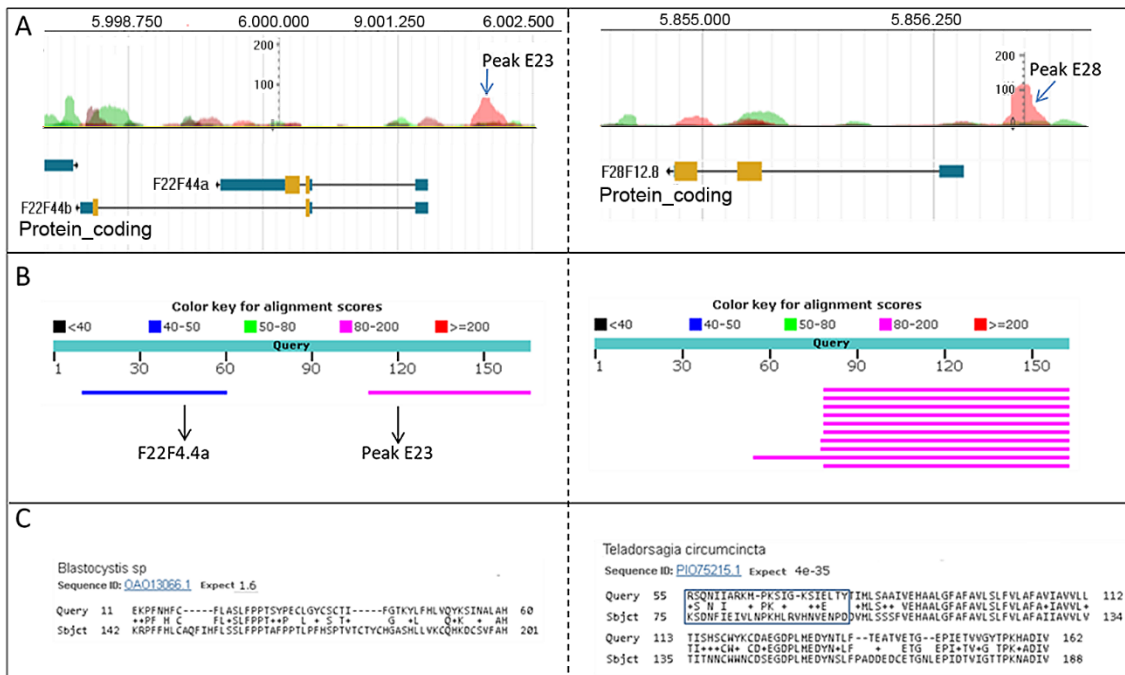
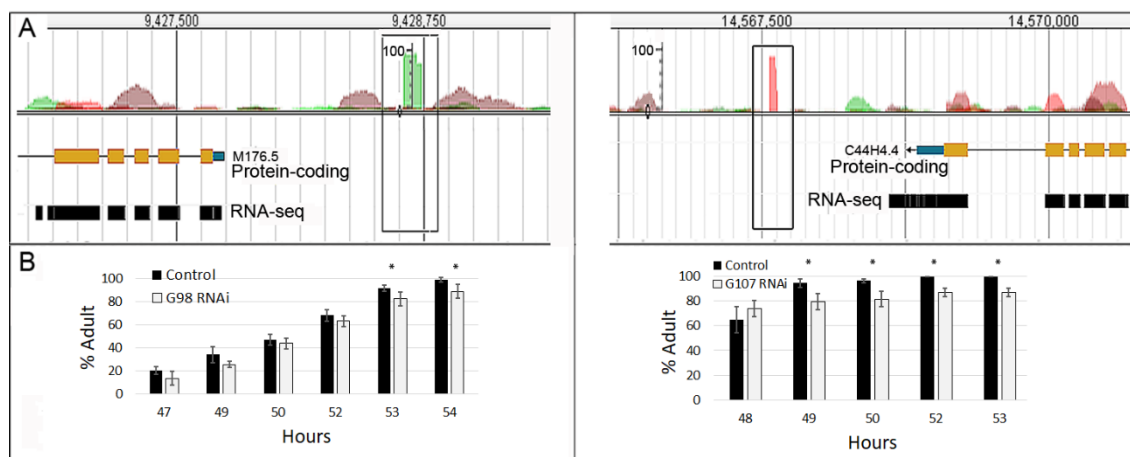


Supplementary information

Supplementary Figures



Supplementary Fig. S1. Putative new exons identified by AnABlast peaks E23 (X:6001927..6002254) and E28 (V:5856625..5856859). A) Peaks E23 (left) and E28 (right) (squared). Annotated exons of their respective adjacent genes F22F4.4a and F28F12.8 are shown. B) Top BLASTp hits of E23 (left) and E28 (right) predicted protein sequences. C) E23 (left) and E28 (right) protein sequence alignments to proteins found in the indicated specie. Exon E28 sequences is highlighted in box. Sequence ID and alignment significance (Expected E-value) are indicated.



Supplementary Fig. S2. RNAi analysis of AnABlast peaks G98 (II: 9428645..9428735) and G107 (X: 14567563-14567626). A) AnABlast profiles showing peak G98 (left) and peak G107 (right) and peaks matching exons encoding their respective adjacent protein M175.5 and C44H4. Peaks G98 and G107 are indicated (squares). RNA expression data (RNA-seq) are shown. B) Average worms (%) that reaches adulthood from L1 (time 0 hours) in worms subject to E98 (left) or E107 (right) RNAi (grey) with respect to their controls (black). Standard deviation bars are shown. * means $P \leq 0,05$.

Supplementary Tables

Supplementary Table S1. Accuracy of AnAblast in the identification of non-redundant intergenic sORFs found at <http://www.sorfs.org/database> for *C. elegans*. A representative sORF reference is described for the indicated genome interval. sORF length (number of amino acids), Evidences of expression reported in WormBase (“-” Not reported, “+” RNA-seq, “++” Polysomes, “+++” both), AnAblast prediction at the sORF genomic interval (Peak height: “-” Not significant, “+” 5-14, “++” 15-24) “+++” >25), and representative related coding sequence identified by BLASTp search (default parameters) against the non-redundant protein sequence data base (length of the target protein and E-value of the alignment are indicated) and remarks are indicated.

| sORF reference | Genome interval | sORF length | Expr. | Anablast prediction | Related Coding Sequence and Remarks |
|--|----------------------|-------------|-------|---------------------|---|
| arnold c14 2014:151752 | III:5094893..5095009 | 38 | + | ++ | Annotated sORF CELE_F54D8.10 No similar proteins. |
| arnold c14 2014:229152 | IV:7053788..7053817 | 9 | +++ | ++ | Annotated sORF CELE_F54H12.3 No similar proteins. |
| arnold n2 2014:113038 | II:5758546..5758620 | 24 | ++ | - | Annotated sORF CELE_F10C1.23 No similar proteins. |
| arnold n2 2014:505973 | X:4702799..4702855 | 18 | - | - | Not annotated Similar proteins: -AquaPorin (Caenorhabditis elegans) Sequence ID: NP_001359963.1 Length: 330 E-value: 1e-09 -hypothetical protein B9Z55_024173 (Caenorhabditis nigoni) Sequence ID: PIC18191.1 Length: 297 E-value: 1e-09 |
| hendriks 2014:175563 | II:2725608..2725649 | 13 | + | - | Annotated sORF CELE_T05A8.11 No similar proteins. |
| hendriks 2014:175658 | II:5803854..5803913 | 19 | + | + | Not annotated Similar proteins: -TIL domain-containing protein (Caenorhabditis elegans) Sequence ID: NP_001343656.1 Length: 171 E-value: 1e-10 -hypothetical protein CRE_11990 [Caenorhabditis remanei] Sequence ID: XP_003109086.1 Length: 169 E-value: 9e-06 -hypothetical protein FL83_04414, partial [Caenorhabditis latens] Sequence ID: OZG21110.1 Length: 169 E-value: 9e-06 |
| hendriks 2014:175699 | II:8982729..8982761 | 10 | + | - | Not annotated. No similar proteins. located at the 5' utr of gene C18E9.7 |
| hendriks 2014:262 | I:2945458..2945487 | 9 | ++ | + | Not annotated No similar proteins. |
| hendriks 2014:331543 | III:4324159..4324236 | 25 | + | + | Not annotated. Similar proteins: -Uncharacterized CELE_H38K22.9 (Caenorhabditis elegans) Sequence ID: NP_001368690.1 Length: 25 E-value: 1e-21 |
| hendriks 2014:331740 | III:1901967..1902038 | 23 | + | + | Not annotated. No similar proteins. |
| hendriks 2014:658572 | V:6452777..6452872 | 31 | +++ | + | Not annotated. No similar proteins. |
| hendriks 2014:823799 | X:5450031..5450201 | 56 | + | + | Not annotated |

