

Electronic supplementary material

Below is the image is a link to a low resolution version

Supplementary figure 1

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CLUSTAL FORMAT for T-COFFEE Version_1.41, CPU=23.55 sec, SCORE=53, Nseq=4, Len=1515

```
DmOAZ      MMALKMLYRGPSSRLENLIEKIQATKEITNNDMYSTHTSSSYSPSISDGTMTPNSHHLIG
OAZ        medesiytcdhcqqdfesladitdhrahrcpgdgdqddpqlswvasspskdvasptqmig
EBFAZ     ----------mig
ROAZ      ----------mig
                                         :**
```

```
DmOAZ      APTAAGQEDHPTEGKINGGADGEDLPKPKRLPHFHHHHHHHHYHHQQALKIANKLRKINKE
OAZ        -----dgcdl-----
EBFAZ     -----dgcdl-----
ROAZ      -----dgcdl-----
                                         ** **
```

```
DmOAZ      AKMGATAGGATGAASKPDKLTGEGIKSRGDG-SYQCQFCEKTFPRLGYLKHHVQSHAEH
OAZ        -----glgeeeggtglpypcqfcdksfirlsylkrhegihsk
EBFAZ     -----glgeeeggtglpypcqfcdksfirlsylkrhegihsk
ROAZ      -----glgeeeggtglpypcqfcdksfirlsylkrhegihsk
                                         * * :. * * . * *****;:* **.****;* * *:::
```

```
DmOAZ      LPFKCEYCSKLPFKHKRSRDRHKKLHTNERNYKCPHCEAAFSRSDHLKIHMKTHDIQKPFQ
OAZ        lpfkctycsrlfkhkrsrdrhiklhtgdkkyhcheceaafsrdhlkihlkhthsskpkf
EBFAZ     lpfkctfcsrlfkhkrsrdrhiklhtgdkkyhcheceaafsrdhlkihlkhthsskpkf
ROAZ      lpfkctfcsrlfkhkrsrdrhiklhtgdkkyhcheceaafsrdhlkihlkhthsskpkf
***** :*:***** *****.:*:* .***** *****:***. .***:
```

```
DmOAZ      CSMCNRGYNTAAALTSHMOKHKNAAILAAGGNP-----NAL
OAZ        ctvckrgfsstsslqshmqahkknkehlaksekeakkddfmcdycedtfsqteelekhvl
EBFAZ     cvvckrgfsstsslqshmqahkknkehlaksekeakkddfmcdycedtfsqteelekhvl
ROAZ      cvvckrgfsstsslqshmqahkknkehlaksekeakkddfmcdycedtfsqteelekhvl
*:*:***:.:*:* ***** ** . :                               :.*
```

```
DmOAZ      NYSPRSTGSAS-----
OAZ        trhpqlsekadlqcihcpevfdestllahihqahanqkhkcpmcpeqfssvegvychld
EBFAZ     tlhpqlsekadlqcihcpevfdestllahihqahanqkhkcpmcpeqfssvegvychld
ROAZ      tlhpqlsekadlqcihcpevfdestllahihqahanqkhkcpmcpeqfssvegvychld
. * : : .*.
```

```
DmOAZ      -----ASVSSNGSLQKRRYALALASDS-----SPS--RMDFP
OAZ        shrqpdssnhsvspdpvlgsvasmsatpds-----sasvergstp
EBFAZ     -----ASVSSNGSLQKRRYALALASDS-----SPS--RMDFP
ROAZ      -----ASVSSNGSLQKRRYALALASDS-----SPS--RMDFP
```

```

OAZ      shrqpdssnhsvspdpvlgsvasmssatpds-----sasvergstp
EBFAZ    shrqpdssnhsvspdpvlgsvasmssatpds-----sasvergstp
ROAZ     shrqpdssnhsvspdpvlgsvasmssatpdstpdpvlgsvasmssatpdssasvergstp
          ***.: * . : :.**          *. * . *

DmOAZ    KRRSRSNHVGGGTTTTATPTP----LLRCSYCPKVTEFSSLEQLNAHLQSVHEQPQTQGVKT
OAZ      dstlkplrgqkmrddgqgwtkvvyscpycsk-rdfnslavleihktihadkpqgshtc
EBFAZ    dstlkplrgqkmrddgqgswpkvyscpycsk-rdfnslavleihktihadkpqgshtc
ROAZ     dstlkplrgqkmrddgqgswkvyscpycsk-rdfnslavleihktihadkpqgshtc
          . : . * .. : *.*.* :*.* * : *:::* : * .

DmOAZ    PV-----QEGEGPQLSCEYCTMKFGNIAGLFOHMRSTH
OAZ      qicldsmptlynlnehvrklhknhaypvmqfgnisafhcnypemfadinslqehirvsh
