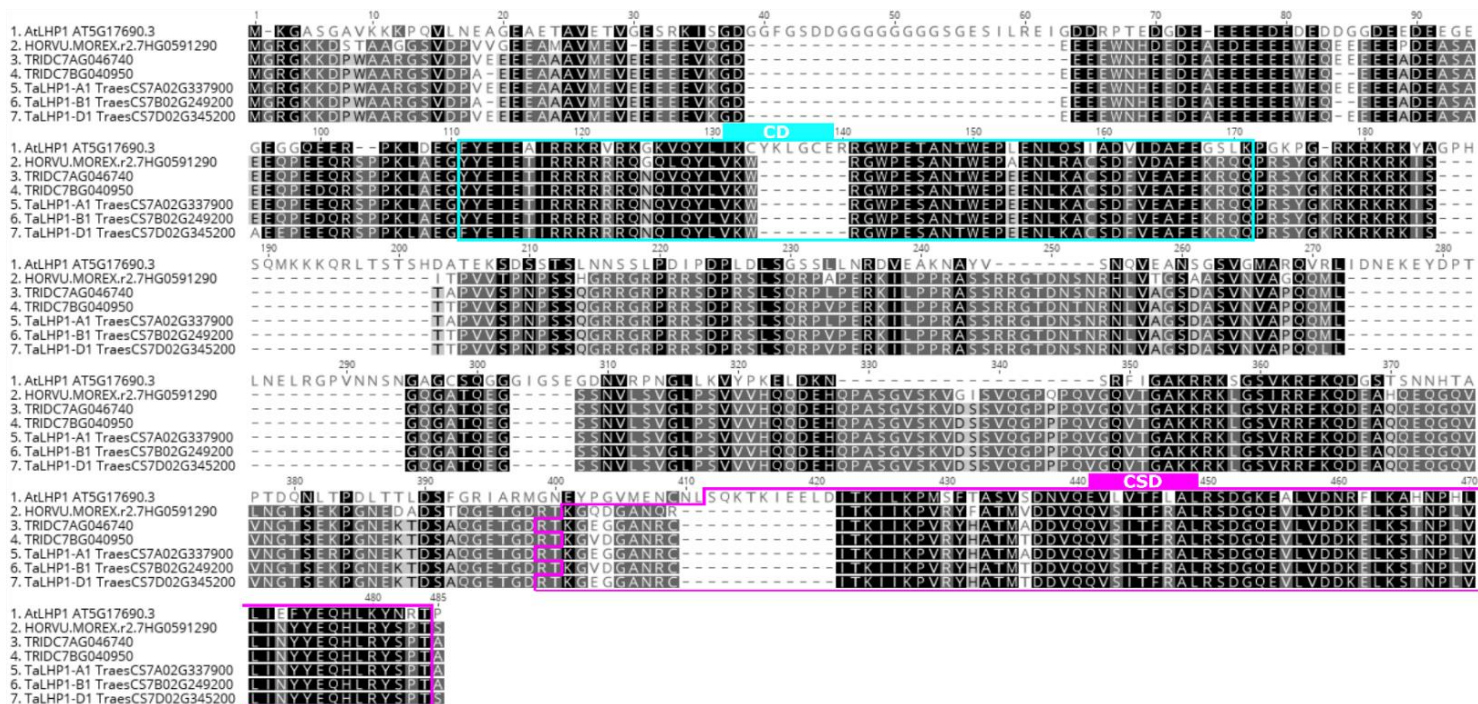


Figure S1. Protein alignments of plant PRC1 core components LHP1 (**A**), BMI1 (**B**) and RING1 (**C**) and PRC2 core components E(z) (**D**), FIE (**E**), MSI (**F**) and Su(z) (**G**) from *Arabidopsis thaliana* (At), *Hordeum vulgare* (HORVU), *Triticum dicoccoides* (TRIDC) and *Triticum aestivum* (Ta). Conserved protein domains are highlighted. CD; chromo domain, CSD; chromo shadow domain.



B

1. AtBM11A AtZG30580
2. AtBM11B AT1G06770.1
3. AtBM11C AT3G23060
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11. TaBM11-B1 TraesCS5B02G382100.1
12. TaBM11-D1 TraesCS5D02G388500.1
13. TaBM11-A2 TraesCS5A02G058000.1
14. TaBM11-B2 TraesCS5B02G065600.1
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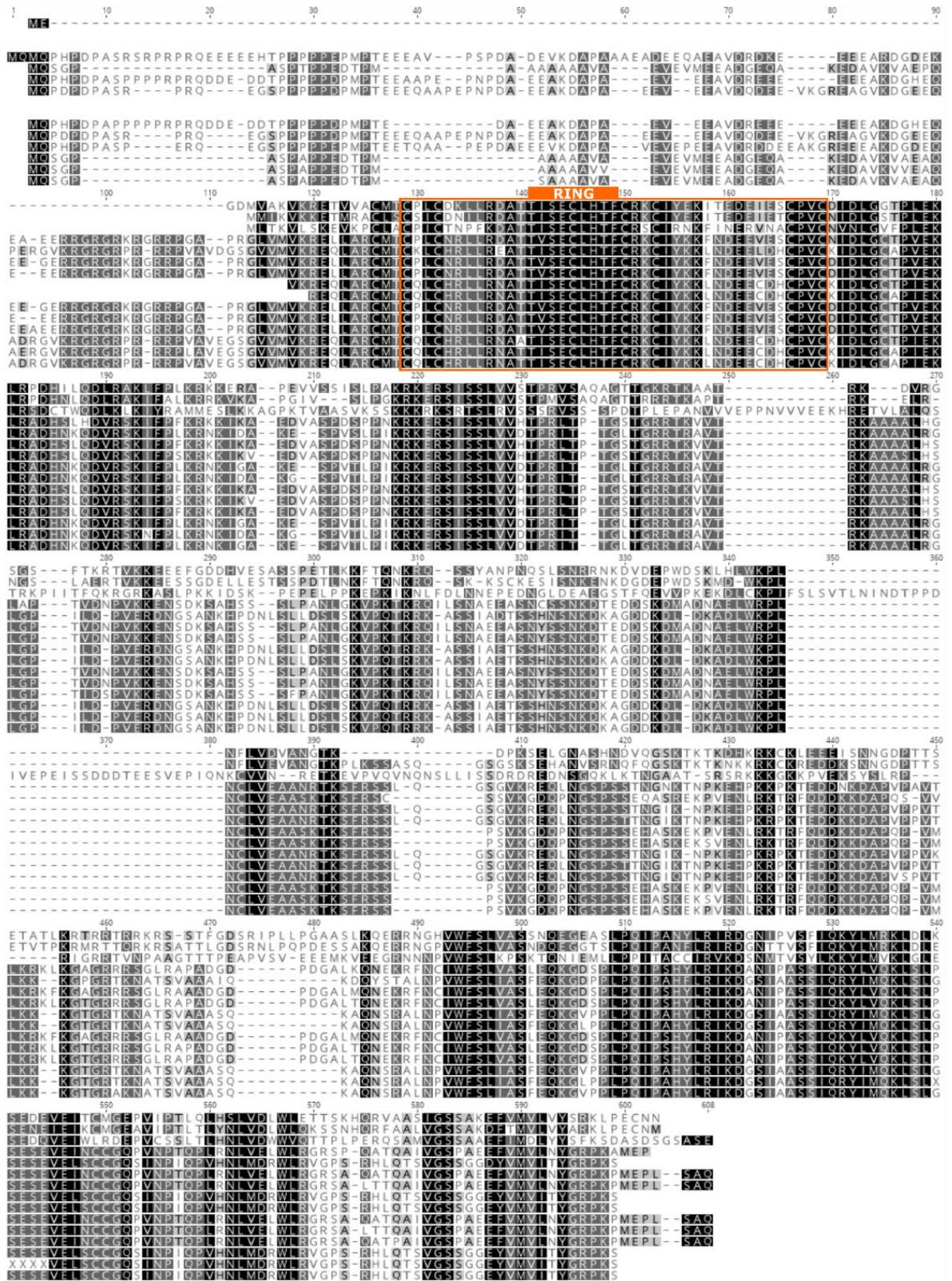
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13. TaBM11-A2 TraesCS5A02G058000.1
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12. TaBM11-D1 TraesCS5D02G388500.1
13. TaBM11-A2 TraesCS5A02G058000.1
14. TaBM11-B2 TraesCS5B02G065600.1
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D (part1)

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15. TaE(J)-7B1.1 TaesC57B02G028200.2
16. TaE(J)-7A1.2 TaesC57D02G127100.2
17. TaE(J)-7A1.2 TaesC57A02G128600.1
18. TaE(J)-7B1.2 TaesC57B02G028500.1
19. TaE(J)-7D1.2 TaesC57D02G127400.1

1. At SWN AT4G02020.1
2. At MEA AT1G02580.1
3. At CLF AT2G23380.1
4. HORVU.MOREX.r.2.HG0317910.1
5. HORVU.MOREX.r.2.HG0544280
6. HORVU.MOREX.r.2.HG0544320
7. TRIDC4AG017090
8. TRIDC4BG031660
9. TRIDC7AG0014970.3
10. TRIDC7BG004320.3
11. TcE2(-)-4A1 TracesCA5402G121300.1
12. TcE2(-)-4B1 TracesCA5802G181400.3
13. TcE2(-)-4D1 TracesCA5402G184600.3
14. TcE2(-)-7A1.1 TracesCA7502G128300.1
15. TcE2(-)-7B1.1 TracesCA7802G02800.1
16. TcE2(-)-7D1.1 TracesCA570D2G127100.2
17. TcE2(-)-7A1.2 TracesCA7502G128600.1
18. TcE2(-)-7B1.2 TracesCA7802G028500.2
19. TcE2(-)-7D1.2 TracesCA570D2G127400.1

