

Supplemental Figure S2. Sequence alignment of PtCenBP1p, PtCenBP2p and PtCenBP3p.

Sequence alignments were realized using the ClustalW program. For convenience, each PtCenBP1p repeat (r1 to r6) is aligned separately. Conserved residues are underlined in black and similar residues in grey.

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CenBP1_Start 1 MPPGQLQKNKQQQKNVLTPOKLELLQENRKLLSHIFNMGNLNGQHNLHRAMLRMRAMIE
CenBP3 1 -----MLSDS
CenBP2 1 -----MLSDT
CenBP1_end 1 -----
CenBP1_rP1 1 -----
CenBP1_rP2 1 -----
CenBP1_rp3 1 -----
CenBP1_rP4 1 -----
CenBP1_rP5 1 -----
CenBP1_rP6a 1 -----

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CenBP1_Start 61 KKIDVSKISKKIKGKIVSQLLRYESHSTLHEAFIRWKVRADPEIVKKAVDQILLNSRLNE
CenBP3 6  NNRLSTQLSPKLGIIIVSQLIKQSSLSIQDAFIRWQVRTNPEIVKKAVDKILLNSKLNQ
CenBP2 6  NNQLSTKLSPKLKGIIIVSQLIKQONLTLQDAFIRWQVRTNPEIVKQAVDKILLNSKLNQ
CenBP1_end 1 -----
CenBP1_rP1 1 -----
CenBP1_rP2 1 -----
CenBP1_rp3 1 -----
CenBP1_rP4 1 -----
CenBP1_rP5 1 -----
CenBP1_rP6a 1 -----

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CenBP1_Start 121 FNAFHKLKNLLGQKDLQK-KMNAKKRKNMCLMNLALFLQKKEFQLKTAAVAAALKPKNQDS
CenBP3 66  FNAFHKLKFLLGTQPPKEVRMNAKKKKNLSIINLALFVQKKEQQLKRAIESIKPTSQDT
CenBP2 66  FNAFHKLKFLLGTQPPKEARMNARKKKNLSLINLALFIQKKEQQLKRAIESIKPTSQDS
CenBP1_end 1 -----
CenBP1_rP1 1 -----
CenBP1_rP2 1 -----
CenBP1_rp3 1 -----
CenBP1_rP4 1 -----
CenBP1_rP5 1 -----
CenBP1_rP6a 1 -----

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CenBP1_Start 180 DKMLGLLIWSISSKHRERYLREKFNWWRLYSKVKSDKLQQLKALERLGDEYNMRNDRLD
CenBP3 126 NKMLGLLIWSISSKYRERYLREKFNWWKLIAKIKSNKLEKQLKALERLGDEYNMRNDRLD
CenBP2 126 NKMLGLLIWSISSKYRERYLREKFNWWKLIAKMKSNKLEKQLKALEILGDEYNMRNDRLD
CenBP1_end 1 -----
CenBP1_rP1 1 -----
CenBP1_rP2 1 -----
CenBP1_rp3 1 -----
CenBP1_rP4 1 -----
CenBP1_rP5 1 -----
CenBP1_rP6a 1 -----

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CenBP1_Start 240 RQRLKEVQNISNYQAFEKWRGDLNFRLLKKKFFSVLLKTTFGRLQRCYTRWVDLPDKRE
CenBP3 186 RQRLKE-----AFEIWRGDLNFRLLKKKFFAVLLKTTFGRLQRCYTRWVDLPDKRE
CenBP2 186 RSRLKE-----AFEIWRGDLNFRLLKKKFFAVLLKTTFGRLQRCYTRWVDLPDKRE
CenBP1_end 1 -----
CenBP1_rP1 1 -----
CenBP1_rP2 1 -----
CenBP1_rp3 1 -----
CenBP1_rP4 1 -----
CenBP1_rP5 1 -----
CenBP1_rP6a 1 -----