| | | | | | |
|--|----------------------|----|----|-----|---|
| | | | | | Tandem repeat of the 3' exon of gene C25F6.6 |
| hendriks 2014:823914 | X:3025113..3025163 | 16 | + | - | Not annotated. No similar proteins. |
| hendriks 2014:823999 | X:4783780..4783821 | 13 | + | - | Annotated sORF CELE_F43C9.2 No similar proteins. |
| hendriks 2014:824045 | X:5659967..5660023 | 18 | + | - | Annotated sORF CELE_T22B7.22 No similar proteins. |
| hendriks 2014:824117 | X:11267038..11267298 | 86 | + | ++ | Annotated sORF CELE_C03A3.9 No similar proteins. |
| hendriks 2014:824131 | X:12148633..12148665 | 10 | + | - | Not annotated. No similar proteins. |
| nedialkova 2015:108298 | II:9418511..9418513 | 48 | + | - | Annotated sORF CELE_M176.16 No similar proteins. |
| nedialkova 2015:108339 | II:2895597..2895668 | 23 | + | ++ | Not annotated. Similar proteins: -UBIQUITIN_CONJUGAT_2 domain-containing protein (Caenorhabditis elegans) Sequence ID: NP_001348718.1 Length: 238 E-value: 9e-13 |
| nedialkova 2015:204387 | III:8326386..8326598 | 70 | + | ++ | Annotated sORF CELE_ZC262.13 Similar proteins: -hypothetical protein FL83_22023, partial (Caenorhabditis latens) Sequence ID: OZF89903.1 Length: 98 E-value: 2e-29 -hypothetical protein FL81_17889 (Caenorhabditis remanei) Sequence ID: POM29574.1 Length: 98 E-value: 2e-29 -Protein CBG25937 (Caenorhabditis briggsae) Sequence ID: CAS00299.1 Length: 86 E-value: 1e-27 |
| nedialkova 2015:204436 | III:2528650..2528679 | 9 | + | - | Annotated sORF CELE_Y54F10AM.15 No similar proteins. |
| nedialkova 2015:27 | I:10380793..10380921 | 42 | ++ | + | Annotated sORF CELE_F45H11.11 Similar proteins: -Unnamed protein product (Heligmosomoides polygyrus) Sequence ID: VDP01011.1 Length: 118 E-value: 3e-08 |
| nedialkova 2015:412435 | V:14547397..14547441 | 14 | + | - | Annotated sORF CELE_Y54F10AM.15 No Similar proteins. Located at the 5' utr of the rbc-2 gene |
| nedialkova 2015:516194 | X:5259950..5260078 | 42 | + | +++ | Not annotated Similar proteins: -hypothetical protein CRE_00743 (Caenorhabditis remanei) Sequence ID: XP_003117941.1 Length: 125 E-value: 1e-21 -hypothetical protein B9Z55_024276 (Caenorhabditis nigoni) Sequence ID: PIC18352.1 Length: 125 E-value: 2e-20 -Hypothetical protein CBG14648 (Caenorhabditis briggsae) Sequence ID: XP_002644667.1 Length: 125 E-value: 2e-20 |

| | | | | | |
|-------------------------------------|----------------------|----|----|---|--|
| stadler_2012:136758 | II:8766809..8766838 | 9 | - | - | Annotated sORF CELE_K08F8.15 No similar proteins. Located at a pah-1 gene intron (antisense) |
| stadler_2012:256915 | III:5863632..5863715 | 27 | + | - | Not annotated. No similar proteins. Located at the 5' utr of the dnpp-1 gene |
| stadler_2012:54 | I:15064721..15064759 | 12 | ++ | + | Not annotated. No similar proteins. |
| stadler_2012:639775 | X:3147194..3147226 | 10 | + | - | Not annotated. No similar proteins. Located at the 3' utr of the C15C7.4 gene |

Supplementary Table S2. Accuracy of AnAblast in the identification of curated genes coding less than 100 amino acids length peptides. Coding genome interval, peptide length (number of amino acids), AnAblast prediction (peak height: "-" Not significant, "+" 5-29, "++" 30-89) "+++" >90), and reported sORFs entries at the coding genomic interval of the gene ("-" None, "+" 1-2, "++" 3-4, "+++" >4) are indicated.

| Gene | Genome interval | Encoded Peptide length | AnAblast Peak height | Reported sORFs |
|----------|-------------------------------|------------------------|----------------------|----------------|
| fipr-16 | <u>III:8590833..8590982</u> | 49 | + | - |
| fipr-3 | <u>X:14423405..14423883</u> | 50 | + | - |
| fipr-15 | <u>IV:10880564..10880716</u> | 50 | ++ | - |
| rpl-39 | <u>V:7775742..7776079</u> | 51 | +++ | +++ |
| R05D3.6 | <u>III:8350419..8350805</u> | 54 | ++ | - |
| ZC262.5 | <u>III:8342224..8342610</u> | 54 | + | - |
| T23F2.4 | <u>X:5514798..5515080</u> | 57 | +++ | - |
| tomm-7 | <u>III:7859613..7860159</u> | 58 | ++ | +++ |
| C04G6.5 | <u>II:5085785..5086121</u> | 59 | ++ | - |
| gpc-1 | <u>X:12881126..12884989</u> | 62 | ++ | - |
| mtl-2 | <u>V:14018270..14018673</u> | 63 | + | ++ |
| fip-1 | <u>III:8639791..8640093</u> | 63 | - | - |
| nola-3 | <u>I:10179042..10179236</u> | 64 | +++ | +++ |
| rps-28 | <u>IV:1659691..1660011</u> | 65 | +++ | +++ |
| nlp-28 | <u>V:3987900..3988312</u> | 65 | - | + |
| sid-5 | <u>X:6904721..6905849</u> | 67 | + | ++ |
| emo-1 | <u>V:10896658..10897143</u> | 68 | +++ | +++ |
| flp-24 | <u>III:725022..726155</u> | 69 | - | ++ |
| cpg-9 | <u>IV:3067848..3069876</u> | 69 | ++ | ++ |
| nlp-30 | <u>V:3981980..3982741</u> | 69 | + | + |
| rpl-38 | <u>V:15512166..15512780</u> | 70 | +++ | +++ |
| ubl-5 | <u>I:5607820..5608841</u> | 73 | +++ | - |
| nlp-29 | <u>V:3984413..3984847</u> | 73 | - | + |
| nlp-33 | <u>V:11147336..11147737</u> | 74 | - | - |
| mtl-1 | <u>V:6691371..6691863</u> | 75 | ++ | ++ |
| nlp-31 | <u>V:3980055..3980622</u> | 75 | + | - |
| ins-23 | <u>III:10028247..10028600</u> | 76 | + | - |
| ins-21 | <u>III:10023804..10024120</u> | 76 | ++ | - |
| snr-7 | <u>I:2727014..2727545</u> | 77 | +++ | +++ |
| ned-8 | <u>I:10373368..10373862</u> | 77 | +++ | +++ |
| tmem-258 | <u>V:7063174..7063718</u> | 79 | ++ | +++ |
| emb-1 | <u>III:5173439..5173809</u> | 81 | ++ | + |
| nlp-36 | <u>III:9488731..9489188</u> | 82 | ++ | +++ |
| rmo-1 | <u>II:13237404..13237907</u> | 82 | +++ | - |
| moag-4 | <u>I:2064909..2065481</u> | 82 | ++ | +++ |
| dss-1 | <u>III:1194367..1196292</u> | 82 | ++ | +++ |
| ddp-1 | <u>III:1859888..1860381</u> | 83 | +++ | +++ |
| flp-23 | <u>III:8650764..8652190</u> | 83 | + | - |
| rps-27 | <u>V:103394..104064</u> | 83 | +++ | +++ |
| ins-22 | <u>III:10026289..10026673</u> | 83 | ++ | - |
| kreg-1 | <u>X:8709764..8710137</u> | 83 | + | - |
| ceh-7 | <u>II:8703368..8703829</u> | 84 | +++ | - |
| flp-26 | <u>X:7029136..7029638</u> | 84 | + | - |
| abf-1 | <u>I:3886111..3887080</u> | 85 | + | - |
| snr-5 | <u>III:7862070..7862577</u> | 85 | +++ | - |
| abf-2 | <u>I:3885548..3885905</u> | 85 | ++ | - |
| acbp-1 | <u>I:4635722..4637328</u> | 86 | +++ | +++ |