1. At SWN AT4G02020.1
2. At MEA AT1G02580.1
3. At CLF AT2G23380.1
4. HORVU.MOREX.r.2.HG0317910.1
5. HORVU.MOREX.r.7.HG0544280
6. HORVU.MOREX.r.2.HG0544320
7. TRIDC4AG017090
8. TRIDC4BG031660
9. TRIDC7AG0014970.3
10. TRIDC7BG004320.3
11. TaE(2)-4A1 TracesC54A02G121300.1
12. TaE(2)-4B1 TracesC54B02G181400.3
13. TaE(2)-7A1 TracesC54A02G184600.3
14. TaE(2)-7A1.1 TracesC7A02G128300.1
15. TaE(2)-7B1.1 TracesC7B02G028200.2
16. TaE(2)-7D1.1 TracesC57D02G127100.2
17. TaE(2)-7A1.2 TracesC7A02G128600.1
18. TaE(2)-7B1.2 TracesC7B02G028500.2
19. TaE(2)-7D1.2 TracesC57D02G127400.1

1. At SWN AT4G02020.1
2. At MEA AT1G02580.1
3. At CLF AT2G23380.1
4. HORVU.MOREX.r.2.HG0317910.1
5. HORVU.MOREX.r.2.HG0544280
6. HORVU.MOREX.r.2.HG0544320
7. TRIDC4AG017090
8. TRIDC4BG031660
9. TRIDC7AG014970.3
10. TRIDC7BG004320.3
11. TaE(2)-4A1 TressCS4A02G121300.1
12. TaE(2)-4B1 TressCS4B02G181400.3
13. TaE(2)-4D1 TressCS4D02G184600.3
14. TaE(2)-7A0 TressCS7A02G128300.1
15. TaE(2)-7B1.1 TressCS7B02G028200.2
16. TaE(2)-7D1.1 TressCS7D02G127100.2
17. TaE(2)-7A1.2 TressCS7A02G128600.1
18. TaE(2)-7B1.2 TressCS7B02G028500.2
19. TaE(2)-7D1.2 TressCS7D02G127400.1

[illegible]

GKEKLRVRSIKKFKKFNRRKIKKMDAHVIFSSASSRRATADNGN--**SNLVLS**SRMRPLCKLNG--FSGHVG**GR**DDVYPTK**Q**
 EKERLILRKRFKFLRYIPVSATHASHQSFDDINPAEDDNGDGNKS**SLSR**MRNP LRFHSA--SDNYS**VD**QGYVLV**LD**QDDY**AL**EEDWP
 AADCKLAS**IK**KK**FNRR**AKRKHTKGLFDVAIAA**AAS**RSGSES--**SNLVLS**QLAAR**Q**GSRI**VGWN**AARSG**GR**EVVHVQ**FN**LADG**IL**VLV
 QQARLAS**IK**KK**FNRR**AKRKHTKGLFDVAIAA**AAS**RSGSES--**SNLVLS**QLAAR**Q**GSRI**VGWN**AARSG**GR**EVVHVQ**FN**LADG**IL**VLV
 TADRTFY**IK**NR**FN**DK**IK**SPVSTOSTGNSKK**I**WRNT**NS**TD--**SNLVLS**RQDDV**LS**SGPR--**IV**VSPA**D**GVGS**SD****HS**YAT**SI**VMV
 TTYRND**IK**ME**FN**DK**IK**STISITQSGK**SI**WT**SA**DGTD-LA**IN**PL**IP**RODD**AP**SC**ST**LG--**EL**CL**AK**GGGS**SD****HS**YPGT**SI**ATV
 QQARLAS**IK**KK**FNRR**AKRKHTKGLFDVAIAA**AAS**RSGSES--**SNLVLS**QLAAR**Q**GSRI**VGWN**AARSG**GR**EVVHVQ**FN**LADG**IL**VLV
 QQARLAS**IK**KK**FNRR**AKRKHTKGLFDVAIAA**AAS**RSGSES--**SNLVLS**QLAAR**Q**GSRI**VGWN**AARSG**GR**EVVHVQ**FN**LADG**IL**VLV
 TADRTFY**IK**NR**FN**DK**IK**SPVSTOSTGNSKK**I**WRNT**NS**TD--**SNLVLS**RQDDV**LS**SGPR--**IV**VSPA**D**GVGS**SD****HS**YAT**SI**VMV
 TADRTFY**IK**NR**FN**DK**IK**SPVSTOSTGNSKK**I**WRNT**NS**TD--**SNLVLS**RQDDV**LS**SGPR--**IV**VSPA**D**GVGS**SD****HS**YAT**SI**VMV
 TADRTFY**IK**NR**FN**DK**IK**SPVSTOSTGNSKK**I**WRNT**NS**TD--**SNLVLS**RQDDV**LS**SGPR--**IV**VSPA**D**GVGS**SD****HS**YAT**SI**VMV
 TADRTFY**IK**NR**FN**DK**IK**SPVSTOSTGNSKK**I**WRNT**NS**TD--**SNLVLS**RQDDV**LS**SGPR--**IV**VSPA**D**GVGS**SD****HS**YAT**SI**VMV
 ATLRSAE**IK**DMV**FN**DK**IK**STIMQSNRGS**ST**IT**WT**SA**D**GTG-LA**IN**PL**IP**RODD**AP**SC**ST**LG--**EL**CL**AK**GGGS**SD****HS**YPGT**SI**ATV
 ATLRSAE**IK**DMV**FN**DK**IK**STIMQSNRGS**ST**IT**WT**SA**D**GTG-LA**IN**PL**IP**RODD**AP**SC**ST**LG--**EL**CL**AK**GGGS**SD****HS**YPGT**SI**ATV

[illegible]

```

RFFIWLIGOFYVGGEEVQ-DALCAXLVSDVAS-DLIERYNELKLDKQETEFYFNSGFGLGIS- ----FKGIGAAI- -DNL-CRRC-VF-
RFFITVGVGDYDYLDFVLRALACXLYLVDSVDF-LKLN-DGTAAGEAS-DLT- ----SKTITAFQDIA- -DRRH-CRCM-VF-
YIIRMTLHQLEFSDSVS-AELASFLSRSTF-FKRGHGVLM-KKEKVESGSDNQ-AESSL- ----NKDMEGADSE- -DNL-CRRC-VF-
QLWKATQOEHHSQENF-NVLCFIDASPSPF-FGRSFHFF-EKNEKHREFSDK-TESQLS- ----DKTVDIVDS- -DNL-CRRC-VF-
CLIRMTIQCFCMSDAVE-ETLAIACFDRVAGDPAARYEILN-GGKTEGSLKKVS- -FLNNAKVIEDLYRDKD-DAAD-SE- -DNL-CRRC-VF-
NLIRTTIHDTAMSDVE-EALACCFKTAGDPAARYEIVK-GNTETGSKQVS- -FLNAKMKDYVHDKD-DAAD-SE- -NN-CRRC-VF-
QLWKATQOERHSQEDIN-NVLCFIDASPSPF-FGRSFHFF-EKHEKHREFSDK-IESQLP- ----DKTVDIVDS- -DNL-CRRC-VF-
QLWKATQOERHSQEDIN-NVLCFIDASPSPF-FGRSFHFF-EKHEKHREFSDK-IESQLP- ----DKTVDIVDS- -DNL-CRRC-VF-
CLIRMTIQCFCMSDAVE-ETLAIACFDRAAGDPAARYEILN-GGKTEGSLKKVS- -FLNNAKVIEDLYRDKD-DAAD-SE- -DNL-CRRC-VF-
CLIRMTIQCFCMSDAVE-ETLAIACFDRAAGDPAARYEILN-GGKTEGSLKKVS- -FLNNAKVIEDLYRDKD-DAAD-SE- -DNL-CRRC-VF-
QLWKATQOERHSQEDIN-NVLCFIDASPSPF-FGRSFHFF-EKHEKHREFSDK-IESQLP- ----DKTVDIVDS- -DNL-CRRC-VF-
QLWKATQOERHSQEDIN-NVLCFIDASPSPF-FGRSFHFF-EKHEKHREFSDK-IESQLP- ----DKTVDIVDS- -DNL-CRRC-VF-
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CLIRMTIQCFCMSDAVE-ETLAIACFDRAAGDPAARYEILN-GGKTEGSLKKVS- -FLNNAKVIEDLYRDKD-DAAD-SE- -DNL-CRRC-VF-
CFIRMTIDGCFMSDEVIL-ETLACCFKTAGDPAARYEILQ-GNTETGSKQVS- -FLNAKMKDYHDKD-DAAD-SE- -DNL-CRRC-VF-
CFIRMTIDGCFMSDEVIL-ETLACCFKTAGDPAARYEILQ-GNTETGSKQVS- -FLNAKMKDYHDKD-DAAD-SE- -DNL-CRRC-VF-
CFIRMTIDGCFMSDEVIL-ETLACCFKTAGDPAARYEILQ-RESTETGSKQVS- -FLNAKMKDYHDKD-DAAD-SE- -DNL-CRRC-VF-

