Multiple sequence alignment (ODAM orthologs). Position rulers, conservation track, and aligned nucleotide sequences.

Block 1 (positions 1–80)

```
                  5        10        15        20        25        30        35        40        45        50        55        60        65        70        75        80
conservation     ***********************************************!!**!***!***!*****!!****!!****!*!*
ODAM-IP    ACATTCTCTCAGTGAGCTCTTCTCAGCTTTTGCTCTTCAGCTCCAATCCTCCGCCAGCAGCTTGGAATAATCGCCAGTAA   80
ODAM-LW    ..........................GGCATTTGCACTTGTGCCCCTATCTACCAGCCACAAATTGGAATAATTGCAAGTAA   56
ODAM-PP    ATCTTTTCCATGGCTGGTCTTCTCAGCATTTGCACTTGTGCCCCTATCTACCAGCCACAAATTGGAATAATTGCAAGTAA   95
ODAM-CI    GTCTTTTCCATGGCTGGTCTTCTCAGCATTTGCACTTGTGTTCCTATCTACCAGCCACAATTTGGAATAATTGCAAGCAA   95
ODAM-DR    ACCTTTTCCATGGCTGCTCTTCTCAGCATTTGCACTTGTGCCCCTATCTATCAGCCACAAGTTGGACTAATAGCAAGCAA   95
ODAM-PN    ACCGTTCCATTGGCTGTTCTTCTCAGCGTGTGCACTAGCGCTCCTATCTTACAGCCGCGGCTCGGAATAATTGCAAGTAA   95
ODAM-C1-CC ATCTTTTCCATGGCTGGTCTTCTCAGCATTTGCACTTGTGCTCCTATCTACCACCACAAATTGGAATAATTGGAAGTAA   95
ODAM-C2-CC ATCTTTTCGATGGCTGGTCTTCTCAGCATTTGCACTTGTGCTCCTATCTACCAGCCACAAATTGGAATAATTGCAAGTAA   95
ODAM-C1-SA ...........................................CCTGTTGTTATTGGACAGCCTCCATTAGCACAGATCAC   38
ODAM-C2-SA ATCTTTTCCATGGCTGGTCTTCTCAGCATTTGCACTTGTGCTCCTATCTACCAGCCACAAATTGGAATAATGGCAAGTAA   95
ODAM-SR    ATCTTTTCCATGGCTGGTCTTCTCAGCATTTGCACTTGTGCTCCTATCTACCATCCTCAAATTGGAATAATTGCAAGTAA   95
ODAM-C1-SG GTCTTTTCCATGGCTGGTCTTCTCAGCATTTGCACTTGTGCTCCTATCTACCAGCCACAAATTGGAATAATTGCAAGTAA   95
ODAM-C2-SG ATCTTTTCCATGGCTGGTCTTCTCAGCATTTGCACTTGTGCTCCTATCTACCAGCCACACATTGGAATAATTGCAAGTAA   95
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Block 2 (positions 85–160)

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                  85       90        95       100       105       110       115       120       125       130       135       140       145       150       155      160
conservation     !********!!*!!!!!**!****!!*!**!!!**!***!****!!*!**!!**!*!**!!!!**!**!!!!!**!!*!!!*
ODAM-IP    CAGCAATGAGATTGTGCGCCTCCCAGGGACTCACGCTCGCCGGCGTCGGGTTTGGGACAAACACAAGGCACTCAGTTCCTCT   160
ODAM-LW    CAGTAACGAGGTTTTTGCGTCTCAATGGACTCACTCTGGCAGGCGTTGGGTCTGGGTCAAGCACAGGGTACTCCATTTTTCT   136
ODAM-PP    CAGTAATGAGGTTTTTGCGTATCAATGGACTCAGTCTGGCAAGTTTGGGTTTGGGTCAAGCACAGGGTACTCCATTTTTCT   175
ODAM-CI    CAGTAATGAGGTTTTTGCGTCTCAATGGACTCACTCTAGCAGGTGTGGGGTTTGGGTCCAGCACAGGGTACTCCATTTTTCT   175
ODAM-DR    CAGTAATGAGATTTTTGCGTCTTAATGGTCTCACCCTGGCAGGCATGGGTTTGGGTCCAGCACAGGGTTCTCCATTTTTCTAT   175