| | | | | |
|----------------|-------------------------------|----|-----|-----|
| vha-17 | <u>IV:9321801..9322528</u> | 86 | +++ | +++ |
| tin-10 | <u>III:11500867..11502852</u> | 86 | +++ | +++ |
| moa-2 | <u>II:7698613..7699046</u> | 87 | +++ | +++ |
| rps-21 | <u>III:7189142..7189631</u> | 88 | +++ | +++ |
| mai-1 | <u>X:3114668..3116538</u> | 88 | +++ | - |
| flp-19 | <u>X:10604686..10605828</u> | 89 | + | + |
| lury-1 | <u>III:12186411..12190116</u> | 89 | ++ | - |
| baf-1 | <u>III:9467464..9468058</u> | 89 | +++ | +++ |
| flp-27 | <u>II:5680980..5682667</u> | 89 | ++ | + |
| dlc-1 | <u>III:6462907..6463801</u> | 89 | +++ | +++ |
| snr-6 | <u>III:12429172..12429630</u> | 90 | +++ | ++ |
| tin-9.1 | <u>IV:7044058..7044602</u> | 90 | +++ | ++ |
| emre-1 | <u>X:14979374..14980435</u> | 90 | ++ | ++ |
| dlc-2 | <u>IV:12110586..12111577</u> | 90 | +++ | ++ |
| rpl-43 | <u>II:14155280..14155660</u> | 91 | +++ | +++ |
| rpl-37 | <u>III:3528547..3528968</u> | 91 | +++ | - |
| sno-1 | <u>I:1340678..1341258</u> | 91 | +++ | +++ |
| ins-11 | <u>II:5556761..5557088</u> | 91 | + | - |
| mpe-4 | <u>III:8270790..8271776</u> | 91 | + | - |
| flp-5 | <u>X:8528250..8531033</u> | 92 | +++ | + |
| flp-16 | <u>II:13235306..13237417</u> | 92 | - | - |
| flp-22 | <u>I:8658874..8659967</u> | 93 | ++ | ++ |
| ufm-1 | <u>III:7858979..7859512</u> | 94 | ++ | ++ |
| cks-1 | <u>IV:8513919..8514725</u> | 94 | +++ | + |
| dpm-3 | <u>IV:12391591..12392120</u> | 95 | +++ | ++ |
| tag-209 | <u>II:10787312..10787914</u> | 99 | + | - |

Supplementary Table S3. Genome intervals highlighted by AnAblast as putative new intergenic sORFs (82). AnAblast peak height (protomotifs accumulation), Expression evidence data, homologs/motifs, predicted amino acid sequence (ORF) and the number of residues (ORF_length) are described.

| Peak | Genome interval | Peak height. | Expres. | Homolgs/ Motifs | ORF | ORF length |
|------|---------------------------|--------------|----------|---|--|------------|
| G5 | IV:1213206..1 213443 | 88 | Polysome | -/- | MDTLAIKRRSEQKVVGSYEPTGEMGNEL KRWKKERKGVLENGGTYRLVVREHQI FWEGEKDGSLWGDFFSYTYTLRLH | 80 |
| G14 | II:11736898..1 1737084 | 175 | RNAseq | -/- | MEDTKRVFGILPGKLLHLSRSYSTLKHII LRASRSTFQA | 39 |
| G22 | III:670901..67 1255 | 74 | RNA-seq | -/- | MRHKKEGSIACELMRFESYLLAHGGDD HHLNESLYFLYLDLSLHFPCKILFSGIRKGE GRNLKVTMKIAYDTRRIISQRLVKIAFSPS TTGFAATHRLP GTSGEQFLAASPNTLFPGRSWSRQLFL FLQKKRERERATTNSINTDLKTSSSVFSL LQES | 162 |
| G23 | III:5838386..5 838494 | 71 | RNA-seq | -/- | ISHRHEALRKSFLINWRVNSPSHKDQE KLEKRQILPVAAK | 41 |
| G25 | X:17515475..1 7515919 | 70 | RNA-seq | -/- | MELECSGLLILNKKRFFSQNFLKFKVCFEI ITFSSQKINEKISIRMSHYHSDQTFKYQI VNNNSAFQSRQFPVNNQWKPLIGLSTRY GQDNILMEHKIWLKIGNIKFKKPQHTGK SPHCAQPTSSVLFASNYFKHLLRGEKFKQ RA KLKEKVFEYSELYLLQNFATLHIRTG | 175 |
| G26 | II:11717583..1 1718477 | 297 | RNA-seq | -/ PF07735 (F-box associated) | MVAVELNISYQTQCCVFRFNHNSVNIKIDF PNGYYWNGTRRLCEEIELRYTEIDMFQR PYRWFWFMPKVSARYVDHILKTFNRGK VLRLKIDCDAREFMNLNEFNDIRFESLWI RKL RNANYFFNLKEFINQAYSLLLRDSEF TTLPKFQIDFCQNERIELWSFSMNLNTL LLCNFKEISLITSINLADINLFTK | 199 |
| G30 | II:13644506..1 3644671 | 196 | RNA-seq | (O02112_CAEL)/- | IQAFFVFVSAVLDVVKLYLNFFSDGIERV DCSDGYDIERNDDLATVFYQNMGTDFV VWHDREFPTYSHRNLPST | 75 |
| G31 | I:12928143..12 928563 | 164 | RNA-seq | (G8JLX0_CAEL)/ PF07735 (F-box associated) | LIINYSNWFNLDYLLKSDSVNIHLYDFVW NPADLNRFLRSWLLSESNVKLTFLVENIA NRDSLEQILDLPEDSIVRNEENRYSANK FVLKSCFLWQRTICNCMFLSRRVKNPTK RRKESCTTHLFCSLARQIRLYISCLLRKYV ICSRNNLNKVIKILVTVAKKI | 167 |
| G32 | V:13396252..1 3396714 | 84 | RNA-seq | -/- | ILRDIEGIFCRNTDESLRGLGRLVFVDILIK TTDYRISSHEPSGLHFWGNWVGDKMEIF QNMWDKLEKGLDRRTIGAPGLLHRRRA AKTNLRPSALIHTRYQHPPPLRFAQCPS YTHHTQKRRRGHILCDKEGIFRQVREG DTGRRVHTLIGRTRDGLPSRLDANTCGS LRVE | 176 |
| G43 | X:15015384..1 5015639 | 233 | RNA-seq | -/- | MNFAKQAKPDCFAHRTYKAYKNKNET FHISGRKTILKNQFLYRKAVYS | 49 |
| G45 | III:7833431..7 833716 | 102 | RNA-seq | (Q9XWD9_CAEL)/ - | MYAWQNFNTGNHTLKLGEAAIHLYDLI FPPCSDRDGIATCLISLGLKQKCVARTLS HDEIRLDKWINTYLTMTLFRHYRSCILLS YSYNILLFFF | 97 |
| G46 | I:7316251..731 6590 | 70 | RNA-seq | -/- | MQIRETERTVEERSKKIGWSSVTASSFLS FISQFPLNTKMRRMGCRSAIFTQKRLSY RKAKGDMIERAADPKPKIDPQRKWLITL SSLQGFIKTFSSS RFPFKYFREYEHCEYLKGET | 122 |
| G49 | V:14367725..1 4368037 | 74 | RNA-seq | -/- | ILSCGLSCSFLNKCFALRTPQVFRPTFSIF PENRGIFIVMDMTSRIPNNKKYTLTPNSL TCCRKFQRSNRELELLKTWLPARLHDLF VLSRYIKYRYNHSLKLYQYSQYFHLNIAL NL | 119 |
| G50 | X:16728266..1 6728758 | 93 | RNA-seq | -/- | MHRFTLNFARKCPMILQTFEIQVYPPFRN QITEAKVSPQNLIVYKFHQQLFAEYLISPP ECGGVERTQKLSSVIYEVRRHRTLAKQEK GKNWKLATTMQ NSTSEVGMRIGLRKKKWKGDQRKEKI | 126 |