```

CR|H|H|G|G|S|Q|D|V|P|A|F|K|Q|S|PW|S|D|L|F|E|D|D|G|D|G|S|K|H|V|L|Q|L|K|-----|AV|RE|V|P|E|T|C|S|N|F|A|S|K|A|E|E|K|A|S|E|E|C|S|K|A|V|S|
 CH|H|H|E|K|Y|E|P|E|S|R|S|D|K|S|L|F|E|D|D|D|G|D|G|S|K|H|V|L|Q|L|K|V|R|-----|S|V|T|-----|
 CR|H|H|G|G|S|Q|D|V|P|A|F|K|Q|S|PW|P|C|P|P|D|N|L|I|G|A|N|C|W|K|T|L|-----|K|S|G|R|F|P|G|Y|G|T|-----|I|E|G|K|T|G|T|S|S|D|G|A|G|K|T|T|
 CR|H|H|G|G|S|Q|D|V|P|A|F|K|Q|S|CG|F|E|L|G|N|K|S|E|G|D|Q|Y|L|R|R|R|E|G|F|Q|D|I|R|K|H|D|Y|A|S|A|T|H|N|M|E|S|R|S|I|L|H|K|V|G|T|D|M|V|S|E|S|D|S|N|R|E|E|I|I|K|-----|S|
 CK|L|H|G|G|S|Q|D|V|P|A|F|K|Q|S|PW|N|S|M|B|D|G|I|G|G|H|C|W|K|L|A|P|-----|K|P|D|A|T|T|V|D|S|D|M|L|D|I|E|E|P|T|H|S|S|D|N|T|R|N|Q|L|S|
 CK|L|H|G|G|S|Q|D|V|P|A|F|K|Q|S|PW|N|S|M|B|D|G|I|G|G|H|C|W|K|L|A|P|-----|K|-----|
 CR|H|H|G|G|S|Q|D|V|P|A|F|K|Q|S|CG|F|E|L|G|N|K|S|E|G|D|Q|Y|L|R|R|R|E|G|F|Q|D|I|H|K|H|D|Y|A|S|A|T|H|N|M|E|S|R|S|T|L|H|K|V|G|T|D|M|V|S|E|S|D|S|N|R|E|E|I|I|K|-----|S|
 CR|H|H|G|G|S|Q|D|V|P|A|F|K|Q|S|CG|F|E|L|G|N|K|S|E|G|D|Q|Y|L|R|R|R|E|G|F|Q|D|I|R|K|H|D|Y|A|S|A|T|H|N|M|E|S|R|S|T|L|H|K|V|G|T|D|M|V|S|E|S|D|S|N|R|E|E|I|I|K|-----|S|
 CR|H|H|G|G|S|Q|D|V|P|A|F|K|Q|S|PW|N|S|M|B|D|G|I|G|G|H|C|W|K|L|A|P|-----|K|P|E|A|T|T|V|D|S|D|M|L|D|I|E|E|P|T|H|S|S|D|N|T|R|N|Q|L|S|
 CK|L|H|G|G|S|Q|D|V|P|A|F|K|Q|S|PW|N|S|M|B|D|G|I|G|G|H|C|W|K|L|A|P|-----|K|P|D|A|T|T|V|D|S|D|M|L|D|I|E|E|P|T|H|S|S|D|N|T|R|N|Q|L|S|
 CR|H|H|G|G|S|Q|D|V|P|A|F|K|Q|S|CG|F|E|L|G|N|K|S|E|G|D|Q|Y|L|R|R|R|E|G|F|Q|D|I|H|K|H|D|Y|A|S|A|T|H|N|M|E|S|R|S|T|L|H|K|V|G|T|D|M|V|S|E|S|D|S|N|R|E|E|I|I|K|-----|S|
 CR|H|H|G|G|S|Q|D|V|P|A|F|K|Q|S|CG|F|E|L|G|N|K|S|E|G|D|Q|Y|L|R|R|R|E|G|F|Q|D|I|R|K|H|D|Y|A|S|A|T|H|N|M|E|S|R|S|T|L|H|K|V|G|T|D|M|V|S|E|S|D|S|N|R|E|E|I|I|K|-----|S|
 CR|H|H|G|G|S|Q|D|V|P|A|F|K|Q|S|PW|N|S|M|B|D|G|I|G|G|H|C|W|K|L|A|P|-----|K|P|E|A|T|T|V|D|S|D|M|L|D|I|E|E|P|T|H|S|S|D|N|T|R|N|Q|L|S|
 CR|H|H|G|G|S|Q|D|V|P|A|F|K|Q|S|PW|N|S|L|I|B|D|G|I|G|G|H|C|W|K|L|A|P|-----|K|P|D|A|T|T|V|D|S|D|M|L|D|I|E|E|P|T|H|S|S|D|N|T|R|N|Q|L|S|
 CK|L|H|G|G|S|Q|D|V|P|A|F|K|Q|S|PW|D|S|M|B|D|G|I|G|G|H|C|W|K|L|A|P|-----|K|-----|
 CK|L|H|G|G|S|Q|D|V|P|A|F|K|Q|S|PW|N|S|M|B|D|G|I|G|G|H|C|W|K|L|A|P|-----|K|-----|
 CK|L|H|G|G|S|Q|D|V|P|A|F|K|Q|S|PW|N|S|R|B|D|G|I|G|G|H|C|W|K|L|A|P|-----|K|-----|

- - - - - V P H A A A S G V S L Q V E K T D - - - - - I G I K N V D S S - - - - - G V E Q E H G I R - - G K - - R E V P I L K D S N D L P N L S N K K Q K T A A S D - - - - -
 P T K F S S K L N G R K P K T F P S E S A S S N E K C A L T S D S E N G L Q Q D T N S D K V S S S P K V K G S R R V R G R K R N K N R V A E R V P R K T Q K R K K T E A S - - - - -
 S I S V G T S R S K I Y F E S A E K H - - - - - T L P S G D A S E - - - - - T E N V S T D M L L R S L G K - - - - - R K V S K G P R S S D - - D F P Y K K P R M L T S D I P F - - - - -
 S N K K K Q G S S G K K A K S Q Q S E - G S S I Q R V A S E S S D S E G H P T S T K S P Q Q S S C S Q S K V K I S P K G G I R K S T N R R I A E R I L M S V K K G R E V A P S - - - - -
 S I S V G T S R S K I S F E S A E K H - - - - - T A L P S G D A S E - - - - - T E N V S T D M L L R S L G K - - - - - R K V S K G P R S S D - - D F P Y K K P R T L A S D I P F - - - - -
 S I S V G T S R S K I S F E S A E K H - - - - - T L P S G D A S E - - - - - T E N V S T D M L L R S L G K - - - - - R K V L K G P R S S D - - D F Y K K P R M L T S D I P F - - - - -
 S N K K K Q G S S G K K A K S Q Q S E - G S S T Q R V A S E S S D S E G H P M S T K S P Q Q S S C S Q S K V K I S P K G G I R K S T N R R I A E R I L M S V K K G R E V A P S - - - - -
 S N K K K Q G S S G K K A K S Q Q S E - G S S T Q R V A S E S S D S E G H P M S T K S P Q Q T S C S Q S K V K I S P K G G I R K S T N R R I A E R I L M S V K K G R E V A P S - - - - -
 S I S V G T S R S K I S F E S A E K H - - - - - T A L P S G D A S E - - - - - T E N V S T D M L L R S L G K - - - - - R K V S K G P R S S D - - D F P Y K K P R T L A S D I P F - - - - -
 S I S V G T S R S K I S F E S A E K H - - - - - T L P S G D A S E - - - - - T E N V S T D M L L R S L G K - - - - - R K V L K G P R S S D - - D F Y K K P R M L T S D I P F - - - - -
 S N K K K Q G S S G K K A K S Q Q S E - G S S T Q R V A S E S S D S E G H P M S T K S P Q Q S S C S Q S K V K I S P K G G I R K S T N R R I A E R I L M S V K K G R E V A P S - - - - -
 S N K K K Q G S S G K K A K S Q Q S E - G S S T Q R V A S E S S D S E G H P M S T K S P Q Q T S C S Q S K V K I S P K G G I R K S T N R R I A E R I L M S V K K G R E V A P S - - - - -
 S N K K K Q G S S G K K A K S Q Q S E - G S S T Q R V A S E S S D S E G H P T S T K S P Q Q S S C S Q S K V K I S P K G G I R K S T N R R I A E R I L M S V K K G R E V A P S - - - - -

D (part2)

1. At SWN AT4G02020.1
2. At MEA AT1G02580.1
3. At CLF AT2G23380.1
4. HORVU.MOREX.r.2.4HG0317910.1
5. HORVU.MOREX.r.2.7HG0544280
6. HORVU.MOREX.r.2.7HG0544320
7. TRIDC4AG017090
8. TRIDC4BG031660
9. TRIDC7AG014970.3
10. TRIDC7BG004320.3
11. TaE[2]-6A1 TraesCS4A02G121300.1
12. TaE[2]-4B1 TraesCS4B02G181400.3
13. TaE[2]-4B1 TraesCS4B02G184600.3
14. TaE[2]-7A1.1 TraesCS7A02G218300.1
15. TaE[2]-7B1.1 TraesCS7B02G028200.2
16. TaE[2]-7D1.1 TraesCS7D02G212700.2
17. TaE[2]-7A1.2 TraesCS7A02G128600.1
18. TaE[2]-7B1.2 TraesCS7B02G028500.2
19. TaE[2]-7D1.2 TraesCS7D02G127400.1

1. At SWN AT4G02020.1
2. At MEA AT1G02580.1
3. At CLF AT2G23380.1
4. HORVU.MOREX.r.2HG0317910.1
5. HORVU.MOREX.r.2HG0544280
6. HORVU.MOREX.r.2HG0544320
7. TRIDC4AG017090
8. TRIDC4BG031660
9. TRIDC7AG014970.3
10. TRIDC7BG004320.3
11. TaE[2]-6A1 TraesCS4A02G121300.1
12. TaE[2]-4B1 TraesCS4B02G181400.3
13. TaE[2]-4C1 TraesCS4C02G184600.3
14. TaE[2]-7A1.1 TraesCS7A02G128300.1
15. TaE[2]-7B1.1 TraesCS7B02G028200.2
16. TaE[2]-7D1.1 TraesCS7D02G127100.2
17. TaE[2]-7A1.2 TraesCS7A02G128600.1
18. TaE[2]-7B1.2 TraesCS7B02G028500.2
19. TaE[2]-7D1.2 TraesCS7D02G127400.1

1. At SWN AT4G02020.1
2. At MEA AT1G02580.1
3. At CLF AT2G23380.1
4. HORVU.MOREX.r.2HG0317910.1
5. HORVU.MOREX.r.2HG0544280
6. HORVU.MOREX.r.2HG0544320
7. TRIDC4AG017090
8. TRIDC4BG031660
9. TRIDC7AG014970.3
10. TRIDC7BG004320.3
11. TaE[2]-6A1 TraesCS4A02G121300.1
12. TaE[2]-4B1 TraesCS4B02G181400.3
13. TaE[2]-4B1 TraesCS4B02G184600.3
14. TaE[2]-7A1.1 TraesCS7A02G128300.1
15. TaE[2]-7B1.1 TraesCS7B02G028200.2
16. TaE[2]-7D1.1 TraesCS7D02G127100.2
17. TaE[2]-7A1.2 TraesCS7A02G128600.1
18. TaE[2]-7B1.2 TraesCS7B02G028500.2
19. TaE[2]-7D1.2 TraesCS7D02G127400.1

