACACAAGTATAA
KC470227.1      CAACGACGCAGAGAAAACACAAGTATAA
KC470228.1      CAACGACGCAGAGAAAACACAAGTATAA
KC470230.1      CAACGACGCAGAGAAAACACAAGTATAA
KC470229.1      CAACGACGCAGAGAAAACACAAGTATAA
KC470224.1      CAACGACGCAGAGAAAACACAAGTATAA
KX514433.1      CAACGACGCAGAGAAAACACAAGTATAA
KU298886.1      CAACGACGCAGAGAAAACACAAGTATAA
KC470213.1      CAACGACGCAGAGAAAACACAAGTATAA
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Multiple Sequence Alignment tree



Consensus sequence

ATGGCGCGCTTTGAGGATCCAACACGGCGACCCTACAAGCTACCTGATCTGTGCACGGAAGTGAACACTTCACTGCAAGAC
ATAGAAATAACCTGTGTATATTGCAAGACAGTATTGGAACCTACAGAGGTATTTGAATTTGCATTCAAAGATTTATTTGT
AGTGTATAGAGACAGTATACCGCATGCTGCATGCCATAAATGTATAGATTTTTATTCTAGAATTAGAGAATTAAGACATT
ATTCAGACTCTGTGTATGGAGACACATTAGAAAACTAACTAACACTGGGTATACAATTTATTAATAAGGTGCCTGCGG
TGCCAGAAACCGTTGAATCCAGCAGAAAACTTAGACACCTTAATGAAAAACGACGATTCCACAAAATAGCTGGGCACTA