

Saccharomyces cerevisiae
 A 5' 3' (2009; 2015).
 5 (2015)
 (C),
 (2008;
 2009; A (2008).
 fi A
 5' (5').
S. cerevisiae
 A (2015). F CBC
 C A
Arabidopsis thaliana fl.
S. cerevisiae (2015). F CBC A

RESULTS

GMUCT I U v S v m RNA-D c Ta RNA
C a6a a C a a a RNA D ca
Pa T a c m
 A- A fl
 A fi C
 A A 5'
 A (2008;
 2014). fi A,
 C A
 (A 10) (F. 1A).
 79 82% A
 A
 5' (A)- 100-
 C ,
 C . F ,
 C
 (= 0.93) (F. 2A),
 C
 .A z
 ~80% 5' A
 (CD) ~10% 3'
 () , <5% 5' ()
 F. 2B). 5'
 3' A

5' C :
 A 16 17
 A 5'
 (~30)
 A A (2015;
 2013). A-
 A (D , 2011).
 A C
 (F. 1B). A
 A
 5' 16 17
 A A ,
 5' (F. 1C) (2015).

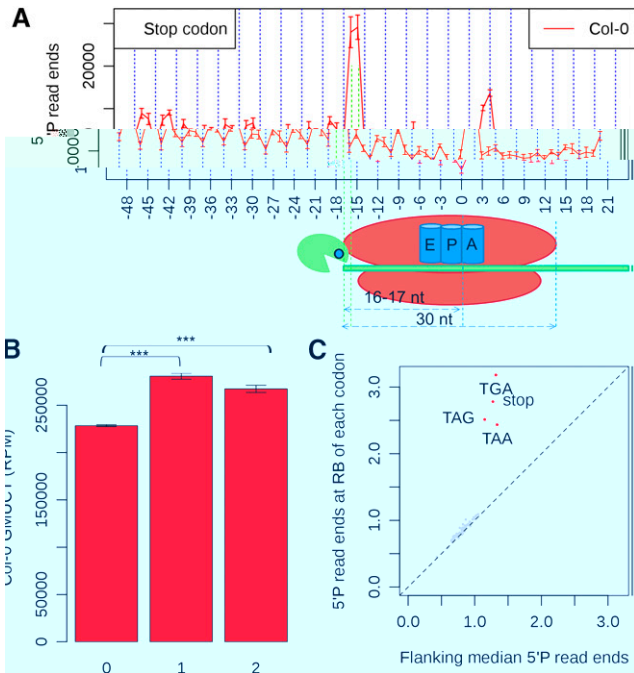
GMUCT R G a m RNA-M a Ta RNA
C a6a E fic c

A 45 A
 A B (2012). C
 F
 C fi 410 A
 8- 100
 fi (fi) 2-
 5' fi)(
 F. 1B D 1). fi ,
 fi fi (<2.2 × 10⁻¹⁰⁰, x²)
 5' A
 100- fi (F. 1A).
 A A
 A- fi
 fi A
 fi A fi
 (D 1). F ,
 172 A , TOE2 AP2, 156
 A , SPL15 SPL3 (, 2009; A
 , 2003; z , 2008),
 fi A fi
 (F. 1B; F. 3A 3C). fi
 396 (GRF4).
 (, 2014),
 fi (F. 1B; F. 3D
 D 1). A- fi ,
 AP2 (172) , SPL3 (156) , CSD1 (398
) , (C , 2004;
 , 2007; D B , 2008).
 A A

A- A
 fi
 A- fi 410 A
 A fi
 fi (D 1).