1. At SWN AT4G02020.1
2. At MEA ATT1G02580.1
3. At CLF AT2G23380.1
4. HORVU.MOREX.r.2.HG0317910.1
5. HORVU.MOREX.r.2.HG0544280
6. HORVU.MOREX.r.2.HG0544320
7. TRIDCA4G017090
8. TRIDC4BG031660
9. TRIDCT4G014970.3
10. TRIDCTBG004320.3
11. TaE(2)-4A1 TraesCS4A02G121300.1
12. TaE(2)-4B1 TraesCS4B02G181400.1
13. TaE(2)-7A1 TraesCS4D02G184600.3
14. TaE(2)-7B1 TraesCS7A02G128300.1
15. TaE(2)-7B1.1 TraesCS7B02G028200.2
16. TaE(2)-7D1.1 TraesCS7D02G127100.2
17. TaE(2)-7A1.2 TraesCS7A02G128600.1
18. TaE(2)-7B1.2 TraesCS7B02G028500.2
19. TaE(2)-7D1.2 TraesCS7D02G127400.1

1. At SWN AT4G02020.1
2. At MEA AT2G0580.1
3. At CLF AT2G23380.1
4. HORVU.MOREX.r.2.HG0317910.1
5. HORVU.MOREX.r.2.HG0544280
6. HORVU.MOREX.r.2.HG0544320
7. TRIDC4.G017090
8. TRIDC4.G031660
9. TRIDC7A.G014970.3
10. TRIDC7B.G004320.3
11. TaE(2)-4A1 TraesCS4A02G213300.1
12. TaE(2)-4B1 TraesCS4B02G181400.3
13. TaE(2)-4D1 TraesCS4D02G184600.3
14. TaE(2)-7A1.1 TraesCS7A02G128300.1
15. TaE(2)-7B1.2 TraesCS7B02G028200.2
16. TaE(2)-7D1.1 TraesCS7D02G217200.2
17. TaE(2)-7A1.2 TraesCS7A02G128600.1
18. TaE(2)-7B1.2 TraesCS7B02G028500.2
19. TaE(2)-7D1.2 TraesCS7D02G127400.1

1. At SWN AT4G02020.1
2. At MEA ATT1G02580.1
3. At CLF AT2G23380.1
4. HORVU.MOREX.r.2.HG0317910.1
5. HORVU.MOREX.r.2.HG0544280
6. HORVU.MOREX.r.2.HG0544320
7. TRIDC4A.G01790
8. TRIDC4B.G01160
9. TRIDC7A.G014970.3
10. TRIDC7B.G004320.3
11. TaE(2)-4A1 TraesCS4A02G121300.1
12. TaE(2)-4B1 TraesCS4B02G181400.3
13. TaE(2)-4D1 TraesCS4D02G184600.3
14. TaE(2)-7A1.1 TraesCS7A02G128300.1
15. TaE(2)-7B1.1 TraesCS7B02G028200.2
16. TaE(2)-7D1.1 TraesCS7D02G127100.2
17. TaE(2)-7A1.2 TraesCS7A02G128600.1
18. TaE(2)-7B1.2 TraesCS7B02G028500.2
19. TaE(2)-7D1.2 TraesCS7D02G127400.1

550 560 570 580 590 600 610 620 630
 TKMSFVNSVPSLDQALDS---TKG**D**GGTTDNKVN**R**DSEAD**A**KEV**E**GR--IP**D**NSVHDGGS**I**CPH-----HG**S**NGAI**I**---
 ---E**A**H-----VMD**N**NS-----
 DSDSIASGSCSPSDAKHK---DNE**D**AT**S**SSQ**H**VKS**G**NS**G**SK**R**NGTP**A**V**M**NDNS**G**DDVPV**C**Q**S**NEVAS**E**LDAPG**S**DE**S**LR**K**EF**M**---
 ASHILNKHSTSEVGDTRP---D**F**LG**F**GN**Q**LD**P**N**K**KT**N**K**D**CGG**S**P**T**TE**T**TE**D**AAR**N**-----IN**K**S---SA
 D**S**N**S**--GGCLWPRDMK**L**RS**D**TRNG**H**K**D**VAS**P**Q**N**SP**S**TR**S**--SR**K**KD**V**P**Q**MEN**I**LA**S**GED**R**ND**S**TEET**K**NE**H**SA**D**GH**D**SS**M**I**D**VE
 ---H**K**D**V**AS**P**Q**N**SP**S**TR**S**--SR**K**KD**A**H**Q**MEN**I**LA**S**AL**V**ED**R**NYLM**E**ETH**E**NS**A**T**D**GH**D**SS**T**SR**K**EL**V**D
 ASHILNNHSTSEIGDTRP---D**R**IF**F**GG**N**Q**R**D**P**N**K**KT**N**K**D**CGG**S**P**T**---T**T**TE**D**AAR**N**-----TN**K**S---SA
 ASHILNKHSTSEIGDTRP---D**R**IF**F**GG**N**Q**L**D**P**N**K**KT**N**K**D**CGG**S**P**T**---T**T**TE**D**AAR**N**-----TN**K**S---SA
 D**S**N**S**--GGCLWPRDMK**L**RS**D**TRNG**H**K**D**VAS**P**Q**N**SP**S**TR**S**--SR**K**KD**A**P**Q**MEN**I**LA**S**GED**R**ND**S**TVET**K**NE**H**SA**T**DGH**D**SS**M**I**D**VE
 D**S**N**S**--GGCLWPRDMK**L**RS**D**TRNG**H**K**D**VAS**P**Q**N**SP**S**TR**S**--SR**K**KD**A**P**Q**MEN**I**LA**S**GED**R**ND**S**TEET**K**NE**H**SA**T**DGH**D**SS**M**I**D**VE
 ASHILNNHSTSEIGDTRP---D**R**IF**F**GG**N**Q**R**D**P**N**K**KT**N**K**D**CGG**S**P**T**---T**T**TE**D**AAR**N**-----TN**K**S---SA
 ASHILNKHSTSEIGDTRP---D**R**IF**F**GG**N**Q**L**D**P**N**K**KT**N**K**D**CGG**S**P**T**---T**T**TE**D**AAR**N**-----TN**K**S---SA
 ASHILNNHSTSEIGDTRP---D**R**IF**F**GG**N**Q**R**D**P**N**K**KT**N**K**D**CGG**S**P**T**---T**T**TE**D**AAR**N**-----TN**K**S---SA
 D**S**N**S**--GGCLWPRDMK**L**RS**D**TRNG**H**K**D**VAS**P**Q**N**SP**S**TR**S**--SR**K**KD**A**P**Q**MEN**I**LA**S**GED**R**ND**S**TVET**K**NE**H**SA**T**DGH**D**SS**M**I**D**VE
 D**S**N**S**--GGCLWPRDMK**L**RS**D**TRNG**H**K**D**VAS**P**Q**N**SP**S**TR**S**--SR**K**KD**A**P**Q**MEN**I**LA**S**GED**R**ND**S**TEET**K**NE**H**SA**T**DGH**D**SS**M**I**D**VE
 D**S**N**S**--GGCLWPRDMK**L**RS**D**TRNG**H**K**D**VAS**P**Q**N**SP**S**TR**S**--SR**K**KD**A**P**Q**MEN**I**LA**S**GED**R**ND**S**TEET**K**NE**H**SA**T**DGH**D**SS**M**I**D**VE
 ---H**K**D**V**AS**P**Q**N**SP**S**TR**S**--SR**K**KD**A**H**Q**MEN**I**LA**S**AL**V**ED**R**NYLM**V**ET**N**NE**H**SA**T**DGH**D**SS**R**K**E**L**V**D
 ---H**K**D**V**AS**P**Q**N**SP**S**TR**S**--SR**K**KD**A**H**Q**MEN**I**LA**S**AL**V**ED**R**NYLM**V**ET**N**NE**H**SA**T**DGH**D**SS**R**K**E**L**V**D
 ---H**K**D**S**I**A**Y**S**QH**N**SP**S**TR**S**--SR**K**KD**A**H**Q**MEN**I**LA**S**AL**V**ED**R**NYLM**V**ET**N**NE**H**SA**T**DGH**D**SS**R**K**E**L**V**D

640 650 660 670 680 690 700 710 720
 A E M S E T - - - S R P S T E W N P I F E D I L Y - - - K G V F F G R N S C A I N L N R G L K T C V D S Y M R E N E V S V F R R S I P I N L L D D G R - - - - - T D P G
 N K I V S V - - - P N N T N T P V K E D I L Y - - - K G V F F G R N S C D A I N L N R G L K T C V I N Y M R E Q Q C - - - T M S - - - L D L N K I T - - - Q R N H
 E T V S R G - - - R L A T N K I W R P I F E K S I F D K G V F F G R N S C A I N L N R G L K T C V F V Q M T C S E N K - - - A S F - - - F G G D I N P D G S S K F D I N G S
 N I L F S S S R - - - H L P L S W S T L F R D I L Y - - - K G V F F G R N S C V R N L N R G L K T C V - - - V A S Y M Y N N G A A N M N K S I N G - - - D F T E - - - T H Q D
 E N I C R Q - - - - - H N K C R S W K V I F O G I L V K G V F F G R N S C A I N L N R G L K T C V D F V F H Y M S Y I E N S - - - S A N G L N S R G D I S L - - - V K G Y
 K N I C T Q - - - - - H D L V S W K V I F O E I L V K G V F F G R N S C A I N L N R G L K T C V D F V F Y M N Y I E N S - - - S T S - - - - - - - - - - - H G H
 E N I C R Q - - - - - H N K C R S W S T L F R D I L Y - - - K G V F F G R N S C V R N L N R G L K T C V - - - V A S Y M Y N N G A A N M S K S I N G - - - D F T E - - - T H Q N
 E N I C R Q - - - - - H N K C R S W S T L F R D I L Y - - - K G V F F G R N S C V R N L N R G L K T C V - - - V A S Y M Y N N G A A N M R K S I N G - - - D F T E - - - T H Q N
 E N I C R Q - - - - - H N K C R S W K V I F O G I L V K G V F F G R N S C A I N L N R G L K T C V D F V F H Y M S Y I E N S - - - S A N G L T L S R G D I S L - - - V K G Y
 E N I C R Q - - - - - H N K C R S W K V I F O G I L V K G V F F G R N S C A I N L N R G L K T C V D F V F H Y M S Y I E N S - - - S A N G L T L S R G D I S L - - - V K G Y
 N A L F S S S R - - - H L P L S W S T L F R D I L Y - - - K G V F F G R N S C V R N L N R G L K T C V - - - V A S Y M Y N N G A A N M S K S I N G - - - D F T E - - - T H Q N
 N A L F S S S R - - - H L P L S W S T L F R D I L Y - - - K G V F F G R N S C V R N L N R G L K T C V - - - V A S Y M Y N N G A A N M R K S I N G - - - D F T E - - - T H Q N
 N A L F S S S R - - - H L P L S W S T L F R D I L Y - - - K G V F F G R N S C V R N L N R G L K T C V - - - V A S Y M Y N N G A A N M S K S I N G - - - D F T E - - - T H Q N
 E N I C R Q - - - - - H N K C R S W K V I F O G I L V K G V F F G R N S C A I N L N R G L K T C V D F V F H Y M S Y I E N S - - - S A N G L T L S R G D I S L - - - V K G Y
 E N I C R Q - - - - - H N K C R S W K V I F O G I L V K G V F F G R N S C A I N L N R G L K T C V D F V F H Y M S Y I E N S - - - S A N G L T L S R G D I S L - - - V K G Y
 E N I C R Q - - - - - H N K C R S W K V I F O G I L V K G V F F G R N S C A I N L N R G L K T C V D F V F H Y M S Y I E N S - - - S A N G L T L S R G D I S L - - - V K G Y
 K N I C R Q - - - - - H D L V S W W V I F O E I L V K G V F F G R N S C A I N L N R G L K T C V D F V F Y M N Y I E N S - - - S T S - - - - - - - - - - - H G H
 K N I C R Q - - - - - H D L V S W W V I F E I L V K G V F F G R N S C A I N L N R G L K T C V D F V F Y M N Y I E N S - - - S T S - - - - - - - - - - - H G H