ODAM-PN    CAGCAACGAGGCTTGCGTGTGAATGAAATCACCCTTGCTGGCGTTGGCATGGGCCAAAGCACAGGGAGCACCTTTTCTAT   175
ODAM-C1-CC CAGTAATGAGGTTTTTGCGTCTCAATGGACTCACTCTGGCAGGTGTGTGGGTTTGGGTCCAGCACAGGGAACACAGCATTTTTTC   175
ODAM-C2-CC CAGTAATGAGGTTTTTGCGTCTCAATGGACTAACTCTGGCAGGTGTGTGGGTTTGGGTCCAGCACAGGGAACTGCTTTTTTTCC   175
ODAM-C1-SA CTCAGCTAAGGTTTTTGCGTCTCAATGGACTCACTCTGGCAGGTGTGTGGGTTTGGGTCCAGCACAGGGAACTGCATTTTTCC   118
ODAM-C2-SA CAGTAATGAGGTTTTTGCGTCTCAATGGACTCACTCTGGCAGGTGTGTGGGTTTGGGTCCAGCACAGGGAACTGCATTTTTCC   175
ODAM-SR    CAGTAATGAGGTTTTTGCGTATCAATGGACTCACTCTGGCAGGTGTGTGGGTTTGGGTCCAGCACAGGGAACTGCATTTTTCC   175
ODAM-C1-SG CAGTAATGAGGTTTTTGCGTTTCAATGGACTCACTCTGGCAGGTGTGTGGGTTTGGGTCCAGCACAGGGAACTGCATTTTTCC   175
ODAM-C2-SG CAGTAATGAGGTTTTTGCGTTTCAATGGACTCACCCTGGCAGGTATGGGTTTGGGTCCAGCACAGGGAACTGCATTTTTCC   175
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Block 3 (positions 165–240)

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                 165       170       175       180       185       190       195       200       205       210       215       220       225       230       235      240
conservation     !*!!*!*!!**!*!*!***!!!*                !!**!!**!*!!!*!!!*!****!!!****!**!!!*!!***
ODAM-IP    CTCCGTTCCTGATCCAGTCCCAGCCTGATCTCCTGATGCCTCCTCACCTGCTGAATTTGGTCCTCAGTTTCCGGGTCAG   240
ODAM-LW    CCCCTACCTGATCCAGCAGCAG..............CCCCCGCAGGTGCTGAACTTTAACCCTGGGTTTCAGGGACCC   201
ODAM-PP    CCCCTACCTGATCCAGCAGCAG..............CCCCCACAGGTGCTGAACTTTAACCCTGCGATGCAAGGA...   237
ODAM-CI    CTCCTACCTGTTCCAGCAGCAG..............CCCCCGCAGGTGCTGAACTTTAACCCTGCGATGCAGGGACCC   240
ODAM-DR    CTCCATTCCTGATCCAGCAGCAG..............CCTCCACAGGTGCTGAATTTTAACCCTGGACTGCAGGGACCC   240
ODAM-PN    CACCATTCCTAATCCAGACGCAGCCTGAAATCCTGCTGCCTCCCCAGTTTCTGAACTTTGGCCCCAGCTGCCGGGACCC   255
ODAM-C1-CC CTCCCTTCCTGATCCAGCAGCAG..............CCCCCACAGGTGCTCAGCTTTAACCCTGCTATGCAGGGACCA   240
ODAM-C2-CC CTCCCTTCCTGTTTCAGCAGCAG..............CCCCCACAGGTGCTGAACTTCAACCCTGGGATGCAGGGACCC   240
ODAM-C1-SA CTCCCTTCCTGATCCAGCAGCAG..............CACCCACAGGTGCTGAACTTTAACCCTGCGATGCAGGGACCC   183
ODAM-C2-SA CTCCCTTCCTAATTCGGCAGCAG..............CCCCCACAGGTGCTAAACTTCAACCCTGCGATGCAGGGACCC   240
ODAM-SR    CTCCCTTCCTAATTCGGCAGCAG..............CCCCCACAGGTGCTGAACTTCAACCCTGCGATGCAGGGACAC   240
ODAM-C1-SG CTCCCTTCCTGATCCAGCAGCAG..............CCCCCACAGGTGCTCAACTTTAACCCTGCGATGCAGGGACCC   240
ODAM-C2-SG CTCCCTTCCTGATTCAGCAGCAG..............CCCCACAGGTGCTGAACTTCAATCCTGCGATGCAGGGACCC   240
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Block 4 (positions 245–315)