| | | | | | | |
|-----|-----------------------|------|---------|---|--|-----|
| G51 | V:8646870..8647347 | 98 | RNA-seq | -/- | ITVTILLNLTSKHLPISIINIPDLRKLPAQGY PKPLRRQTRTPERNQISGTRSGTTLNEVT EKVSKCVHLFSGRLTILWVYVRDKEMMI ERMFDRLYGGTYLDMISLFWKPRVFFCL LITFFCWVHLHIPICVGIIRLCSFLMFLGFIF NFPRYKIKNTTTRVNIQM | 165 |
| G52 | IV:379001..379340 | 71 | RNA-seq | -/- | ILKMNLSIAHLEKLELIKFYIIFSRNSSTIH PHCHGTFKDFSLTRVLVFGTKKSLLVII VITLTYNHKALRTFIVETAWMHTHPQISS NLVGDCEQKRRREIRKTERQIDSRDTNV RCFIGTQSVKDHREPRHRLICR | 140 |
| G54 | III:4101011..4101389 | 139 | RNA-seq | (A0A0U5FV96_9EUR0)/- | IFINLKSQQNKLVGMAAQGISIEPIEKQTE TKKKPQIFFLKSPNPSKDRRLDRIRQEUR EKQKVLRRRIHNRIRGIVNDKVSEEMGFCF ETLCWVHNHTFIGGEVGFVKYKRNVKV GKQQCFNVQVLSCDGEAFKNE | 138 |
| G57 | X:541358..541951 | 1820 | - | RNA-directed DNA polymerase/ Integrase domain containing protein | MSQFLLHYRATPSNALGGLTPAEVHYGR RLRTRTSLMMPRKDHSEDSTASTLAMK DQFDKHNRAKARYFHEDEKVFVKVYER NSWSWKPGKVANKQGVVYVNYLDDGR ERAVHANQLKPRVDEKETVVRVNAWKDT MSDTSELLPYDNEDYEVIERKTKLPTIMP TLKEDNSGSSSTTPAQPVQSPVQGPVQ GDHAQQDALVLLPNARGSPRATSPVPI RRSTRQHSIRFDPCA | 59 |
| G58 | V:19477929..19478157 | 243 | RNA-seq | -/ PF00097 (Zinc finger, C3HC4 type) | MTVGRQAILLECGHTFCIQCVENNKENSA VRYLDCFDLSAIRLRSEYMESNNLFIYSYR YTFFKVTIKRFLI | 72 |
| G61 | V:10709701..10709983 | 424 | - | -/- | MGLLKYEIKKRANSRSKSSKAIECISSKYE NSHTSNILIKYSLKPYACNPFNDCFITNSL LQLHRIIPVIQYTRCSNLDYDKSVESTETM ICMCICFVI LR | 102 |
| G63 | IV:1278944..1279091 | 363 | - | -/ PS50883 (EAL domain profile.) | MGWRHPETLTNLPPSQFLPIAETTNFKF MNDVYLVEK | 37 |
| G64 | I:14308479..14308887 | 354 | - | -/- | MSTCSNQLKHLSTIQNFDWVTTILDLP HRETEPRKYEITRDDGVKSVCGLNRGVQ FX | 59 |
| G65 | V:5768239..5768632 | 343 | - | -/- | MKMAPRLMYIIHHHSKLSASHDLLSLSL KKRRDDTRGDGNSNVLSVSCSLIDLPLIM SFL | 61 |
| G67 | V:3576900..3577317 | 288 | - | (G0PEE4_CAEBE)/ Serpentine type 7TM GPCR chemorec. | ILSLSLQFSKCSKSETFLCCWQGLAYTSHA ITAVLVSFHILGGYCILLKTPPMASYRW PLFNLHFW | 67 |
| G68 | II:6978237..6978540 | 271 | - | -/ PF07735 (F-box associated) | VVCVVDCLILEGEIYPLSSAQLLAQRRL PRNFRELKLLIGIPLNDLLTSCSSLHTYN SLSTDKDINFLRHWTAGLKPELEFLTIL NIHARIKLSILFSVASTFTFLKE | 113 |
| G69 | X:14916816..14916993 | 271 | - | (Q84LU4_GINBI)/- | MFFRHMSQGFCSWKKHRKPGDX | 22 |
| G70 | V:13060163..13060498 | 251 | - | (G0P3Q5_CAEBE)/ Peptidase_A17 | IQRKSENKCKNHDMFNTWCSDYSYKSAK LIMFSDVSKNNDGLVAYI..... FEYKDGHAQSKLVMAKSRVKSSIPYRG | 46 |
| G71 | X:11701412..11701730 | 251 | - | (Q4R178_CAEE)/ PF07735 (F-box associated) | MNIKCEEAQIWKNNLSLQDIELFIRHWLS GNMPNFKCLRHDYQNVRFWINALRGID SRVRNPLSQPKTYKFLNMYISKQGNII | 86 |
| G75 | V:4970301..4970493 | 147 | - | (A8WQ28_CAEBR)/ Serpentine type 7TM GPCR chemoreceptor | MSQKFSKLQVEILRALTIQTLVPIVSSVLP CVICWYFPNFPNIACEL | 47 |
| G76 | II:11805687..11805840 | 136 | - | (Q9XX13_CAEE)/- | IERVDCEGKDVLSDDGLIATIKYKNCGID FLVWHEKFPIDLMQRFEMRNKI | 52 |
| G78 | V:6699013..6699454 | 134 | - | -/- | MISFFQISKNTTIMISFAIKQSYSCHGVVCS VVKHEKTSVGEKYLVSSTVFLISELFAFCD LTNTFSAHRPYKCKRHLHFDSRKFYGNLKS SLDTSHAFL CRLICLGF | 108 |
| G83 | II:3733728..3734019 | 116 | - | -/- | MFDIFQIRPVLPDLLDLRLIEKHSNPNFSV SLHTKYNPFLDQSRKMISFFQISKNTTIMI SFAIKQSYSCHGVVCSVVKHEKTSVGEKY LVSSTVFLISELFAFCDLTNTFSAHRPYK CRALHFDSRKFYGNLKSLLDTSHAFLCRL ICLGF | 154 |