QVDEYV--PPRTRILFRKKKTKR---STKAGHPSWAKRAGGNCKQKVPCCGCLSMCGKDKPCLTNEICEKFKYCGPKKSCNFRERGCN
QVTKKSRSSRSRVRKSSRSLRL---KRYARVPALKKITSFHAIFYKVTPTCTKSCGQQQCLPETHENGCEKFKYCGPKKSCNFRERGCN
MYNNQV--RRRSRFLRRRRKVRRLKYTWKSAAGYHAIKKRITERTKDDPCROVNPCCGCLSMCGKQCPCLVNGICEKFKYCGPKKSCNFRERGCN
YMEQGV--VVRIRVCRRRRRTIRKHYPSKAGAHAIKKKVVGDGRQCDDROMVPCCGCEMKNKPKQVENGICEKFKYCGPKKSCNFRERGCN
KGHEI--RVRSRFIRRRRVRRLKYTWKSAAGYHFIKKRITERTKDDPCROVNPCCGCLSMCGKQCPCLVNGICEKFKYCGPKKSCNFRERGCN
DLGRDI--GIGSRFPCKRKKVVRVRIPIRSTVYRFIKKRIIAARKGELROIYNPCCGCLSMCGKQCPCKKNGICEKFKYCGPKKACNFRERGCN
YMEQGM--VVRIRVCRRRRRTIRKHYPSKAGAHAIKKKVVGDGRQCDDROMVPCCGCEMKNKPKQVENGICEKFKYCGPKKSCNFRERGCN
YMEQGM--VVRIRVCRRRRRTIRKHYPSKAGAHAIKKKVVGDGRQCDDROMVPCCGCEMKNKPKQVENGICEKFKYCGPKKSCNFRERGCN
KGHEI--RVRSRFIRRRRVRRLKYTWKSAAGYHFIKKRITERTKDDPCROVNPCCGCLSMCGKQCPCLVNGICEKFKYCGPKKSCNFRERGCN
KGHEI--RVRSRFIRRRRVRRLKYTWKSAAGYHFIKKRITERTKDDPCROVNPCCGCLSMCGKQCPCLVNGICEKFKYCGPKKSCNFRERGCN
YMEQGM--VVRIRVCRRRRRTIRKHYPSKAGAHAIKKKVVGDGRQCDDROMVPCCGCEMKNKPKQVENGICEKFKYCGPKKSCNFRERGCN
YMEQGM--VVRIRVCRRRRRTIRKHYPSKAGAHAIKKKVVGDGRQCDDROMVPCCGCEMKNKPKQVENGICEKFKYCGPKKSCNFRERGCN
YMEQGM--VVRIRVCRRRRRTIRKHYPSKAGAHAIKKKVVGDGRQCDDROMVPCCGCEMKNKPKQVENGICEKFKYCGPKKSCNFRERGCN
KGHEI--RVRSRFIRRRRVRRLKYTWKSAAGYHFIKKRITERTKDDPCROVNPCCGCLSMCGKQCPCLVNGICEKFKYCGPKKSCNFRERGCN
KGHEI--RVRSRFIRRRRVRRLKYTWKSAAGYHFIKKRITERTKDDPCROVNPCCGCLSMCGKQCPCLVNGICEKFKYCGPKKSCNFRERGCN
KGHEI--RVRSRFIRRRRVRRLKYTWKSAAGYHFIKKRITERTKDDPCROVNPCCGCLSMCGKQCPCLVNGICEKFKYCGPKKSCNFRERGCN
KGHEI--RVRSRFIRRRRVRRLKYTWKSAAGYHFIKKRITERTKDDPCROVNPCCGCLSMCGKQCPCLVNGICEKFKYCGPKKSCNFRERGCN
---ELGIGSRRPRIKQGV---KHA SRSAVYPLIKRIIAARKGELROIYNPCCGCLSMCGKQCPCKKNDICEKFKYCGPKKACNFRERGCN
---GLGIGSRRPRIKGRV---KHA SRSTVYRFIKKRIIAARKGELROIYNPCCGCLSMCGKQCPCKKNDICEKFKYCGPKKACNFRERGCN
---GLGIGSRRPRIKGRV---KHA SRSTVYRFIKKRIIAARKGELROIYNPCCGCLSMCGKQCPCKKNDICEKFKYCGPKKACNFRERGCN

[illegible][illegible]

AAVWARRKPP-----GSKKDS-AITHRRARKHQ-----SH
 ADWRRGR-----PRK-TGSRGRKEARP-----AR
 AAWAKKPP-----APGSKKDENVTPVGRPKKLA-----
 AAWARRPP-----GAKKDEA-SGSHRRRAHKVA-----
 AAVWARRPP-----APGAKDPGQ--PS-SGRAKKLA-----H
 AAWALAKADATGPEDPGQSSSSGSAKKANAPGAKDPGQ--SSRGRRAKRPQGSSRGRPRKHAK
 AAWARRPP-----GAKKDEA-SGSHRRRAHKVA-----
 AAWARRPP-----GAKKDEA-SGSHRRRAHKVA-----
 AAVWARRPP-----APGAKDPGQ--PS-SGRAKKLA-----H
 AAVWARRPP-----APGAKDPGQ--PS-SGRAKKLA-----H
 AAWARRPP-----GAKKDEA-SGSHRRRAHKVA-----
 AAWARRPP-----GAKKDEA-SGSHRRRAHKVA-----
 AAWARRPP-----GAKKDEA-SGSHRRRAHKVA-----
 AAVWARRPP-----APGAKDPGQ--PS-SGRAKKLA-----H
 AAWARRPP-----APGAKDPGQ--PS-SGRAKKLA-----H
 AAVWARRPP-----APGAKDPGQ--PS-SGRAKKLA-----H
 AAWALAKADATGAKDPGQSSSSGSAKKADAPGAKDPGQ--SS-SGRAKRPKRKSSRGRPRKHAK
 AAWALAKADATGAEDPGQSSSSGSAKKVDTPGAKDPGQ--SS-SGRAKRPKRKSSRGRPRKHAK
 AAWALAKADATGAKDPGQSSSSGSAKKADAPGAKDPGQ--SS-SGRAKRPKGSSRGRPRKHAK

E

1. AtFIE A13G20740.1
2. HORVU.MOREX.r2.7HG0582460
3. TRIDC4A_58500
4. TRIDC7A1_89200
5. TRIDC7A2_42990
6. TRIDC7B_34260
7. TaFIE-7A1 TraesCS7A02G308300.1
8. TaFIE-7B1 TraesCS7B02G377900LC.1
9. TaFIE-7D1 TraesCS7D02G084500.1
10. TaFIE-7A2.1 TraesCS7A02G089100.1
11. TaFIE-7A2.2 TraesCS7A02G089200.1
12. TaFIE-4A1 TraesCS4A02G388400.1
13. TaFIE-7D2 TraesCS7D02G305100.1

1. AtFIE AT3G20740.1
2. HORVU.MOREX.r2.7HG0582460
3. TRIDC4A_58500
4. TRIDC7A1_89200
5. TRIDC7A2_42990
6. TRIDC7B_34260
7. TaFIE-7A1 TraesCS7A02G308300.1
8. TaFIE-7B1 TraesCS7B02G337900C.1
9. TaFIE-7D1 TraesCS7D02G084500.1
10. TaFIE-7A2.1 TraesCS7A02G089100.1
11. TaFIE-7A2.2 TraesCS7A02G089200.1
12. TaFIE-4A1 TraesCS4A02G388400.1
13. TaFIE-7D2 TraesCS7D02G305100.1

1. AtFIE A13G20740.1
2. HORVU.MOREX.r2.7HG0582460
3. TRIDC4A_58500
4. TRIDC7A1_89200
5. TRIDC7A2_42990
6. TRIDC7B_34260
7. TaFIE-7A1 TraesCS7A02G308300.1
8. TaFIE-7B1 TraesCS7B02G377900LC.1
9. TaFIE-7D1 TraesCS7D02G084500.1
10. TaFIE-7A2.1 TraesCS7A02G089100.1
11. TaFIE-7A2.2 TraesCS7A02G089200.1
12. TaFIE-4A1 TraesCS4A02G388400.1
13. TaFIE-7D2 TraesCS7D02G305100.1