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                 245       250       255       260       265       270       275       280       285       290       295       300       305       310      315
conservation     !!*!*!**!!**!**!*!*******           *!!***!!!*  ***!*!!*!!!!!*!**!!!****!!*!   **
ODAM-IP    TTCCTGACCCCACAACAGAAC...CTGCCCCGTTACTGCTGCCCTCTTTTCAGCAAGAGGCAGCCCACAGGGTCAAACAA   317
ODAM-LW    TTCTTTCCCCCTCAAATAAAC.........CCAGCACAGATGCCTCCGTTGCAGCAGGAGCAGCCTATACCTGGCTTCGG   272
ODAM-PP    TTCTTTCCCCCTCAAATAAACCCACTGAACCCAGCACAGTTGCCTCCGTTGCAGCAGGAGCAGCCTATACCTGGCTTCGG   317
ODAM-CI    TTCTTTCCCCCTCAAATAAACCAGCTGAACCCAGCACAGTTGCCCCCGTTGCAGCAGGAGCAGCCTATACCTGGCTTCGG   320
ODAM-DR    TTCCTGCCCCCTCAGATTAAC.........CCCGCTCAGATCCCTCCACTGCAGCAGGACCCATCTGTGCCGGGTCTTGG   311
ODAM-PN    TTCCTACCACACAGCAGAACCAAATGCCCCAAGTATTGCTGCCCTCCCAATCAGCAGGAACAGCAGACA...GCTCTTAA   332
ODAM-C1-CC TTCCTGCCACCTCAAATAAACCAGCTGAACCCAGCACAGTTGCCCCCGTTGCAGCAGGAGCAGCCCATACCTGGCATTTAT   320
ODAM-C2-CC TTCCTGCCCCCTCAAATAAACCAGCTGAACCCAGCACAGTTGCCCCCATTGCTGCAGGAGCAGCCTATACCTGGCATCGG   320
ODAM-C1-SA TTCCTGCCCTCCTCAAATAAACCAGCTGAACCCAGCACAGCTGCCCCCGTTGCAGCAGGAGCAGCCTATACCTGGCATCAT   263
ODAM-C2-SA TTCCTGCCCCCTCAAATAAACCAGCTGAACCCAGCACAGTTGCCCCCATTGCTGCAGGAGCAGCCTATACCTGGCATTGG   320
ODAM-SR    TTCCTGCCCCCTCAAATAAACCAGCTGAACCCAGCACAGTTGCCCCCATTGCTGCAGGAGCAGCCTATACCTGGCATTGG   320
ODAM-C1-SG TTCCTGCCTCCTCAAATAAACCAGCTGAACCCAGCACAACTGCCCCCGTTGCAGCAGGAGCAGCCTATACCTGGCATCAT   320
ODAM-C2-SG TTCCTGCCCCCTCAAATAAACCAGCTGAACCCAGCACAGTTGCCCCCATTGCTGCAGGAGCAGCCTATACCTGGCATTGG   320
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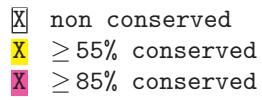
Block 5 (positions 320–395)

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                 320       325       330       335       340       345       350       355       360       365       370       375       380       385       390     395
conservation     *!!!!!*!**!****!**!*!*!!!**!!*!*!**!*!*!**********!*  *! !!**!**!***!**!!*!*!**!*
ODAM-IP    CCCCAACAACACCCTCCCCCCAACAACCAGGACCCCGCCCAGGGGTTTTCGGTATTATATAAGTTATGGATTCCCTTCAAGAA   397
ODAM-LW    CCCCAATAACGGCCTACCAGCACAGAACCCTCCTCCG...GGCTTTCCATTCTTCCTGACGAATCTATATCCTATGAGAA   349
ODAM-PP    TCCCAACAATGGCATACCAGCACAGAACCCTCCTCCG...GGCTTTCCATTCTTCCTGACGAATCTATATCCTCTGAGAA   394
ODAM-CI    TCCCAATAACGGCGTACCAGCACAGAACCTTCCCCCG...GGCTTTCCATTCTTCCTGACAAATCTATATCCTCTGAGAA   397
ODAM-DR    TCCCAACAACGGCATACCAGCACAAAACCTTCCTCCG...GGCTTTCCGTTCTTCATGACTAATTTGTATCCTCTGAGG.   387
ODAM-PN    CCCCAACAACCCCCCACTGAACCAGAATCCTGTCCAG...GCCTTCCCGTATTATCTCACCTACGGTTTCCCTCCAAGGA   409