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|------|--------------------------|-----|---|------------------------------------|--|-----|
| G85 | III:669337..66 9397 | 112 | - | (A0A0P5LGG1_9CR US)/mobidb-lite | MKTNISKKNESSTKRRKTSAKRQKSVPV LPCFLPFFHTFVLFVFTLLHRYATSLFLFF FVKHHSSAFSIECTRYIKKGNLVAPPPVV RGEI | 91 |
| G86 | II:4548339..45 48606 | 111 | - | -/- | IELLHYNFKNSPTFFQETLQRGLVKQKI KTVPPIRSTDKDITNLPFNPIEDETTFDVT KNVSTKNLTVSSKTHKLWFICRIVSVWRY QNITRFF | 95 |
| G89 | X:7713027..77 13081 | 108 | - | -/- | MRIRLLLHFTSHLHSSISGIVNTLIVEDT QMCKEKKTARKARTICTIAW | 51 |
| G93 | I:10067869..10 067959 | 104 | - | -/- | ILLKRLIVSHETPWTTHTCTFIQNF | 24 |
| G95 | II:3857180..38 57426 | 101 | - | -/- | ISFSNSIPSIRRDSDVSIASLVKRGKDTATI DVGEFYLYFNSFSPVFNNDTETRYYYD EKGFYIYSSLNHLTPYGLEHVRHVWTEVC AKL | 92 |
| G97 | I:6983892..698 3949 | 97 | - | -/- | MLDAKMQDHSAQLLVFGNFVVISINLISF LSHFDDGSRCEKX | 41 |
| G98 | II:9428645..94 28735 | 97 | - | -/- | VKKQYKPRKWYSLLVHVYFHNKFENSK KLLKSK | 34 |
| G99 | X:13784500..1 3784599 | 96 | - | -/- | VISHFENHILFSSVSLVTKCIFNGCYTYVM NFEKHFLVNCCC | 42 |
| G100 | X:7369398..73 69593 | 95 | - | -/- | LVLTNHLSKKVCIHTLVVPLICFRYGIPEP SAPFSALFGLGRNMKTFSSSFLRIIYFLFN IFSHKCDVLFSSVF | 76 |
| G103 | III:7619994..7 620480 | 92 | - | -/- | VQKFVCSISFVKQFNSCDEYINPNLLKGI SQLCHLMVQTFCSHKQSTFTPDCHVHIFL SFLLAIFPCLSQPFLSSTSTLHGHHQR PQTHIISCHKPPSFLSIPNDLSRRILEKER EFKTLRRQCDQACQSHIVRLSHRNPIIFTF LPLIRVHNEIESPVFRGTSYVIREFMRFEI | 180 |
| G106 | III:7546511..7 546649 | 91 | - | -/- | IEFYGSFTLSVSLYTSSSLKIGRVFVAKRK YNLKVVLCSFPLLFHGLKISVIQEKIILKIN QLGQKCT | 70 |
| G107 | X:14567563..1 4567626 | 91 | - | (H3D5Q5_TETNG) - | ILSTVNFGNVLFWQQAHVFLTGL | 24 |
| G108 | II:3997148..39 97499 | 90 | - | -/- | IFAHNGKLFVNLNFQKEFLVSPVFAKT PSVHRNHTENYVGKYWGMVMPETIKT DQWVKYQEKLMVKGFENFHKFLSKIFQ NALKISGRLETIFGVLKNCGKLDKVLFRY FQETLKFF | 121 |
| G109 | X:16024200..1 6024737 | 90 | - | -/- | MHRRSHRCKTFHVTDDQHAGLGADVHVS TAVARRPAPATFLCASYMTPRSLSLCILY ALSVCSPSTSLVKKRWNCVPCNELWSIR RGEIGKAERMMEIRTTDKICYGVRVLSIIG NYWFLIYNPWFAGTILNMFLFLGNKIYV FNHENILIASIKSLNFRNLKVRSPPDFS VKKFQKHMIFKLLNFPKAKKFKV | 198 |
| G110 | IV:2212713..2 213040 | 89 | - | -/- | LGAGVHGSHVIYVRGSHVCGDVNELGGSV NKNWESIKNILEIRRSYIEINKLRTDPYF KAVNTQLNLDMPESRICPLRIGMCWEFG EGSDRRSTDRPSGRDSSKF | 106 |
| G111 | IV:1212666..1 213077 | 88 | - | -/- | LVGKKERGLIRFVLCSSLFLAHHNEDTIS FFPFFWQNLAHFSLTVSEIPAFFHFKSC PVFLTVLISA AFCSTLSDFCGIFPIFRRTLL AFYSTLPTFCKTLPFNSTLPFCRTFPAL CSTLPLWSTLPVS | 133 |
| G112 | X:13380046..1 3380358 | 88 | - | -/- | MIIFPTSTNKKLERAHSYSPRFREVSFKL NALRFFDIQPFQDDSTSLNRRFFENLE RKTFFKARVSILRVKFIHVLTANSADLL EMTAYTLIVFNI TET | 104 |
| G114 | X:14344402..1 4344645 | 86 | - | -/- | MIPTHSVPTALNKRKSFPERYQGTAVQ KQITRYLPLGNGHFCKRFRVIFSMCTNC VTVSGFQGLKVGYYEIGVSMILD | 84 |
| G115 | III:214502..21 4871 | 85 | - | -/- | IIGFWVRETLQTM LGRCERRKMWPDMF SSIHVPAGDPKTHGNQVYTMSSCESEQ YFKPIPNFLRFLPKNWQHGFETQNR NHRFSGTTNHRVQVRELKNSFYQASR CPLETPRKTPHNVTMFNYFKN | 133 |
| G116 | IV:1287156..1 287513 | 84 | - | -/- | VFFDSFSKFNISTYIISAGNPDFSTNRKL KSRFSVEFKPNLGFSEMRIFANAGCREK PILNFISATFRKISRFFPEYYSRFAEIFEK FPSIFSQNLNFRSRKPIFGSISAKFLRNL KFP | 126 |

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|------|----------------------------|----|---|--|--|-----|
| G117 | IV:9866734..9 867040 | 84 | - | -/- | MIAKIYTISIVYTLVFISKNRRTTSPVFPQFD QNKTTLGDEFEIRIFLKHQDQFFHELLQD MSFWSYNSSIRVVFHIVMS | 79 |
| G121 | IV:3654868..3 655246 | 82 | - | -/- | ILTLIFYHLSPKFFTTVQKIYANFFTRSM ETGTLQNFQFAIFPKKLFSSKLVAFSEELP QVLNKQNAIFCKSCSQSTIGCSLLRVHLW SIREQLSPTSITPLALAAPRAQPPQRTFCE NRMLLTDWIRSSFSIIFLDMYSLCSFLRKK GSRGLVFCVLFQFWHVFFVFWGQKFLA EVSRN | 182 |
| G122 | X:743277..743 580 | 82 | - | -/- | MPSGVINCISRQLINPKNVLTRAQCPDLIE MVEDRNDPLTNINNCFLIGHCCFMRKV KNLQVEYFLTRVNIICVFLTWCLLFLFETIL QFFSQIGFFVCK TTKSGSGIFFAVLLIKX | 118 |
| G123 | III:12582510.. 12582588 | 81 | - | (A0A0L8G6E5_OCT BM)/- | LVHDYFEYIFIFGGVQVFKGKIFYLKASNN | 30 |
| G126 | I:14314870..14 315371 | 78 | - | Sequence ID: NP_001361903.1 /FBA_2 domain- containing protein | MEFFLDIFNQAELTYLKLSHSGLSFLPILK DFNRFNKLVDSDRLKSIQKYAAVAKSLK TYYVYSELLIQNFQKLIKTRRPHHITLDDL LLINGERVILTAHLSSRDNTLFLKH | 114 |
| G127 | III:9992028..9 992310 | 78 | - | -/- | IATLAANLQVTARRFRLPYRRCCKGALSV TVSDFSPFSLPEYRREIVLTIERKEEKEML RRTWEQNDLHSFDGWNGTENEREIPMV DFYD | 90 |
| G129 | X:15255109..1 5255442 | 78 | - | -/- | MADTSQLSNCSTDPSTHVNVDMVPMSD YLKLNKNTCDASIAKFARFTEAIDALICDKS PSAVPVQASNPFAVTAAPSQVLPMSFK MHPPTFSSYLSHEISREMLSISFHSPPQSF VIIAGWKADP | 127 |
| G130 | X:9603752..96 04172 | 78 | - | -/- | ISNHSQVMSNHTNLPTIFEEGFETYLEL AHVDDDEASGSDLSLNTEDSTIDLEFLGTF SHYDENPNSSTFTVDLNSCDFSNPDAA IFEDIKIRLGSNDLSTFPNENEAVYKTPN NQIEESADSRNAKKDESVKRWWQFWG | 143 |
| G131 | II:12979623..1 2979845 | 77 | - | -/- | MNTSKSTYACLKIFKETYTCLNTFDVTYA CLKTYKGTFA | 39 |
| G133 | II:6310391..63 10769 | 76 | - | -/- | MQTAHSMRQRSLISKIRYHLGDSSKVKVR EWWRENVKRNKENKLRKFSLLGTSFLE YAHRLPSLFLIDGLAKKSKVETRDRMIA TLYRLEKIFKLCHSDRKIFKYLFLHNV NYFFFDIQNIFQN | 128 |
| G134 | III:11729720.. 11729903 | 76 | - | -/- | IGDFSRVDFRLLFFQQLQHFKLPKISRIS FQIRNQKRMFDHLNFLCSHFQKTTIGGK EHLNSQQISYKIIK | 76 |
| G135 | III:1446243..1 446597 | 76 | - | (A8Y423_CAEBR)/ mobidb-lite | VAWTTAAEAAELKWSDLQKGGDFGG KKTERRKRDQLTPNAVDSIAKRTLQKIGV DFSHHALRRG | 66 |
| G136 | I:13395200..13 395593 | 75 | - | -/- | MLKKQDSKFLKMKNKSYITEKENPQKT RRIISILGLKWKTRSSRCLRLSHYLSLIYSL YSRLKIERNWWFDRKMKMKEEGFQENK KH | 88 |
| G137 | V:10032341..1 0032656 | 75 | - | -/- | MMIENLPTQMTITYFSVPSSFMINITG DNLELTSTTKSSTGNFKQKLEELEQKRAA EHWCCVFSNYIFSVPVGHF | 79 |
| G138 | V:8678462..86 78762 | 75 | - | -/- | MRIFSTFNITYMNSAFSSNPLPVCQFLT NSTQFPKLQRKLPHTSHTRAQIFPKSFSP KLVNAANKIRV | 69 |
| G139 | X:9646607..96 46910 | 75 | - | -/- | INLLSFFGQRVKWRENPPTPHSHVIMS HLRRRQRASMQIALKSEQCVPRGEQKAR QQUERAGSALLFLIPLPEHRGLRMKGAQLF VILTFPPSPYHYHFCHLEFLSLHNVRNA TGFSKK | 121 |
| G140 | I:11500352..11 500649 | 74 | - | -/- | MPKPIILPFSQLSSNRRGVYLLPFCREEG VDPLPVLINFLSRIPGFVDEKLRIASLWTK NSFLQINFFEFKPEPETSFSEFASISHCAILT GAVGNRHQLDENNQSSNPGKAH | 113 |
| G141 | I:12612423..12 612753 | 74 | - | -/- | MRILKENSQAKNISAKIEWNYSKRSQNSK HQCPVKHIYNLLTPINIGRQTTFNQKSSM FKNREDFKQLNIHLCLGKFPNTQNSRIS RKNGSFEVIFCLEKRGILRRQRIEEKELCH TKNRLTFWVNDIPSTQR | 135 |
| G142 | I:4819997..482 0081 | 74 | - | -/- | LETSPILETFENVKTLS | 17 |