1. AtFie A13G20740.1
2. HORVU.MOREX.r2.7HG0582460
3. TRIDC4A_58500
4. TRIDC7A1_89200
5. TRIDC7A2_42990
6. TRIDC7B_34260
7. TaFie-7A1 TraesCS7A02G308300.1
8. TaFie-7B1 TraesCS7B02G377900LC.1
9. TaFie-7D1 TraesCS7D02G084500.1
10. TaFie-7A2.1 TraesCS7A02G089100.1
11. TaFie-7A2.2 TraesCS7A02G089200.1
12. TaFie-4A1 TraesCS4A02G388400.1
13. TaFie-7D2 TraesCS7D02G305100.1

1. AtFIE A13G20740.1
2. HORVU.MOREX.r2.7HG0582460
3. TRIDC4A_58500
4. TRIDC7A1_89200
5. TRIDC7A2_42990
6. TRIDC7B_34260
7. TaFIE-7A1 TraesCS7A02G308300.1
8. TaFIE-7B1 TraesCS7B02G377900LC.1
9. TaFIE-7D1 TraesCS7D02G084500.1
10. TaFIE-7A2.1 TraesCS7A02G089100.1
11. TaFIE-7A2.2 TraesCS7A02G089200.1
12. TaFIE-4A1 TraesCS4A02G388400.1
13. TaFIE-7D2 TraesCS7D02G305100.1

1. AtFIE AT3G20740.1
2. HORVU.MOREX.r2.7HG0582460
3. TRIDC4A_38260
4. TRIDC7A1_89200
5. TRIDC7A2_42990
6. TRIDC7B_34260
7. TaFIE-7A1 TraesCS7A02G308300.1
8. TaFIE-7B1 TraesCS7B02G377900LC.1
9. TaFIE-7D1 TraesCS7D02G084500.1
10. TaFIE-7A2.1 TraesCS7A02G089100.1
11. TaFIE-7A2.2 TraesCS7A02G089200.1
12. TaFIE-4A1 TraesCS4A02G388400.1
13. TaFIE-7D2 TraesCS7D02G305100.1

[illegible]

G (part1)

1. AtEMF2 AT5G51230.1
2. AtVRN2 AT4G16845.1
3. AtFIS2 AT2G35670.1
4. HORVU.MOREX.r2.HG0078790.1
5. HORVU.MOREX.r2.HG007970.1
6. HORVU.MOREX.r2.HG0391090.1
7. TRIDC2AG000370.14
8. TRIDC2AG000520.28
9. TRIDC2BG000420.11
10. TRIDC5AG029300.6
11. TRIDC5BG030790.3
12. TRIDC5BG078180.1
13. TaSuSu(2)-2A1 TraesCS2A02G000100.1
14. TaSuSu(2)-2A2 TraesCS2A02G002500.1
15. TaSuSu(2)-2B1 TraesCS2B02G023900.1
16. TaSuSu(2)-2B2 TraesCS2B02G020400.3
17. TaSuSu(2)-2D1 TraesCS2D02G000600.1
18. TaSuSu(2)-5A1 TraesCS5A02G179600.1
19. TaSuSu(2)-5B1 TraesCS5B02G177400.3
20. TaSuSu(2)-5D1 TraesCS5D02G184200.3

1. AtEMF2 AT5G51230.1
2. AtVRN2 AT4G16845.1
3. AtFIS2 AT2G35670.1
4. HORVU.MOREX.r2.HG0078790.1
5. HORVU.MOREX.r2.HG0079070.1
6. HORVU.MOREX.r2.HG0391090.1
7. TRIDC2AG0003070.14
8. TRIDC2AG000520.28
9. TRIDC2BG000420.11
10. TRIDC5AG029300.6
11. TRIDC5BG030790.3
12. TRIDC5BG078180.1
13. TaSu2J-2A1 TraesCS2A02G000100.1
14. TaSu2J-2A2 TraesCS2A02G002500.1
15. TaSu2J-2B1 TraesCS2B02G023900.1
16. TaSu2J-2B2 TraesCS2B02G020400.3
17. TaSu2J-2D1 TraesCS2D02G000600.1
18. TaSu2J-5A1 TraesCS5A02G179600.1
19. TaSu2J-5B1 TraesCS5B02G177400.3
20. TaSu2J-5D1 TraesCS5D02G184200.3

1. AtEMF2 AT5G51230.1
2. AtVRN2 AT4G16845.1
3. AtFIS2 AT2G35670.1
4. HORVU.MOREX.r2.HG0078790.1
5. HORVU.MOREX.r2.HG007970.1
6. HORVU.MOREX.r2.HG0391090.1
7. TRIDC2AG0003070.14
8. TRIDC2AG000520.28
9. TRIDC2BG000420.11
10. TRIDCSAG029300.6
11. TRIDCSBG030790.3
12. TRIDCSBG078180.1
13. TaSu2J-2A1 TraesCS2A02G000100.1
14. TaSu2J-2A2 TraesCS2A02G002500.1
15. TaSu2J-2B1 TraesCS2B02G023900.1
16. TaSu2J-2B2 TraesCS2B02G020400.3
17. TaSu2J-2D1 TraesCS2D02G000600.1
18. TaSu2J-5A1 TraesCS5A02G179600.1
19. TaSu2J-5B1 TraesCS5B02G177400.3
20. TaSu2J-5D1 TraesCS5D02G184200.3

1. AtEMF2 AT5G51230.1
2. AtVRN2 AT4G16845.1
3. AtFIS2 AT2G35670.1
4. HORVU.MOREX.r2.HG0078790.1
5. HORVU.MOREX.r2.HG007970.1
6. HORVU.MOREX.r2.HG0391090.1
7. TRIDC2AG000370.14
8. TRIDC2AG000520.28
9. TRIDC2BG000420.11
10. TRIDC5AG029300.6
11. TRIDC5BG030790.3
12. TRIDC5BG078180.1
13. TaSuZ(2)-2A1 TraesCS2A02G000100.1
14. TaSuZ(2)-2A2 TraesCS2A02G002500.1
15. TaSuZ(2)-2B1 TraesCS2B02G023900.1
16. TaSuZ(2)-2B2 TraesCS2B02G020400.3
17. TaSuZ(2)-2D1 TraesCS2D02G000600.1
18. TaSuZ(2)-5A1 TraesCS5A02G179600.1
19. TaSuZ(2)-5B1 TraesCS5B02G177400.3
20. TaSuZ(2)-5D1 TraesCS5D02G184200.3

1. AtEMF2 AT5G51230.1
2. AtVRN2 AT4G16845.1
3. AtFIS2 AT2G35670.1
4. HORVU.MOREX.r2.HG0078790.1
5. HORVU.MOREX.r2.HG007970.1
6. HORVU.MOREX.r2.HG0391090.1
7. TRIDC2AG000370.14
8. TRIDC2AG000520.28
9. TRIDC2BG000420.11
10. TRIDC5AG029300.6
11. TRIDC5BG030790.3
12. TRIDC5BG078180.1
13. TaSuZ(2)-2A1 TraesCS2A02G000100.1
14. TaSuZ(2)-2A2 TraesCS2A02G002500.1
15. TaSuZ(2)-2B1 TraesCS2B02G023900.1
16. TaSuZ(2)-2B2 TraesCS2B02G020400.3
17. TaSuZ(2)-2D1 TraesCS2D02G000600.1
18. TaSuZ(2)-5A1 TraesCS5A02G179600.1
19. TaSuZ(2)-5B1 TraesCS5B02G177400.3
20. TaSuZ(2)-5D1 TraesCS5D02G184200.3

10 20 30 40 50 60 70 80 90

M P G I L R C S E S T L E C M C H E D S R L R I S E E F L A A E S L A A Y K P V E L Y N Q R R A I K K
M A R K S I R G K E V V M S D D D D D D D V D D D K N I K C V K P L T V Y N L L T P T D S D N D D D D D V D D I N I K Y I K P V A Y K K E I T R S K N N
M P G I L A I P N H D A A N N G C G F S Y T R E S T E I T C G K S R A Q I S P D D L T A K E S L A A Y K P V E L Y N Q R R A I K K
M P G I L P I P P A D A A D T G C E F S Y P Q S A D E M R Q Q L R A R I S P D E L A A E S F A I Y K P V E L Y N Q R R A I K K
M P G I L A I P N H D A A N N C E F S Y P I L S T E I T C G K S R A Q I S P D D L T A K E S L A A Y K P V E L Y N Q R R A I K K
M V G R H G G I H S A K C L P L F I L G R A G P D M C R Q P S T L H S P D E L A A E S F I K Y K P V E L C N V Q K R A I D N
M L L I M V L H T C R D A G C E F S Y P Q S A D E M R Q Q L R A R I S P D E L A A E S F A I Y K P V E L Y N Q R R A I K K
M L L I M V L H T C R D A G C E F S Y P Q S A D E M R Q Q L R A R I S P D E L A A E S F A I Y K P V E L Y N Q R R A I K K
M L L I M V L H T C R D A E C E F S Y P Q S A D E M R Q Q L R A R I S P D E L A A E S F A I Y K P V E L Y N Q R R A I K K
M S G I M S L G L Y G V P C E F C W N N G F S Y P E S T E I T C G K S R A Q I S P D D L T A K E S L A A Y K P V E L Y N Q R R A I K K
M P G I L A I P N H D T A N N G F S Y P E S T E I T C G K S R A Q I S P D D L T A K E S L A A Y K P V E L Y N Q R R A I K K
M P G I L P I P P A D A A D A G C E F S Y P Q S A D E M R Q Q L R A R I S P D E L A A E S F A I Y K P V E L Y N Q R R A I K K
M P G I L P I P P A D A A D A G C E F S Y P Q S A D E M R Q Q L R A R I S P D E L A A E S F A I Y K P V E L Y N Q R R A I K K
M P G I L P I P P A D A A D A G C E F S Y P Q S A D E M R Q Q L R A R I S P D E L A A E S F A I Y K P V E L Y N Q R R A I K K