GMUCT R G a R b ma Pa D T a a
T m a a a 3-N c P c mRNA O
R a F am

B
 A A
 A A- C
 fi A C (F...
 1B),
 A
 C
 5'
 A (F. 4).
 fi 5'
 A fi
 ($< 2.2 \times 10^{-100}, x^2$) 5'
 16 17 A
 fi 5'
 A (F. 2A). A -
 2000
 5' fi
 ($< 2.2 \times 10^{-100}, x^2$) 5'
 16 17. B 115 E/ 38.8()6() 1 0 E B -0.0169 8.4682008.468253.2341184.41557 . / . 31 () . 0 E



Fu 2. 5' E A B

A F C A 3-

F

(A) 5' fi

0 A F

5' A

(B) A3- 5' A A

F A x² E fi E

2.2×10^{-100}

(C) E 5' (16

17 fi 5' A

fi x² fi

F (F. 6A 6B).

fi *S. cerevisiae* (

2015),

A

CD A , A ,

(AA, A, A), 5' fi

F. 7). F. 5'

16 17

S. cerevisiae A (

, 2015). fi , AA

5' 16

17 A

(F. 7A

7B). A 5'

16 17 (

F. 7C). 5' 3' 5'

A

/

GMUCT P G E6 c T a a a Ac G v ORF

5'

fi 5' F

BZIP53

16 17

F (F) C F3 5'

A (F 3A).

fi 5' 46 47

C F3(F 3A),

F. C F3

fi

A F

- fi A 10- F

5' fi 5'

16 17 F F

5' 30

(46 47) (F

3B). (46 47

)

F (F 2A).

A F

- F A A

C AC, F

(, 2015; , 2013).

C

F (F 3A 3B),

5' A A

(A, C, AC)