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|------|----------------------|----|---|----------------|---|-----|
| G144 | II:1696730..1696958 | 74 | - | -/- | ILKIVGVDGGESYFRVVSFFEVAKQDFE VGLFKDSQLDSICHLIWFVLISIDPNEFQN FLEVLYGHHQAITDFVSLTRPLLKFNKIF R | 89 |
| G145 | V:12890577..12890904 | 73 | - | -/- | IKYTRLTAIANRESGNNEYSKSSWKLKSS LNSARRLENSIKKYGRRDAKLLNNTFIFA FFSSGVNYTHLPNQCATLDNMLSLQKLV EKFQEEFGENVGVGNYSIKSCFNF | 110 |
| G146 | X:1120485..1120578 | 73 | - | -/- | MRSIIQSCSLSRRTNVRHVPPLAFINSIIQ LSFGPCLLPCHLSGPENRSALETRLVTRK ERSTSPSLSVCLSTARLPPSPFPAVYCH | 88 |
| G147 | V:6564739..6564919 | 72 | - | -/- | MADWFMVSVFLRFARFYFIQAKAEKSIV VDVILAEIQKYYDFVNIKKYLE | 51 |
| G148 | I:12541606..12541939 | 71 | - | -/- | IVERSGNYFHSNRNYSFRVFLTKLCDCKC TDRLVITYKSGTISPLCHRNLRSKHLIGG AVSESSFVKITPVIVLDFREKICKTVDFR | 87 |
| G149 | V:3831077..3831377 | 71 | - | -/- | IGPNCIPDCHCFTTILIKFYDQALNRVCSK HKTQTQKTLQNIKALYLQFKTQEKFLR RTLTHPQLPGVFAPSILFVYQNEVLTNC TKISSGFQTKRFKFLWICSKHREFGV | 113 |
| G152 | X:10433971..10434304 | 71 | - | -/ mobidb-lite | LNMMTQSEKREKIHPNALRERSGSNN AKVHLFNKLFVRPSWSMSSPNNRMLD NKIEEVP TSSQQKIAKRAEELRKLKIIQV EAKNCIKKNAEVEECFYPYCVHENIKDIF YDKTDF | 119 |
| G154 | X:854404..854797 | 71 | - | -/ mobidb-lite | MDMLPLCFNFNKAQFNKYNKCSQGLW SYPSSLFVSILFYPDIIQHICKMLAIESIQN KDIKQSSGNNKRTKQHHIVIRDPSTSSS NKNEEKRAIHNSPHKNMVGSSRAPPQ REPNKSPLSHRLYRQIYSFLFCCSAHSA TGQPPPPPTLFTFGGLLLSCLPLLLTILG VFSVS | 179 |
| G155 | V:11699793..11700117 | 70 | - | -/- | ILPNLFQSQHLIPSALPVAPYNSFSDHAR GTMYSRISGSTHTDPDAIKSVKSKLDVVH TNRYTYREVSSKHNRDNRVSGIKQIVF HLLMLKGGKHQ | 97 |
| G156 | X:14348630..14348903 | 70 | - | -/- | IEESEKGSSTVYNSFFQIFFCWYKWFICI TTIIVFIQRNKLKNQENCLYSIHMKSQIC SASKRPTSIHKMVTRSQKPSVASTRQID PDVLKLDRAEAEKLRGWRPPKRRELC WNLKRKMMLMFESCFLFIYIF | 137 |
| G157 | X:5994407..5994674 | 70 | - | -/- | MRICCSKVPTSQALRRYETESKNHLSLES LRYGYTSEILVNGKLQRYEKTAEKERKG VGGFFDMRFCVWINRANTHISTYLRKM SQ | 87 |

Supplementary Table S4. Genome intervals highlighted by AnAblast as putative new exons of known genes (10). Peak height (Protomotifs accumulation), RNA expression evidences, homologs/motifs, predicted amino acid sequence (ORF) and the number of residues (ORF_length) are indicated.