100 110 120 130 140 150 160 170 180

P L I L R C T H Y K I E A K H K R R Q M I V F I L G A I D A G V Q T Q K I E P L Y L L A R L V L P K P V A E Y S A V Y R E
P S L P R T N Y K I G A K K R R Q T V S I S R G I E C P D N I P F L Y L L A T P I S D N I P L I G H S P Y R F
P Y L R S L K Y I I Q A K K K K S N S G G K I R F N Y R D V S N K M T L K A E V V E N F S C P F C L P C G G H E G I Q U H K S H D A F K F E F Y R A E D H G E V D V P G E I G H S P M Y R F
P S L R Q R L R S K R Q R L I T V S I S R G I E C P D N I P F L Y L L A T P I S D N I P L I G H S P Y R F
P A E L Q R T H Y M I Q A S R K K R Q I T V S I S R G I N T L P D N I P F L Y L L A T P I S D N I P L I G H S P Y R F
P A E L Q R T H Y M I Q A S R K K R Q I T V S I S R G I N T L P A H G I P F L Y L L A T P I S D N I P L I G H S P Y R F
P A E L Q R T H Y M I Q A S R K K R Q I T V S I S R G T N T D H N I P F L Y L L A T P I S D N I P L I G H S P Y R F
P A E L Q R T H Y M I Q A S R K K R Q I T V S I S R G T N T E W D N I P F L Y L L A T P I S D N I P L I G H S P Y R F
P A E L Q R T H Y K I H A S R K K R Q I T V S I S R G T N T E L P E Q N I P F L Y L L A T P I S N I S L I G H S P Y R F
P A E L Q R T H Y K I H A S R K K R Q I T V S I S R G T N T E L P E Q N I P F L Y L L A T P I S N I S L I G H S P Y R F
P A E L Q R T H Y K I H A S R K K R Q I T V S I S R G T N T E L P E Q N I P F L Y L L A T P I S N I S L I G H S T I Y R F
P A E L Q R T H Y M I Q A N R K K R Q I T V S I S R G T N T D H N I P F L Y L L A T P I S D N I P L I G H S P Y R F
P S L R Q R L R S K R Q R L I T V S I S R G T N T R P A H G I P F L Y L L A T P I S D N I P L I G H S P M Y R F
P A E L Q R T H Y M I Q A S R K K R Q I T V S I S R G T N T L P A H G I P F L Y L L A T P I S D N I P L I G H S P Y R F
P S L R Q R L R S K R Q R L I T V S I S R G T N T R P A H G I P F L Y L L A T P I S D N I P L I G H S P Y R F
P A E L Q R T H Y M I Q A S R K K R Q I T V S I S R G T N T D H N I P F L Y L L A T P I S D N I P L I G H S P Y R F
P A E L Q R T H Y K I H A S R K K R Q I T V S I S R G T N T E L P E Q N I P F L Y L L A T P I S N I S L I G H S P Y R F
P A E L Q R T H Y K I H A S R K K R Q I T V S I S R G T N T E L P E Q N I P F L Y L L A T P I S N I S L I G H S P Y R F
P A E L Q R T H Y K I H A S R K K R Q I T V S I S R G T N T E L P E Q N I P F L Y L L A T P I S N I S L I G H S P Y R F

100 110 120 130 140 150 160 170 180

ZnF C2H2

[illegible]

LTTQTLTAIAEASEPKVPHVNDGIVSSPPRAHSSAEKNESTHVNDDDDVSSPRAHSLKNSSTHVNEENISSPPKAHSSKKNESTHNDP
 WGK P DSI GSSST DCLVTSI GRIT
 WGK P NLI GSSST ENCVT N GHT
 WGK P DLI GSSST ENCVT N GHT
 WGK P DSI GSSST DSVTSI GHT
 WGK P NLI GSSST ENCVT N GHT
 WGK P NLI GSSST ENCVT N GHT
 WGK P DLI GSSST ENCVT N GHT
 WGK P DLI GSSST ENCVT N GHT
 WGK P NLI GSSST ENCVT N GHT
 WGK P DSI GSSST DSVTSI GHT
 WGK P NLI GSSST ENCVIPI N GHT
 WGK P DSI GSSST DCLVTSI GRIT
 WGK P NLI GSSST ENCVT N GHT
 WGK P DLI GSSST ENCVT N GHT
 WGK P DLI GSSST ENCVT N GHT
 WGK P DLI GSSST ENCVT N GHT
 WGK P DLI GSSST ENCVT N GHT

[illegible]

G (part2)

1. AtEMF2 AT5G51230.1
2. AtVRN2 AT4G16845.1
3. AtFIS2 AT2G35670.1
4. HORVU.MOREX.r2.HG0078790.1
5. HORVU.MOREX.r2.HG007970.1
6. HORVU.MOREX.r2.HG0391090.1
7. TRIDC2AG000370.14
8. TRIDC2AG000520.28
9. TRIDC2BG000420.11
10. TRIDC5AG029300.6
11. TRIDC5BG030790.3
12. TRIDC5BG071810.1
13. TaSuU-2A1 TraesCS2A02G000100.1
14. TaSuU-2A2 TraesCS2A02G002500.1
15. TaSuU-2B1 TraesCS2B02G002390.1
16. TaSuU-2B2 TraesCS2B02G002400.3
17. TaSuU-2D1 TraesCS2D02G000600.1
18. TaSuU-5A1 TraesCS5A02G179600.1
19. TaSuU-5B1 TraesCS5B02G177400.2
20. TaSuU-5D1 TraesCS5D02G18200.2

1. AEMF2 AT5G51230.1
2. 16VRN2 AT2G16849.1
3. AFIS2 AT2G35670.1
4. HORVU.MOREX.r2.2HG0078790.1
5. HORVU.MOREX.r2.2HG007970.1
6. HORVU.MOREX.r2.5HG0391090.1
7. TRIDC2AG000370.14
8. TRIDC2AG000520.28
9. TRIDC2BG000420.11
10. TRIDC5AG029300.6
11. TRIDC5BG030790.3
12. TRIDC5BG078180.1
13. TaSu2J-2A1 TraesCS2A02G000100.1
14. TaSu2J-2A2 TraesCS2A02G002500.1
15. TaSu2J-2B1 TraesCS2B02G002390.1
16. TaSu2J-2B2 TraesCS2B02G002400.3
17. TaSu2J-2D1 TraesCS2D02G000600.1
18. TaSu2J-5A1 TraesCS5A02G179600.1
19. TaSu2J-5B1 TraesCS5B02G177400.3
20. TaSu2J-5D1 TraesCS5D02G28200.2

1. AEMF2 AT5651230.1
2. 6ATV8N1 4264829.1
3. AfIS2 AT2G35670.1
4. HORVU.MOREX.r.2HG0078790.1
5. HORVU.MOREX.r.2HG007970.1
6. HORVU.MOREX.r.2HG0391090.1
7. TRIDC2AG003070.14
8. TRIDC2AG000520.28
9. TRIDC2BG000420.11
10. TRIDC5AG029300.6
11. TRIDC5BG030790.3
12. TRIDC5BG078180.1
13. TaSuZ1-2A1 TraesCS2A02G000100.1
14. TaSuZ1-2A2 TraesCS2A02G002500.1
15. TaSuZ1-2B1 TraesCS2B02G002390.1
16. TaSuZ1-2B2 TraesCS2B02G002400.3
17. TaSuZ1-2D1 TraesCS2D02G000600.1
18. TaSuZ1-5A1 TraesCS5A02G179600.1
19. TaSuZ1-5B1 TraesCS5B02G177400.2
20. TaSuZ1-5D1 TraesCS5D02G184200.3

1. AtEMF2 AT5G51230.1
2. AtVRN2 AT4G16845.1
3. AtF52 AT2G35670.1
4. HORVU.MOREX.r2.2HG0078790.1
5. HORVU.MOREX.r2.2HG007970.1
6. HORVU.MOREX.r2.5HG0391090.1
7. TRIDC2AG000370.14
8. TRIDC2AG000520.28
9. TRIDC2BG000420.11
10. TRIDC5AG029300.11
11. TRIDC5BG030790.3
12. TRIDC5BG071810.1
13. TaSuZ1-2A1 TraesCS2A02G000100.1
14. TaSuZ1-2A2 TraesCS2A02G002500.1
15. TaSuZ1-2B1 TraesCS2B02G002390.1
16. TaSuZ1-2B2 TraesCS2B02G002400.3
17. TaSuZ1-2D1 TraesCS2D02G000600.1
18. TaSuZ1-5A1 TraesCS5A02G179600.1
19. TaSuZ1-5B1 TraesCS5B02G177400.3
20. TaSuZ1-5D1 TraesCS5D02G184200.3

1. AtEMF2 AT5G51230.1
2. AtVRN2 AT4G16845.1
3. AtFIS2 AT2G35670.1
4. HORVU.MOREX.r.2HG0078790.1
5. HORVU.MOREX.r.2HG007970.1
6. HORVU.MOREX.r.2HG0391090.1
7. TRIDC2AG000370.14
8. TRIDC2AG000520.28
9. TRIDC2BG000420.11
10. TRIDC5AG029300.16
11. TRIDC5BG030790.3
12. TRIDC5BG078180.1
13. TaSuZ1-2A1 TraesCS2A02G000100.1
14. TaSuZ1-2A2 TraesCS2A02G002500.1
15. TaSuZ1-2B1 TraesCS2B02G023900.1
16. TaSuZ1-2B2 TraesCS2B02G020400.3
17. TaSuZ1-2D1 TraesCS2D02G000600.1
18. TaSuZ1-5A1 TraesCS5A02G179600.1
19. TaSuZ1-5B1 TraesCS5B02G177400.3
20. TaSuZ1-5D1 TraesCS5D02G182000.2