CenBP1_Start 300 NDMKKQGMLLITKLTNKAQONKRLVWNSFKAITDDAKNKKTKVIRELIEVTFNQSYTAFY
CenBP3 237 NDIKKQGLLLINKLGNKVDQONKRLVWNAFKDIHDEAKNKKTKVIRELIEVTFNQSYTAFY
CenBP2 237 NDIKKQGLLLINKLGNKVDQONKRLVWNAFKDIHDEAKNKKTKVIRELIEVTFNQSYTAFY
CenBP1_end 1 -----
CenBP1_rP1 1 -----
CenBP1_rP2 1 -----
CenBP1_rp3 1 -----
CenBP1_rP4 1 -----
CenBP1_rP5 1 -----
CenBP1_rP6a 1 -----

CenBP1_Start 360 KWANYNTYAKLTETNLRKIKALQASANVTQQLVKFETFKLFGLSKKAEICSFNLKILKI
CenBP3 297 KWANYNTYAKLTETNLRKIKSFOQSANVTHQLVKQETFKLFNLSKKMQICSFLDKIILKL
CenBP2 297 KWANYNTYAKLTETNLRKIKSLQQSANVTHQLVKQETFKLFNLSKKMQICSFLDKIILKL
CenBP1_end 1 -----
CenBP1_rP1 1 -----
CenBP1_rP2 1 -----
CenBP1_rp3 1 -----
CenBP1_rP4 1 -----
CenBP1_rP5 1 -----
CenBP1_rP6a 1 -----

CenBP1_Start 420 QQRQKLDALRQIENVSQKMKQEKLDNINVKQEIISRLGDTANKTEKGLLRQVLRKFALLR
CenBP3 357 QQRQKLDALRQIENYCVQKMKMEKLNINVKQDLISRLKDTANKTEKGLLRQVLRKFALLR
CenBP2 357 QQRQKLDALRQIENYCVQKMKMEKLNINVKQDLISRLKDTANKTEKGLLRQVLRKFALLR
CenBP1_end 1 -----
CenBP1_rP1 1 -----
CenBP1_rP2 1 -----
CenBP1_rp3 1 -----
CenBP1_rP4 1 -----
CenBP1_rP5 1 -----
CenBP1_rP6a 1 -----

CenBP1_Start 480 EQQEIKNKYFVRIISITSGMAMDAFRRWKQLPDPAEQOMIQNVSKFQLRLOFLFKQRVKQ
CenBP3 417 TTQEIKNKYFGRILLSVNGQLIDAFRWKTLPNPNDINNIQKASKFQIKLQMFITNKRKQ
CenBP2 417 EQQEIKNKYFGKILLSVNGQLIDAFRWKTLPNPNDINNIQKASKFQIKLQMFITNKRKQ
CenBP1_end 1 -----
CenBP1_rP1 1 -----
CenBP1_rP2 1 -----
CenBP1_rp3 1 -----
CenBP1_rP4 1 -----
CenBP1_rP5 1 -----
CenBP1_rP6a 1 -----

CenBP1_Start 540 **SFDPLKEVYYQGIQSKRLCIKQMLVKQLSAPQRFRLQWQSMNKIYKSVIACQKTNNFFDS**
CenBP3 477 **AYDPLKYLYYDALQKKRFCIRQLFSVTMSAPQRYLKQWQNVAKVYKSVVACQKTNNLFYS**
CenBP2 477 **AYDPLKYLYYDALQKKRFCIRQLFSVTMSAPQRYLKQWQNVAKVYKSVVACQKTNNLFYS**
CenBP1_end 1 -----
CenBP1_rP1 1 -----
CenBP1_rP2 1 -----
CenBP1_rp3 1 -----
CenBP1_rP4 1 -----
CenBP1_rP5 1 -----
CenBP1_rP6a 1 -----