EBFAZ    qicldsmptlynlnehvrklhkshaypvmqfgnisafhcnypemfadinslqehirvsh
ROAZ     qicldsmptlynlnehvrklhkshaypvmqfgnisafhcnypemfadinslqehirvsh
          : * * : : *.*. *.* * : *.* : *

DmOAZ    MDRLSSPNSYYEHF-----NRLTAGTFSPRLALDLPKIKPDLGSPERE
OAZ      cgpnanpsdgnaffcnqcsmgfltessltehiqgahcsvgsaklespvvqptqsfmevy
EBFAZ    cgpnanppdgnaffcnqcsmgfltessltehiqgahcsvgstklespvvqptqsfmevy
ROAZ     cgpnanppdgnaffcnqcsmgfltessltehiqgahcsvgstklespviqptqsfmevy
          . :.* . : * : * * * * : * * : * * : *

DmOAZ    SRPAEDDLPTDLS-----NNKRRPLTPNPQA-----QTPL-----A
OAZ      scpyctnspifgsilklthikenhkniplahskskaeqspvssdevvsspkrqrlsas
EBFAZ    scpyctnspifgsilklthikenhkniplahskskaeqspvssdevvsspkrqrlsgs
ROAZ     scpyctnspifgsilklthikenhkniplahskskaeqspvssdevvsspkrqrlsgs
          * * : * * * : * . * * : * * : * * : *

DmOAZ    PPSAPPGVFFCNQCNAGLPDFESFRNHLKSHIAEGM-QLVCPHCGMSLPEQSEFERHVVG
OAZ      ansisngeypcnqcdlkfsnfesfqthklhlelllrkqacpqckedfdsqellqhtv
EBFAZ    ansisngeypcnqcdlkfsnfesfqthklhlelllrkqacpqckedfdsqellqhtv
ROAZ     ansisngeypcnqcdlkfsnfesfqthklhlelllrkqacpqckedfdsqellqhtv
          . * . * : * * * : * : * * * : * * * : * : * * * : *

DmOAZ    HFLITGSEFNCSSSCGKSFAKSEDLQOHLLSEHVLTLLKCSLCSELCESRMAMOLHLACA
OAZ      hymttsthyvces-cdkqfssvddlqkhlldmhtfvlyhctlcqvfdskvsiqvhlavk
EBFAZ    hymttsthyvces-cdkqfssvddlqkhlldmhtfvlyhctlcqvfdskvsiqvhlavk
ROAZ     hymttsthyvces-cdkqfssvddlqkhlldmhtfvlyhctlcqvfdskvsiqvhlavk
          * : * * : * * * * * : * * * * * : * * * * * : * * * * *

DmOAZ    HSQETKLLRCSACLELFRSDAEFHVHVKTRHQLGGHPTLGATSSAPTNPLOCMFCRAVCS
OAZ      hsnekkmyrctacnwdfrkeadlqvhvkhsh-----lgnpakahkcifcgetfs
EBFAZ    hsnekkmyrctacnwdfrkeadlqvhvkhsh-----lgnpakahkcifcgetfs
ROAZ     hsnekkmyrctacnwdfrkeadlqvhvkhsh-----lgnpakahkcifcgetfs
          * * : * * * * * : * * * * * : * * * * * : * * * * *

DmOAZ    SELEMHPHLAAHARQFRCPSPETPHVEFLDRHMQSQHGGVKDKEANSPNMGSLYVNAL
OAZ      tevelqchitthskkynckfcskafhavilleklhrek-----
EBFAZ    tevelqchitthskkyncrfcskafhavilleklhrek-----
ROAZ     tevelqchitthskkyncrfcskafhavilleklhrek-----
          : * * * : * * * * * : * * * * * : * * * * * : *

DmOAZ    LPPLAAAAAAAAATNNNSSIIDYNVAFKGLFGGASGGAGSGGGGAQSGGAPPSANKFYSP
OAZ      -----cvfdaatengtang-----
EBFAZ    -----cvfdaaaengtang-----
ROAZ     -----cvfdpaaengtang-----
          . . . . *

DmOAZ    LOUDENAIKACGSEBDAI MVGT GQVYI MEMVAAKSMEBSCNEFCVNSODBADA...MADDD

```


ROAZ

Figure S1 Complete amino acid sequence alignment of Dm OAZ with OAZ, EBFAZ and ROAZ. The ZFs of OAZ and Dm OAZ are shown in blue and red, respectively. Asterisks (*) indicate an entirely conserved column, a colon (:) indicates columns where all residues have roughly the same size and hydrophobicity level, and a period (.) indicates columns where either the size or the hydrophobicity level has been conserved during evolution (JPEG 1.2 mb)