| Peak | Genome interval | Peak height | Express. | Homolgs/ Motifs | ORF | ORF length |
|------|-----------------------|-------------|----------|--------------------|---|------------|
| E5 | X:3495047..3495548 | 83 | RNA-seq | -/- | MVKSNFQIINTSFEIFCFQSSFEKYRKIFLS KLTQVFSRLEKLYIDIKIKLVVPSHNISKL CIKLSQAIKLRKLSMTEYIE'TAIIFSLFP PVFVSLSLKYFSQPYFPIKYTKVTKSNDFSE IT | 127 |
| E6 | X:6799982..6800363 | 79 | RNA-seq | -/ E3LDB8_CAERE | MNQKSSLLSFLLSTRDHQTRTVNHCM YVCATSVFRMFVTKIGGNLGCNANRFDV VVLFSHWFPFIFILSDPTTHQNLPPSRLN MPQSSKFTTNPKIMYSIQICQVWHTVFN SPSSSVIFLKSRRGRTLPHLKGCRFGLCVR KLYF IGCSSFSKVFSDSDFYIFSRCLCPY | 176 |
| E7 | II:13888312..13888573 | 73 | RNA-seq | -/- | MTENRKISIFATFSCFKVIFHRKNPQFPEI PDSIKSANTNIPTATRPQRVSPPTFPLSRH LFISFVQLYCLLCIVALSINFYFIYKITTP | 92 |
| E13 | V:13768591..13768795 | 121 | - | -/- | MWILRKISVNFVKVDKSVTTPNNSLNQ KILHQIRYSPANSSIAVDISTQKNSFTSAS CPPN | 64 |
| E14 | X:10674619..10674925 | 80 | - | -/- | MLSGFQQQLSPSTTPARFFALPEDWLP RQQVPDISYTSHTNIKFLHQQESCFPIKTR ILFLANELENFALWVVGVSISERERESEK SSSNLRIYA | 98 |
| E18 | V:7882127..7882430 | 79 | - | -/- | MNWNKLLSLNPETLLPRAFDGHFFWR KLYSIGSANNTMFTKEYRELIRSGIFPPGQ FRNDQQVGFDFPFRWGEVITVCRKACHP NVLQPNNTYVFFIPT FQLFSSLPMFLP | 114 |
| E23 | X:6001927..6002254 | 74 | - | -/- | MKSTVPLESPHFPEKPFNHFCFLASLFP TSYPECLGYCCTIFGTKYLHLVQYKSIN ALAHRLANMLIVEAMGGAPTRRLAPIKE RRGFIFSVTSHFSSKHLLNYGLSDFDFSN FLFFLVAYIFLECGIGTRRFKYEIIRNAH | 149 |
| E28 | V:5856625..5856859 | 120 | - | -/- | MLGPKPILKSHVKKHSDVSGFSLNRYIN CTTACVNDPSSCISKSLNANFEIRNGCRS QNIHARKMPKSGIKSIELTYIYF | 84 |
| E29 | V:3445206..3445602 | 80 | - | -/- | MNSIRVPFETPMLAQLGYIPQHVTKFSYP EPYLFLIFINLYLFSDFIPDLNIENLAKNIS NLIKTFPIYLGWIYFSSACKHSLHISSTISR KKIVSPYWFFDAFDALYDEKVLFGYLSLS YIFDTPDIADHWMLGQSSCVYCMIVVVL GK | 155 |
| E30 | X:3170746..3171163 | 83 | - | -/- | MNTIARFGKRRCAEKKIRHNVMYRATTE DGKLLRFNQVSKYFSCIPSISTDLQYTS FNNFRKHCVFQVTKKVKRRESKQINGR REQGPIQISGGNQFQIFARGFRWSAIVIFIS NLFITTFGYSNIEGRYLESRQHVFSDFFFIC RFLDLTLPFSLKTKICLFFILKNFPFKNQ LPQPK | 186 |

Supplementary Table S5. List of primers (forward and reverse) used for PCR cloning of each selected peak predicted by AnAblast as putative new sORF or exon at the indicated *C. elegans* genome interval. Primers were designed to avoid secondary target genes when expressing RNAi.

| Peak | Genome interval | Forward primer | Reverse primer |
|------|-----------------------|-----------------------|----------------------|
| G5 | IV:1213206..1213443 | gcagtgagcaaaagtggtg | tttgccttctctggcgc |
| G14 | II:11736898..11737084 | gagtgagagagtgggcgaac | aaaaatcgacctcgcat |
| G15 | II:4175282..4175657 | tcagtaccacgcaacagtcg | atcgacattgggattggcca |
| G22 | III:670901..671255 | gcgtgtgaactgatcgctt | ttctcgtcgtcgtgtctt |
| G23 | III:5838386..5838494 | cgccaattagtcagctgcc | gggtgtttctcgcctctca |
| G25 | X:17515475..17515919 | tggagctagaatgttcagggt | ctgtgcacagtgaggggatt |
| G26 | II:11717583..11718477 | ccgcctgaagattgattcgc | aaaacgtgagccagtgctc |
| G30 | II:13644506..13644671 | tggccttctgcaactgtgt | cttctgacgagccctgt |
| G31 | I:12928143..12928563 | actgaagagtgcacagctga | acgagccagggaacaaaaca |
| G32 | V:13396252..13396714 | tttgcgccatctgctctaa | tctgctctggtttccgtg |
| G43 | X:15015384..15015639 | cttgcgttctcatgagcgg | cctcaatgctggtgctgtct |
| G45 | III:7833431..7833716 | gtgcacgggtatgctgttg | tgccgtcacagtctgaacaa |
| G46 | I:7316251..7316590 | atcggttggtcatccgtcac | ggtgtgcccaattcgattg |
| G49 | V:14367725..14368037 | cttgagctgtggtctgctgt | gggggaaaagctctgaggt |
| G50 | X:16728266..16728758 | agatcgtctacccttccga | cggactcttctctgacgca |
| G51 | V:8646870..8647347 | gtgggtgatgttcgggaca | acaaaaaggccattattga |
| G52 | IV:379001..379340 | cacaaggcgttgctacatt | gatgaccggaaactaggcg |
| G54 | III:4101011..4101389 | agagaggtacgcaggcctaa | caaacccacttctctcca |
| G57 | X:541358..541586 | acacggtactcagcgtaga | aagagcatttgacggcgtg |
| G58 | V:19477929..19478157 | ggagaacagcctgtgagat | cgattcgcaatgagccaagc |
| G61 | V:10709701..10709983 | gagcaaacagtcgacgcaaa | gcagacctactggacaagtg |
| G63 | IV:1278944..1279091 | acactctaccagtcgaccga | tttcgacacctcttcgca |
| G64 | I:14308479..14308887 | ttcatgcttcagctccctg | ccagttagggaattagggcc |
| G65 | V:5768239..5768632 | gctgagacctccaagtgtc | cttccgttcttaacacccc |
| G67 | V:3576900..3577317 | ccgactggcaatgagttcct | aaacacggatgctaggccaa |
| G68 | II:6978237..6978540 | aagtcgagtgcaaatgctg | cggcctccaatgtcttaga |
| G69 | X:14916816..14916993 | ctcgacgtcttcccctttt | ccaatggcaggtgatttccg |
| G70 | V:13060163..13060358 | acgtgggagggtagagatc | gcgagtagtgctattgc |
| G71 | X:11701412..11701730 | cggtgaaaattgccgtccat | tcgctcaatccacgca |
| G75 | V:4970301..4970493 | ttcgtctatggcgcatat | cctctcgtctggacaagcag |
| G76 | II:11805687..11805840 | agcgtgacggattaattgct | tatgtccccaccagatt |
| G78 | V:6699013..6699454 | tccgacctgtttactgact | tcaaatgaagagcacggcac |