ODAM-C1-CC TCCCAACAACGGCCTTACCAGCACAGAATCTTCCCCCG...GGTTTTCCATTCTTCCTGACTAATCTATATCCTTTGAGGA   397
ODAM-C2-CC TCCCAACTATGGCATACCGACACAGAATCTTCCCCCG...GGATTTCCATTCTTCCTGACTAATCTATATCCTCCGAGGA   397
ODAM-C1-SA TCCCAACAACGGCTTACCAGCACAGAACCTTCCCCCG...GGCTTTCCATTCTTCCTGGCTAATCTATATCCTCCGAGGA   340
ODAM-C2-SA TCCCAACAATGGCTTACCAACACAGAACCTTCCCCCG...GGATTTCCATTCTTCCTGACTAATCTATATCCTCTGAGGA   397
ODAM-SR    TCCCAACAATGGCTTACCAACACAGAACCTTCCCCCG...GGATTTCCATTCTTCCTGACTAATCTATATCCTCTGAGGA   397
ODAM-C1-SG TCCCAACAATGGCTTACCAGCACAGAACCTTCCCCCG...GGCTTTCCATTCTTCCTGACTAATCTATATCCTCCGAGGA   397
ODAM-C2-SG TCCCAACAATGGCTTACCAACACAGAACCTTCCCCCG...GGATTTCCATTCTTCCTGACTAATCTATATCCTCTGAGGA   397
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Block 6 (positions 400–470)

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                 400       405       410       415       420       425       430       435       440       445       450       455       460       465      470
conservation     ****!*!****!!**!!****!**!*!********************!*****!!*!*!******!****!*!!*!****!*
ODAM-IP    ACACGCTGCCCATATTCCCGCCCCAATCAGAACACG......GCTAATAAAAATATGGCCAATCGGAACCCAGTCGGGCCC   471
ODAM-LW    ACACTCCTGTAAGGTTGATACCCAACCAGAACGCTGGCCCAAATATTCAAGGCCAGGCTACGATGCAACCAGTGCAACCA   429
ODAM-PP    ACACCCCTGTAAGGCTGATACCAAACCAGAACGCTGGGCCAAATATTCAAGGCCAGGCTACGATGCAACCAGTGCAACCA   474
ODAM-CI    ACACTCCTGTAAGGCTGATACCC...CAGAATGCTGGCCCCAATGTTCAAGGTCAGGCTACGATGCAACCAGTGCAACCA   474
ODAM-DR    ..ACTCCTGTACAGCTGATGCCC......AACATTGGACCCAACATTCAAGGCCAAGCTACACTGCAACCAGTTCAACCA   459
ODAM-PN    AC...CCAATAGTTCCACCTCCAAGGAGACCCACTACTTCCACCCAACCAAAAAACAGCCTTCACAGAACTCAGTGAGGCCA   486
ODAM-C1-CC ACACTCCTGTGAGACTGACACCAAAACCAGAACGCTGGCCCAAGTGTTCAAGCGCCAGGACAGGCCATGCAACCAATGCAGCCA   477
ODAM-C2-CC ACACTCCTGTGAGACTGACACCAAAACCAGAACACTGGCCCAAGTATTCAAGGCCAGGACAGGCCATGCAACCAATGCAGCCA   477
ODAM-C1-SA ACACTCCTGTAAGACTGACACCAAAACCAGAACGCTGGCCCAAGTGTTCAAGCCCAGGACACCATGCAACCAATGCAGCCA   420
ODAM-C2-SA ACACTCCTGTAAGGCTGATACCCAACCAGAACACTGGCCCAAGTATTCAAGGCTGGGACACAATGCAACCAATGCAGCCA   477
ODAM-SR    ACACTCCTGTAAGGCTGATACCCAACCAGAACACTGGCCCAAGTATTCAAGGCTGGGACACAATGCAACCAATGCAGCCA   477
ODAM-C1-SG ACACTCCTGTAAGACTGACACCAAAACCAGAACGCTGGCCCAAGTGTTCAAGCCCAGGACACCATGCAACCAATGCAGCCA   477
ODAM-C2-SG ACACTCCTGTAAGGCTGATACCCAACCAGAACACTGGTCCAAGTATTCAAGGTTGGGACACGATGCAACCAATGCAGCCA   477
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conservation          ***** *** ***!!*********  ***  *  **  *         *       *          ***