CenBP1_Start 600 **LQDVLKNNLKAFLYTRKDAEVKEKCLVKLMSSTFNLMIAFLKWKNYNKQOKISENLGDE**
CenBP3 537 **LALITQSNLLTFVQNKKDVDIKEKCIQKILASQHSNLAIAFFKWKSHNKQEQILERLGDE**
CenBP2 537 **LAMILQSNLLAFTIQNKKDVDIKEKCIQKILASQHSNLAIAFFRWKSONKQQQILERLGDE**
CenBP1_end 1 -----
CenBP1_rP1 1 -----
CenBP1_rP2 1 -----
CenBP1_rp3 1 -----
CenBP1_rP4 1 -----
CenBP1_rP5 1 -----
CenBP1_rP6a 1 -----

CenBP1_Start 660 **KKKMLLNLQRFIKNDNLNRLRRILRLFYNEQQVNQLIKKIHLRVL-----**
CenBP3 597 **KMKFLILNLKKEFLENDKKQRLRRALNLF L V Q IKKINLRLMQTVVGQVSSSFQKW**
CenBP2 597 **KMKFLILNLKKEFLENDKKQRLRRALNLFNSNLQIAQQIKKINLRLMQTVIGQVSTSFQKW**
CenBP1_end 1 -----
CenBP1_rP1 1 -----
CenBP1_rP2 1 -----
CenBP1_rp3 1 -----
CenBP1_rP4 1 -----
CenBP1_rP5 1 -----
CenBP1_rP6a 1 -----

CenBP1_Start -----
CenBP3 657 **KYLPEDKVNGSIAKVS KFMISLGRVAYRFVKVNSWNIMEDYLLDGGQAKKCYCINKIISVG**
CenBP2 657 **KYLPEDRVNGKTVKVS KFMISLGRVAYRFVKVNSWNILEDLLEGGQAKKCYCINKIIFSVG**
CenBP1_end 1 -----
CenBP1_rP1 1 -----
CenBP1_rP2 1 -----
CenBP1_rp3 1 -----
CenBP1_rP4 1 -----
CenBP1_rP5 1 -----
CenBP1_rP6a 1 -----

CenBP1_Start -----
CenBP3 717 **QSDLKTAFLIWHRRSWEMKMFDFQFSQLNVTLNDEI IKQRLINWINSGNKVKHYALIEILK**
CenBP2 717 **QSDLKTAFLSWHRRSWEMKMFDFQFSQLNVTLNDEI IKQRLVNWINSGYKVKHYALIEILK**
CenBP1_end 1 -----
CenBP1_rP1 1 -----
CenBP1_rP2 1 -----
CenBP1_rp3 1 -----
CenBP1_rP4 1 -----
CenBP1_rP5 1 -----
CenBP1_rP6a 1 -----

CenBP1_Start -----

CenBP3 777 RFHQNAESHNLRRKALAIHRNTISQVWISFNKWKQIPEHDYSQL-TKVTKFEQSINRFL
 CenBP2 777 RFHQNAOSYNLRRKALAIHRNTISQVWISFNKWKQIPELDYSQL-AKVTKFEQQFNHFL
 CenBP1_end 1 -----
 CenBP1_rP1 1 -----RNTISQVWLSFNRWKQLPEENNDLKVQATKFEKSLSKFV
 CenBP1_rP2 1 -----RTQIGAVWDTFNKWKNLPEANPDDL-IKASRFETQLNKFT
 CenBP1_rp3 1 -----RTQIGAVWDTFNKWKNLPEANADDL-IKASRFETQLNKFT
 CenBP1_rP4 1 -----RTQIGAVWDTFNKWKNLPEANPDDL-IKASKFETQLNKFT
 CenBP1_rP5 1 -----RTQIGAVWDTFNKWKNLPEANPDDL-IKASRFETQLNKFT
 CenBP1_rP6a 1 -----RTQIGAVWDTFNKWKNLPEANPDDL-IKASRFETQLNKFT