| | | | |
|------|------------------------|----------------------|-----------------------|
| G83 | II:3733728..3734019 | tgtgcagccgtttcagttg | ctctgggctagagtgggat |
| G85 | III:669337..669397 | acacggttgctatgagcaa | ttttcaactgtgccccact |
| G86 | II:4548339..4548606 | ggcactctctgatgtagcc | tcttcgatggggtgaacgg |
| G89 | X:7713027..7713081 | tgactccatatcctccgga | acacgaatccggctgaatgt |
| G93 | I:10067869..10067959 | gtgtgtgtgttcgacga | accaactcataggtcacagt |
| G95 | II:3857180..3857426 | gctaccattgatgtgggga | acggacggatcacctgaaaa |
| G97 | I:6983892..6983949 | ttcctgcacaccaattgtca | ttcacacctgaccgtcaa |
| G98 | II:9428645..9428735 | gctacaatttgcgcttgcca | gctagccagactgacccaaa |
| G99 | X:13784500..13784599 | tttcagcactttcgggact | tgaatgtgggaaattcgtggt |
| G100 | X:7369398..7369593 | tcacactctcgtgtgcctc | ccgagctgacgtgaactctt |
| G103 | III:7619994..7620480 | aaccttcacacctgactgcc | ggaagacggggctctcaatt |
| G106 | III:7546511..7546649 | tgtgaccaaggaaccaca | ggtttccagtgaatggccac |
| G107 | X:14567563..14567626 | tcggaatttgatttagcg | agaagtgggatcgtgaca |
| G108 | II:3997148..3997499 | cggaatagtgttcgacg | ggcatcaccatcccccaata |
| G109 | X:16024200..16024737 | ggcgcgagagataggaaaa | tggggaaggcgaaggaaaa |
| G110 | IV:2212713..2213040 | caaagcacagaacacacggg | Cagcacatcccgatcctcaa |
| G111 | IV:1212666..1213077 | ccgtgtttggtcggcaaaa | cgcaaagtgtcgagaaagt |
| G112 | X:13380046..13380358 | gtccgagtttcgtgaggtt | tgtgacgtacagatgcaca |
| G114 | X:14344402..14344645 | ttgaaagatcggtagctgc | ccaagggcaaatatcgcgtg |
| G115 | III:214502..214871 | catgtaccgctggagatcc | gcaacctcgaagctgagat |
| G116 | IV:1287156..1287513 | cacacacatcacggaggaa | tccgcgcgaaatctggaata |
| G117 | IV:9866734..9867040 | tggcaagaccacacagaaa | tggcaacctgtttcatca |
| G121 | IV:3654868..3655246 | aacttctccaactcccc | tgtgggggacaactgtcac |
| G122 | X:743277..743580 | ggtggaataagtgcgacca | tcccactccggatttggtg |
| G123 | III:12582510..12582588 | tattgttgaacgcggcac | cctgattgcagttgcgata |
| G126 | I:14315133..14315517 | ccgttgcgattgttcatcg | ctgtgtggcctaatcccta |
| G127 | III:9992028..9992310 | ttgggtcgcgagaacttccg | tcgtttgttcccagctcct |
| G129 | X:15255109..15255442 | ttctcagctctgccagtg | tcaggggtctgcttccaac |
| G130 | X:9603752..9604172 | acttagagctgcacacgtc | taccccaaaaattgccacca |
| G131 | II:12979623..12979845 | ctcaaggtgacctgtcct | ccaacttgcgaattgccca |
| G133 | II:6310391..6310769 | tgggtcgtgagaatgtcaa | gcagaattgacgttgccaa |
| G134 | III:11729720..11729903 | agacgcgtagatttccgct | tcctcgcaaaaaaccaca |
| G135 | III:1446243..1446597 | aacaagtgaggaccgacgac | gtccatcagatagcgtgcga |
| G136 | I:13395200..13395593 | gtcgtccaaggcctatacc | ctccgacccatttctctgt |
| G137 | V:10032341..10032656 | gctccagcagctactagacg | tcgtcgtgagctttccaaa |
| G138 | V:8678462..8678762 | taccgttccagcagttgcat | tccatgtccgcatcgaaca |

| | | | |
|-------------------|------------------------|-----------------------|------------------------|
| G139 | X:9646607..9646910 | taaaatggcgcgagaacct | cggccattgacctatgcg |
| G140 | I:11500352..11500649 | aggagggtgtggatccgta | tcttaccgactgcgccaatt |
| G141 | I:12612423..12612753 | atcaacattggcgcaaac | aggaagtgtgccaacccaa |
| G142 | I:4819997..4820081 | atagcagtgggagtagctgc | tggaatgacgtcggttaagagt |
| G144 | II:1696730..1696958 | tccgctcttagccatctgt | agtctgtgatggcttgggg |
| G145 | V:12890577..12890904 | aagtatggaaggcgggatgc | tttctcgtgaacctttctgt |
| G146 | X:1120485..1120578 | cctcatgcaatcgccagga | tcagttgagcaacgggagac |
| G147 | V:6564739..6564919 | ggaacaaaatatcggcgccc | acattgcacgacctttgtct |
| G148 | I:12541606..12541939 | ccccctattcgtcccaac | aatacgcgtaccggaact |
| G149 | V:3831077..3831377 | ccccaattaccagcgtctt | ttccacaacaggtacgccag |
| G152 | X:10433971..10434304 | tgaaaggagtggcagcaaca | cgtcacgtttcataatgcca |
| G154 | X:854404..854797 | atgctcctccaaggtttgt | gaagtagtggcgagcaggag |
| G155 | V:11699793..11700117 | ccgtgctaccgtatgtct | acaccacctgggatatcca |
| G156 | X:14348630..14348903 | tgtatgtcgtgaaactgtca | tccaccgcgaagttttct |
| G157 | X:5994407..5994674 | tggtttgcaagagtaccccc | atcctcccactccctcctc |
| E5 | X:3495047..3495548 | ggtgttaggcggttaaatggc | gcgccgaaatacagaatgtga |
| E6 | X:6799982..6800363 | tcaaccgagaccatcaaca | acggacacagcgactaaaa |
| E7 | II:13888312..13888573 | gcctctcagtactttccc | ttttcggctcggcgaag |
| E13 | V:13768591..13768795 | ttaagcggcggaaactcaagt | gaacggagaagacgcagaca |
| E14 | X:10674619..10674925 | acatccctcaggtgacaag | tatggaaaccgagccaacca |
| E18 | V:7882127..7882430 | acatgcactccccactcaag | acaaagcgatggtgaaaaca |
| E23 | X:6001927..6002254 | acgaaccaagtcatgcataca | gtctcgttctatcccgcat |
| E28 | V:5856625..5856859 | tgaaaatagactccccgggc | ttttgcgctcccgtttct |
| E29 | V:3445206..3445602 | gcaacctgacacccttgaa | cgtagcaaaactgtgatcgt |
| E30 | X:3170746..3171163 | aattcgcacacgtcatgt | tgggctgcgtagttgattt |
| unc-22 Exon 20 | IV: 11993323..11992879 | ccaagtaccgaacgaaagac | tctgaccacaatgcttact |
| unc-22 Exon 23 | IV:11989007..11988644 | gttctccgctactggaaca | gttctcactgggatgctga |

Supplementary Table S6. Percentage of animals that reach adulthood in the indicated time (hours, grey rows). Average, Standard deviation and P-value of the differences by T-test. Normality was previously assessed.

| | % Adults / Hours at 20°C | | | | | |
|----------------|--------------------------|----------|---------|----------|----------|--------|
| Control | 47 | 48 | 50 | 52 | 53 | 54 |
| Average | 29,57 | 72,97 | 96,00 | 99,59 | 100 | 100 |
| St desv | 2,83 | 7,92 | 23,11 | 0,91 | 0 | 0 |
| | | | | | | |
| G71 | 47 | 48 | 50 | 52 | 53 | 54 |
| Average | 3,44 | 14,22 | 54,76 | 80,96 | 94,94 | 97,93 |
| St desv | 8,23 | 4,08 | 3,21 | 11,52 | 7,15 | 4,62 |
| | | | | | | |
| T-test | 0,0001 | < 0,0001 | 0,0042 | 0,0069 | 0,1528 | 0,3466 |
| | | | | | | |
| control | 48 | 49 | 50 | 51 | 53 | |
| Average | 64,71 | 91,22 | 97,00 | 100 | 100 | |
| St desv | 10,37 | 3,45 | 1,39 | 0 | 0 | |
| | | | | | | |
| G107 | 48 | 49 | 50 | 51 | 53 | |
| Average | 76,33 | 83,04 | 85,03 | 89,68 | 89,68 | |
| St desv | 6,65 | 6,59 | 6,19 | 3,27 | 3,27 | |
| | | | | | | |
| T-test | 0,0680 | 0,0222 | 0,00155 | < 0,0001 | < 0,0001 | |
| | | | | | | |
| control | 47 | 48 | 50 | 52 | 53 | 54 |
| Average | 20,38 | 34,35 | 47,06 | 68,16 | 91,57 | 99,10 |
| St desv | 3,58 | 6,83 | 4,95 | 4,79 | 2,72 | 1,78 |
| | | | | | | |
| G98 | 47 | 48 | 50 | 52 | 53 | 54 |
| Average | 13,36 | 25,49 | 43,79 | 63,18 | 82,56 | 89,04 |
| St desv | 5,99 | 2,79 | 4,80 | 4,57 | 6,07 | 6,27 |
| | | | | | | |
| T-test | 0,0914 | 0,0574 | 0,3783 | 0,1836 | 0,0352 | 0,0216 |