                  475        480    485     490      495                          500    505    510   515
ODAM˙IP       ACTAAA...GTCCCTCAGCCTGTGCAGAAT.................................AACGGGAAGGTGGTGGA  515
ODAM˙LW       ATGCAA...CCAGTGCAACCAATACAGGGTTAGGGTAGGATTAGGAAC..............AGGGTGAAGGCAGTAGA  491
ODAM˙PP       ATGCAA...CCAGTGCAACCAATTCGACCAATACAGAAC.....................AGGGTGAAGGCAGTAGA  527
ODAM-CI       GTGCAA...CCAATGCAACCAGTGCAACCAGTGCAACCAATCCAGAAC...........AGGGTGAAGGCAGTAGA  536
ODAM-DR       ATGCAA...CCAATGCAGCCAATGCAACCAATACAGCCAATACAACCAATCCAGAAC......AGAGGGAATTTGGCAGA  530
ODAM-PN       ACTCCAGCACCCCCACAGCCTGCGCAGCCAGTAAATATTAAACGGTTCTCAAGAAACTCAATAAAGGGAAACCTTCCTCC  566
ODAM-C1˙CC    GTGCAA...CCAATCCAGAAAATATTTCACATTTTTCAG.................AACAGGGGGAAAGCAGA  530
ODAM-C2˙CC    GTGCAA...CCATTGCAACCAATGCAGCCAGTGCAACCAATGCAACCA...........AGCCAGGGAAAGTCAGA  539
ODAM-C1˙SA    ATGCAG...CCAGTGCAACCAATCCAGCCTCTGCCACCAAACAACAAT.................  465
ODAM-C2˙SA    GTGCAA...CCAATGCAACCAATGCAACCAATGCAGCCA...................AACAGGGGGAAAGTCAGA  530
ODAM˙SR       GTGCAA...CCAATGCAACCAATGCAGCCAGTGCAACCAATGCAACCAATGCAACCA................ATACA  536
ODAM-C1˙SG    GTGCAA...CCAATACAACCAATCCAG...........................................  501
ODAM-C2˙SG    GTGCAA...CCAATGCAGCCAGTGCAACCAATGCAACCAATGCAACCAATACAACCAATCCAGAACAGGGGGAAAGTCAGA  554


conservation  ****  ********************************************************  ***
                  520    525    530    535    540    545    550    555    560    565    570
ODAM˙IP       GCCGTGGCACATGACTCCGCCCCCTGAAAACCGTGGTGATCGTCCTGGGCGTGGT   570
ODAM˙LW       CCCG...ATGGTAACGTCTGCTCCTGATTACCGTGGTGATCGGCCCGGTCCTGGA   543
ODAM˙PP       CCCG...ATGGTAACGTCTGCTCCTGATTACCGTGGTGATCGGCCCGGTCCTGGA   579
ODAM-CI       CCCG...AAGGTAACGTCTGCTCCTGATTACCGTGGTGATCGGCCCGGTCCTGGA   588
ODAM-DR       CCCG...AAAGCAACGTCTGTGCCTGAATACCGGGGTGATCGACCCGGTCCTGGA   582
ODAM-PN       TCCT.....................GGTGGCCAGCGTCCTCCACTTGGC   594
ODAM-C1˙CC    CCCG...AAGGTAACGTCTGCTCCTGATTACCGTGGTGATCGGCCCGTTCCTGGA   582
ODAM-C2˙CC    CCAG...AAGGTAACGTCTGCTCCTGATTACCGTGGTGATCGGCCTGGTCCGGGA   591
ODAM-C1˙SA    ..................................................   465
ODAM-C2˙SA    CCCG...AAGGTAACGTCTGCTCCTGATTACCGTGGTGATCGGCCCGGTCCGGGA   582
ODAM˙SR       ACCAATCCAGGTAACGTCTGCTCCTGATTACCGTGGTGATCGGCCCGGTCCGGGA   591
ODAM-C1˙SG    ..................................................   501
ODAM-C2˙SG    CCCG...AAGGTAACGTCTGCTCCTGATTACCGTGGTGATCGGCCCGGTCCGGGA   606
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X   non conserved
X   ≥ 55% conserved
X   ≥ 85% conserved