F

5' C

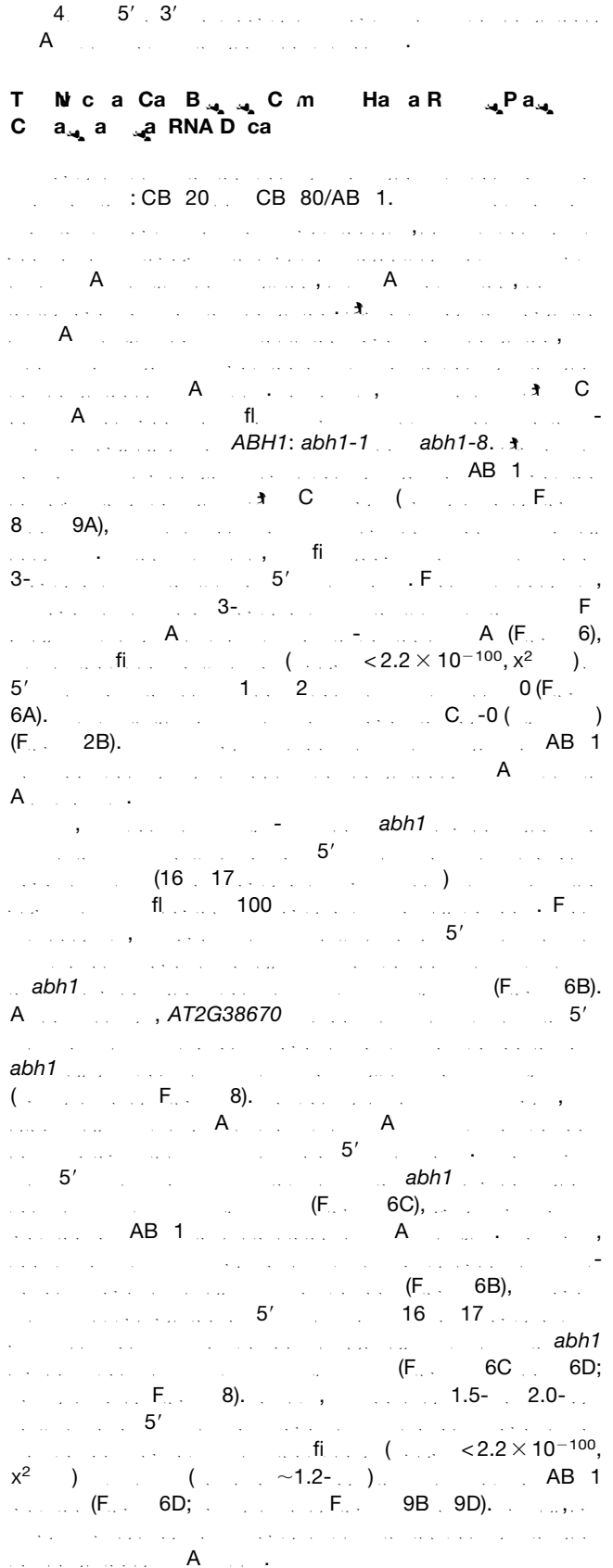
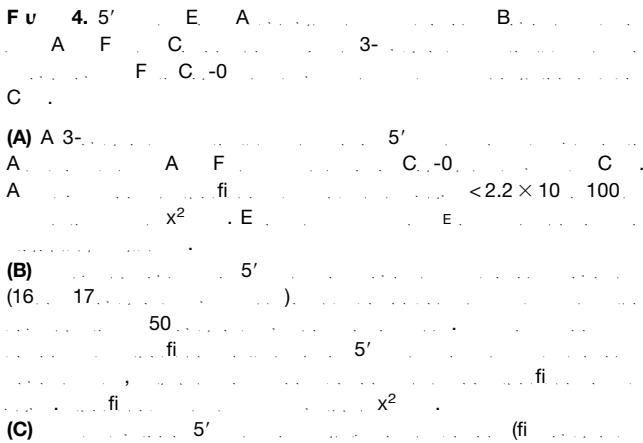
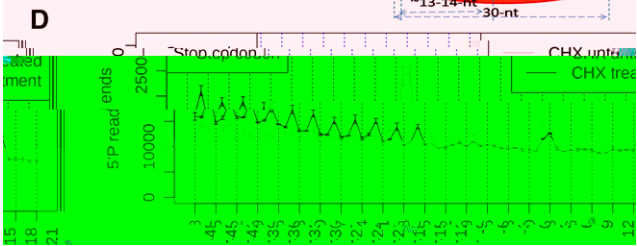
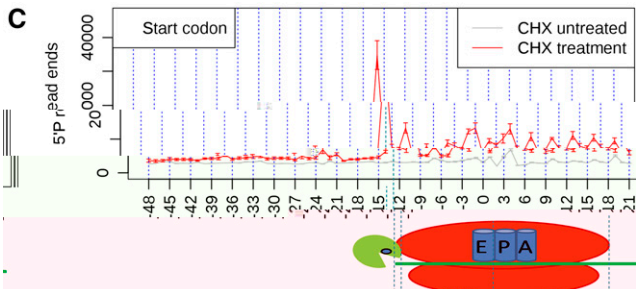
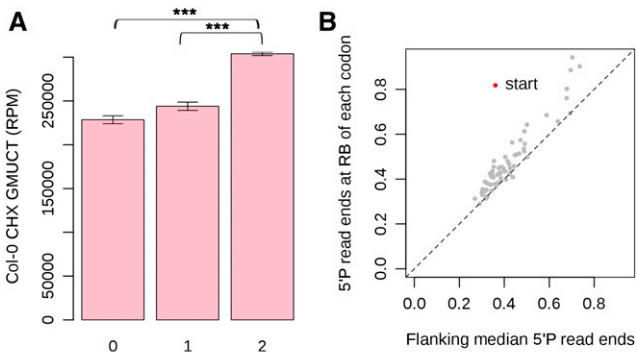
(16 17) F fi