450 470 490 510 530 540

EEFVAVTSECOAVNVSKITMTISLVANE--DVIDPKQDTTFHS--SKFRRRQ--KQVRSSRQGPFI--GLGCEVLDK
EEFKLITTPQIAES--LSEFIFEEG--SDDKFEPFSLCKPKRKRRGG--RNNTRRKVCFLPLDS--SLANGT
ASDITITTPQIAES--LSEPKVPHUND--ENVSSTPIRA--HSCKNKSTKKNVDNVPSPPKTRSSK--IDILTTTPQIAES--SEKVRHVH
EEFVAVTSECOAVNVSKIDAKKGFILTIAGNDGGRIVFYR--SRFRKIKI--SE--TPTHKIKDVPHPHIMDSG2--SGMTMPV
EEFVAVTSECOAVNVSKIAAWKMLVG--KGVDPRHHTTASY--SKALKMRKRRL--SE--AAAINISPVVPHPHIMDSG2--
EEFVAVTSECOAVNVSKITVWRITLVA--EGVDPRHHTTASY--SKFKKIKRRLGML--GTTAAKISHVPHPHIMDSG2--
EEFVAVTSECOAVNVSKITRTREILTVAGNDGGRIVFYR--SRFRKIKI--SE--TITDKTKDVPHPHITHLGSGMTVPV
EEFVAVTSECOAVNVSKIAAWKMLVG--KGVDPRHHTTASY--SKALKMRKRRL--SE--AAAINISPVVPHPHIMDSG2--
EEFVAVTSECOAVNVSKIAAWKMLVG--KGVDPRHHTTASY--SKALKMRKRRL--SE--AAAINISPVVPHPHIMDSG2--
EEFVAVTSECOAVNVSKITVWRITLVA--EGVDPRHHTTASY--SKFKKIKRRLGML--GTTAAKISHVPHPHIMDSG2--
EEFVAVTSECOAVNVSKITVWRITLVA--EGVDPRHHTTASY--SKFKKIKRRLGML--GTTAAKISHVPHPHIMDSG2--
EEFVAVTSECOAVNVSKIAAWKMLVG--KGVDPRHHTTASY--SKALKMRKRRL--SE--AAAINISPVVPHPHIMDSG2--
EEFVAVTSECOAVNVSKITRTREILTVAGNDGGRIVFYR--SRFRKIKI--SE--TITDKTKDVPHPHITHLGSGMTVPV
EEFVAVTSECOAVNVSKIAAWKMLVG--KGVDPRHHTTASY--SKALKMRKRRL--SE--AAAINISPVVPHPHIMDSG2--
EEFVAVTSECOAVNVSKIAARREILTVAGNDGGRIVFYR--SRFRKIKI--SE--TITDKTKDVPHPHITHLGSGMTMPV
EEFVAVTSECOAVNVSKIAAWKMLVG--KGVDPRHHTTASY--SKALKMRKRRL--SE--AAAINISPVVPHPHIMDSG2--
EEFVAVTSECOAVNVSKITVWRITLVA--EGVDPRHHTTASY--SKFKKIKRRLGML--GTTAAKISHVPHPHIMDSG2--
EEFVAVTSECOAVNVSKITVWRITLVA--EGVDPRHHTTASY--SKFKKIKRRLGML--GTTAAKISHVPHPHIMDSG2--

DDAHLSVRSEKSRIPP	NGGNNR	GLGVPY	GKHYV	GGGAA	SGRRVVP	GGISPADVQSGDPD	YVQS	IAGST	FM
ENGIAL	NDGNNR	GLGVPY	EAATL	LAGOFF	MTN	SNIP	---	PAIAHSSLDAG	AKVILL
DDNVSS	PRHHS	---	SKNNK	STKND	DNIP	SPPKTKRSSK	TSN	ILATTPQ	AKAEPS
QDDIVELRSPRNTVPAPTQMTESRSS	EDGDK	---	GSVVD	VYPKE	NGINVP	PEASID	PHRL	---	GRNHS
---	EDTDA	---	GSKDF	-VORE-D	DNN	SV	ALD	SAE	HDHSL
---	EDAQA	---	VSEDD	-VORE-F	DD	ISAPRA	SVDP	PAQSL	---
QDDIVEPRSPRNTVPPPAQTTESGSS	KDAQD	---	GSVVD	VYPKE	NGINVP	---	---	---	---
---	EDAQA	G	GSKDF	-VORE-D	DNN	SV	ALD	SAE	HDHSL
---	EDAQA	ALA	GSKDF	-VORE-D	DNN	SV	ALD	SAE	HDHSL
---	EDAQA	---	VSEDD	-VORE-F	DD	ISAPRA	SVDP	PAQSL	---
---	EDAQA	---	VSEDD	-VORE-F	DD	ISAPRA	SVDP	PAQSL	---
---	EDAQA	---	VSEDD	-VORE-F	DD	ISAPRA	SVDP	PAQSL	---
---	EDAQA	G	GSKDF	-VORE-D	DNN	SV	ALD	SAE	HDHSL
QDDIVEPRSPRNTVPPPAQTTESGSS	KDAQD	---	GSVVD	VYPKE	NGINVP	---	---	---	---
---	EDAQA	ALA	GSKDF	-VORE-D	DNN	SV	ALD	SAE	HDHSL
QDDIVEPRSPRNTVPPPAEMTESGSS	KDAQD	---	GSVVD	VYPKE	NGINVP	---	---	---	---
---	EDAQA	G	GSKDF	-VORE-D	DNN	SV	ALD	SAE	HDHSL
---	EDAQA	---	VSEDD	-VORE-F	DD	ISAPRA	SVDP	PAQSL	---
---	EDAQA	---	VSEDD	-VORE-F	DD	ISAPRA	SVDP	PAQSL	---
---	EDAQA	---	VSEDD	-VORE-F	DD	ISAPRA	SVDP	PAQSL	---
---	EDAQA	---	VSEDD	-VORE-F	DD	ISAPRA	SVDP	PAQSL	---

[illegible]

DGH	SWACE	AF	SRL	HG	QPOLVONP	PRL	WCWR	VM	K	WNH	G	L	NGRTM	NT	LG	YQ	LN	Q	I	SV	TN	NNNN	N	S	V	D	H	P	S	D	S	T	N	NNNN	I	V	D	H	P	N	D	I						
DGH	SWACE	VE	FL	YE	KE	EL	HCYSS	FW	CWR	F	L	K	WNH	G	L	NGRTM	NT	LG	YQ	LN	Q	I	SV	TN	NNNN	N	S	V	D	H	P	S	D	S	T	N	NNNN	I	V	D	H	P	N	D	I			
DGH	SWACE	VE	FL	YE	KE	EL	MKN	SS	FD	MM	WR	F	R	I	K	WNH	G	L	NGRTM	NT	LG	YQ	LN	Q	I	SV	TN	NNNN	N	S	V	D	H	P	S	D	S	T	N	NNNN	I	V	D	H	P	N	D	I
DGH	SWACE	VE	FL	YE	KE	EL	MKN	SS	FD	MM	WR	F	R	I	K	WNH	G	L	NGRTM	NT	LG	YQ	LN	Q	I	SV	TN	NNNN	N	S	V	D	H	P	S	D	S	T	N	NNNN	I	V	D	H	P	N	D	I
DGH	SWACE	VE	FL	YE	KE	EL	MKN	SS	FD	MM	WR	F	R	I	K	WNH	G	L	NGRTM	NT	LG	YQ	LN	Q	I	SV	TN	NNNN	N	S	V	D	H	P	S	D	S	T	N	NNNN	I	V	D	H	P	N	D	I
DGH	SWACE	VE	FL	YE	KE	EL	MKN	SS	FD	MM	WR	F	R	I	K	WNH	G	L	NGRTM	NT	LG	YQ	LN	Q	I	SV	TN	NNNN	N	S	V	D	H	P	S	D	S	T	N	NNNN	I	V	D	H	P	N	D	I
DGH	SWACE	VE	FL	YE	KE	EL	MKN	SS	FD	MM	WR	F	R	I	K	WNH	G	L	NGRTM	NT	LG	YQ	LN	Q	I	SV	TN	NNNN	N	S	V	D	H	P	S	D	S	T	N	NNNN	I	V	D	H	P	N	D	I
DGH	SWACE	VE	FL	YE	KE	EL	MKN	SS	FD	MM	WR	F	R	I	K	WNH	G	L	NGRTM	NT	LG	YQ	LN	Q	I	SV	TN	NNNN	N	S	V	D	H	P	S	D	S	T	N	NNNN	I	V	D	H	P	N	D	I
DGH	SWACE	VE	FL	YE	KE	EL	MKN	SS	FD	MM	WR	F	R	I	K	WNH	G	L	NGRTM	NT	LG	YQ	LN	Q	I	SV	TN	NNNN	N	S	V	D	H	P	S	D	S	T	N	NNNN	I	V	D	H	P	N	D	I
DGH	SWACE	VE	FL	YE	KE	EL	MKN	SS	FD	MM	WR	F	R	I	K	WNH	G	L	NGRTM	NT	LG	YQ	LN	Q	I	SV	TN	NNNN	N	S	V	D	H	P	S	D	S	T	N	NNNN	I	V	D	H	P	N	D	I
DGH	SWACE	VE	FL	YE	KE	EL	MKN	SS	FD	MM	WR	F	R	I	K	WNH	G	L	NGRTM	NT	LG	YQ	LN	Q	I	SV	TN	NNNN	N	S	V	D	H	P	S	D	S	T	N	NNNN	I	V	D	H	P	N	D	I
DGH	SWACE	VE	FL	YE	KE	EL	MKN	SS	FD	MM	WR	F	R	I	K	WNH	G	L	NGRTM	NT	LG	YQ	LN	Q	I	SV	TN	NNNN	N	S	V	D	H	P	S	D	S	T	N	NNNN	I	V	D	H	P	N	D	I
DGH	SWACE	VE	FL	YE	KE	EL	MKN	SS	FD	MM	WR	F	R	I	K	WNH	G	L	NGRTM	NT	LG	YQ	LN	Q	I	SV	TN	NNNN	N	S	V	D	H	P	S	D	S	T	N	NNNN	I	V	D	H	P	N	D	I
DGH	SWACE	VE	FL	YE	KE	EL	MKN	SS	FD	MM	WR	F	R	I	K	WNH	G	L	NGRTM	NT	LG	YQ	LN	Q	I	SV	TN	NNNN	N	S	V	D	H	P	S	D	S	T	N	NNNN	I	V	D	H	P	N	D	I
DGH	SWACE	VE	FL	YE	KE	EL	MKN	SS	FD	MM	WR	F	R	I	K	WNH	G	L	NGRTM	NT	LG	YQ	LN	Q	I	SV	TN	NNNN	N	S	V	D																

K N K N N V D N K D N N S R D K
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