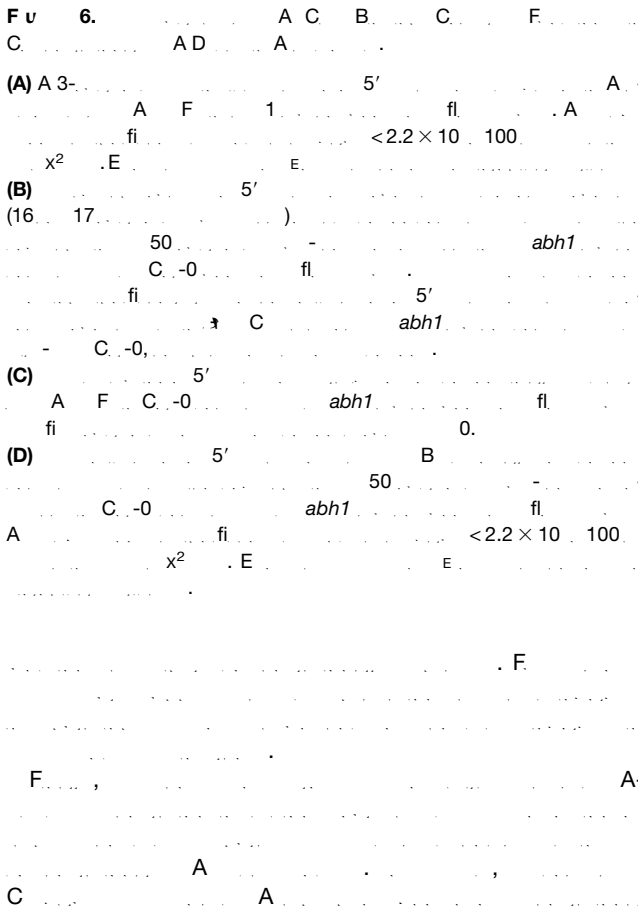
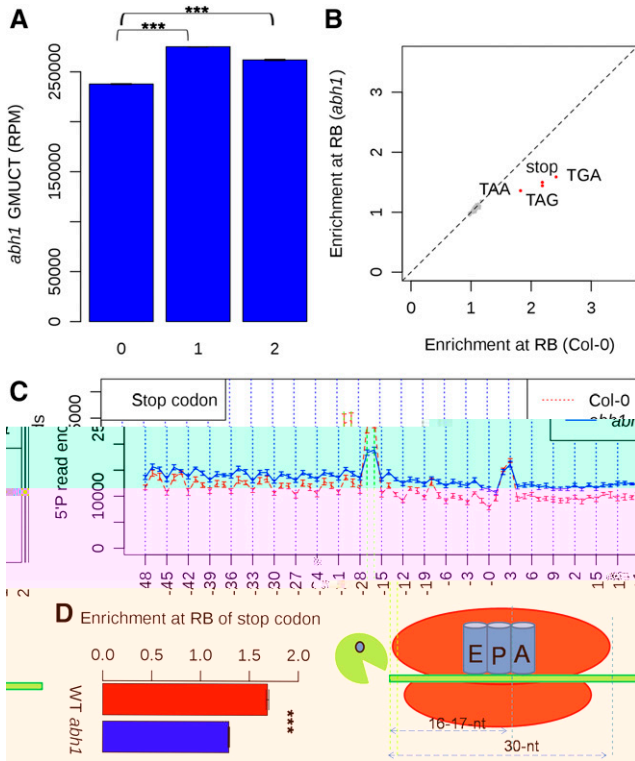
98. F 5'

(D. 2). A fi

5' *ATBZIP11*

(AT4G34590) ... *XIPOTL1* (AT3G18000) (... A ... , 2014;
..., 2004; ..., 2006). A ...
F ... 5'
ATCIPK6 (AT4G30960) ... *BZIP44* (AT1G75390) (...
..., 2012; ..., 2007; ..., 2013).
... fi ... 80 ... F ...

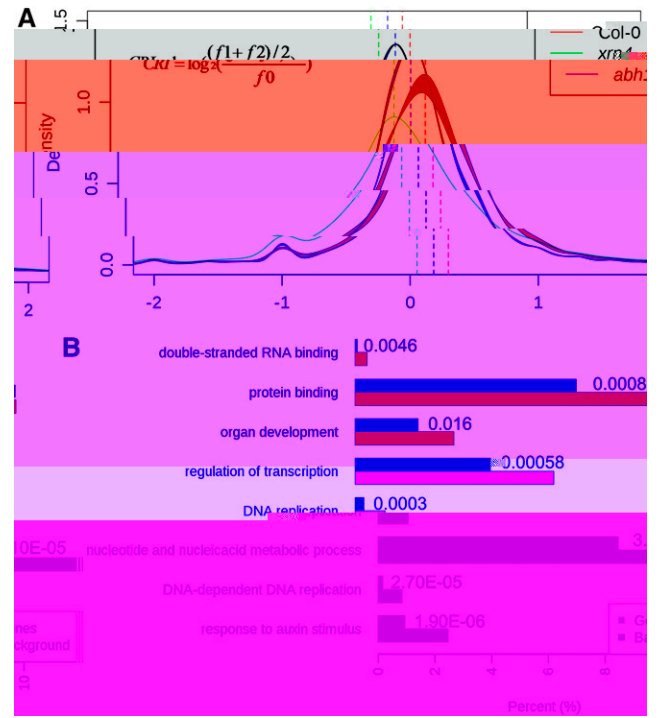




(... , 2013). F...
 fi... (<math>< 0.05; \chi^2</math>) C...
 A... A... A... fi...
 (... F... 10A)...
 A...

DISCUSSION

5' ... C/ 70
 (... , 2013;
 A... , 2013, 2015). F...
 A (... , 2015).



F u 7. C... AD... C.-0,
 xrn4, ... abh1.
 (A) C.-0(...), xrn4(...), abh1(...).
 AB 1
 A...
 (B) 1... A...
 C (...)... (...).
 C... FD...
 C...

A
 A
 A
 A
 S. cerevisiae (2015), C 5'
 3- 13
 14 C C (F. 4).
 C -0 F 5'
 A S. cerevisiae (2015), 5'
 1 2 0
 16 17
 (F. 2). fi 5'
 (F. 7). S. cerevisiae (2015), 5'
 16 17
 (F. 2). fi 5'
 (F. 7). AA. A
 16 17
 A 5' A
 A A fi
 C. fi (F. 6),
 S. cerevisiae 3-
 5'
 (2015). fi 5'
 3' (F. 2B),
 (4) A
 C fi C
 fi 50
 CD (5'),
 (2011; 2010; 2015).
 A 3-
 16- 17-
 (B) 3' (F. 2A),
 S. cerevisiae (2015).
 fi
 A,
 Drosophila melanogaster
 (2011; D 2013;
 2014).
 S. cerevisiae,

(F. 2C). fi
 S. cerevisiae
 (2015).
 (2013; 2013, 2015),
 C fi
 A C
 A F F A fi fi
 (F. 3). F /, fi F
 F (D. 2). F 5'
 FCA (AT4G16280) AGL4/SEP2 (AT3G02310). F
 fi F
 F 5' 46 47
 (F. 3B), A F (F.
 2A). 5' F
 5' z
 F, fi
 A F,
 F 5'
 F - F D
 F
 A 3-
 F (F. 3B).
 F, z fi-
 4 C
 A (5') (F. 3B).
 46 47 F 4
 F 3-
 C xm4 abh1 (F. 5
 6), A
 4 C 3- A
 C 5' F (F. 5).
 fi A
 5' 3' 4,
 S. cerevisiae
 1 (2015).

(CB 20 CB 80/AB 1), A
A, A,
2008; (, 2009). A
A C
abh1,
A fi,
AB 1, *xrn4* ~50%
(F. 5, 6, 7A).
821 C A fi
abh1 C -0 , 76%.
A fi C
A AB 1
AB 1 C
AB 1
(, 2001; D z -
2013), F.
A F.
A
A, AB 1 A
A
fi AB 1 *XRN4* A
abh1 (, 2008).
fi *XRN4* *abh1* A
C -0
abh1
AB 1 A
(1) A ;(2)
A A ; (3). A
A
fi A
C AB 1 A
A A
A fi.

, D A
(F. 7B). fi
A
fi fi A
(, 2012).
A
A fi
A C
A A
F, C A
A-
fi F. 10A). A
A-
A
A 4-
A F.
A
C A F
C -

METHODS

Pa Ma a a GMUCT L b a C v c
C A
5 9 4- *Arabidopsis thaliana* C -0 (A)
C fi
abh1 (*abh1-1* *abh1-8*).
C 2.0 (, 2014). , A fi
(A)⁺ 5' A
A (A)⁺
A
3' 5' 3'
F, C fi
C fi

Ma GMUCT R a mRNA T a c
A C (50-)
A A 10
A (2.40 " F. 10-
F. 10- F. 0.10") (D.
, 2013). A fi BED fi
fi (5')
5' F. C

....., 5' 100-..... A
 fi
 C
 A 5' 5'
 CD, 3' A

P c Ca c m RNA Ta a P c C a Ga S
 45 A A
 B B
 A (:// / A)
 21- A
 10 11 A
 5' 5' 100- fl
 A fi
 A 2 5'
 A 5'
 100- fl fi
 A 2 5'
 A 5'
 A A-
 X² fi
 5' A fl
 5' 5'

D fi a 3-N c P c Pa ORF a E c m
A a 5' P R a E Acc r a D R b m P a
Eac C

..... 0 (0),
 1 (1), 2 (2), 0
 1 2 0
 5'
 F fi
 5' fi
 X² fi
 5' (16 17
) 5'
 fl 100 C ..-0
 C ,xm4, abh1
 C ..-0 xm4
 abh1 fi
 X²

P c P a G T a a Ac G v ORF I fi
b GMUCT
 A, 5'
 F A ,AC , C
 fi F
 F F
 fi 5'
 2- 16 / 17
 fl 100

M av m C a a RNA D ca
 C A
 C 2
 5' (1 2)

..... 5'
 (0). : $CRI = \log_2 \left(\frac{(f1+f2)/2}{f0} \right)$. C
 A C C ..-0
 abh1 xm4 C
 fi abh1 C ..-0
 fi ' t

... fi ... D ... C ... C.-0... abh1
 ... F... B ...
S m a Da a S 1. ... C ... A ...
S m a Da a S 2. ... F ... E ... 5'
 ... E ... C ... B ... C ...
 ... F ...
S m a Da a S 3. ... A ... fi ... D ...
 ... C ... AD ... C.-0... abh1 ...

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...
 ... F... (CB-1243947... -
 1444490) . B.D. ...

AUTHOR CONTRIBUTIONS

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 ... C ... B.D. ...
 ... B.D. ... B.D. ... A ...
 ...
 ... 8,2016; ... A ... 2,2016; ... 7,2016;
 ... 7,2016.

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 E ... A ... fi ...
 A ... C . B ... **18:** 758–762.
A ma M.J., a Sa a , H. (2003). ... fi ...
 fl. ... A ... A E A A2-...
 C ... **15:** 2730–2741.
C a Ga, J.A., a . (2007). ... A ...
 ... C ... **131:** 1340–1353.
C X. (2004). A ... A ... A E A A2 ...
 A ... fl ... **303:** 2022–2025.
C ba, Y., a G P. (2009). ... A ...
 ... B ... **52:** 114–124.
Da , X., a Z a , P.X. (2011). ... A ... A ...
 ... A ... **39:** 155– 159.
**Da a-G c, A., W a , W., R c , M., S a , I.,
 Ma , M., S a-K a, Z., a Ja m , A.**
 (2013). A ... 1 ...
 ... :AB 1 (CB 80) ... AB 4- ... ABA ...
 ... B ... **81:** 189–209.
**D b A., DaG , C.A., Sc , F., D , J., Za , C.,
 J a, S., Bau , P., C a M., a G a , T.R.** (2013). A :
 ... A- ... B ... **29:** 15–21.
D a , D.V., a Ba , B. (2008). ... A ...
 ... 398, C.

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CiteTrack Alerts	C A : :// . . / / /
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