CenBP1_Start -----
 CenBP3 836 IRQAKKKTWNPLNEIYDDALAIKKRAVLLLVKTOESEQQALSCKWNKNVALIQEVERCKS
 CenBP2 836 IRQTKKKTWNPLNEIYDDALAIKKRAVLLLVKTOESEQQALSCKWNKNVSLIQEVERCKS
 CenBP1_end 1 -----
 CenBP1_rP1 41 FHILKKHSWNPLQEVYDDGLAIKKRAVLLMIKTOESEQQRTLDQWNKNVSLIREVERCKV
 CenBP1_rP2 40 LHIWRKRTWNPLQEVYDDAALKKRAIILMIKTOESEQQRALDQWNKNVGLMKEVERCKC
 CenBP1_rp3 40 LHIWRKRTWNPLQEVYDDAALKKRAIILMIKTOESEQQRALDQWNKNVGLMKEVERCKC
 CenBP1_rP4 40 LHIWRKRTWNPLQEVYDDAALKKRAIILMIKTOESEQQRALDQWNKNVGLMKEVERCKC
 CenBP1_rP5 40 LHIWRKRTWNPLQEVYDDAALKKRAIILMIKTOESEQQRALDQWNKNVGLMKEVERCKC
 CenBP1_rP6a 40 LHIWRKRTWNPLQEVYDDAALKKRAIILMIKTOESEQQRALDQWNKNVGLMKEVERCKC

CenBP1_Start -----
 CenBP3 896 VILLFKFGVDQIQCNLQIMOPNOESRLKEKALLKIIGGNYDNIIRYFFMRWRNYLKFERLQ
 CenBP2 896 VILLFKFGVDQIQFNLQIMOPNOESRLKEKALLKIIGGNYDNIIRYFFMRWTNYLKFERIQ
 CenBP1_end 1 -----
 CenBP1_rP1 101 VISLFLGLIGSHIKNNIAPLKPDEESQKKEKALLRLIGNFDSNLRYFFMKWYNDGKLEKLO
 CenBP1_rP2 100 VIGLFGFIGVHIKNNIAPLKPDEESQKKEKALLRLIGNFDSNLRYFFMKWYNDGKLEKLO
 CenBP1_rp3 100 VIGLFGFIGVHIKNNIAPLKPDEESQKKEKALLRLIGNFDSNLRYFFMKWYNDGKLEKLO
 CenBP1_rP4 100 VIGLFGFIGVHIKNNIAPLKPDEESQKKEKALLRLIGNFDSNLRYFFMKWYNDGKLEKLO
 CenBP1_rP5 100 VIGLFGFIGVHIKNNIAPLKPDEESQKKEKALLRLIGNFDSNLRYFFMKWYNDGKLEKLO
 CenBP1_rP6a 100 VIGLFGFIGVHIKNNIAPLKPDEESQKKEKALLRLIGNFDSNLRYFFMKWYNDGKLEKLO

CenBP1_Start -----
 CenBP3 956 -AIEGEKKEFLRQIGGFYRNNMKSRLRLALSFKFRNSVLSAVQQKFFSRLFSTKFGGAI
 CenBP2 956 -AIEGEKKEFLRQIGGFYRNNMKSRLRLALSFKFRNSVLSAVQQKFFSRLFSTKFGGAI
 CenBP1_end 1 -----
 CenBP1_rP1 161 GAMTDEKKKLLLEAINNFSKNNDFARLRAILAKFRRNSSITAVQDRFFAKLFATQFGGAI
 CenBP1_rP2 160 GAMTDEKKKLLLEAINNFSKNNDFARLRAILAKFRRNSSITAVQDRFFAKLFATQFGGAI
 CenBP1_rp3 160 GAMTDEKKKLLLEAINNFSKNNDFARLRAILAKFRRNSSITAVQDRFFAKLFATQFGGAI
 CenBP1_rP4 160 GAMTDEKKKLLLEAINNFSKNNDFARLRAILAKFRRNSSITAVQDRFFAKLFATQFGGAI
 CenBP1_rP5 160 GAMTDEKKKLLLEAINNFSKNNDFARLRAILAKFRRNSSITAVQDRFFAKLFATQFGGAI
 CenBP1_rP6a 160 GAMTDEKKKLLLEAINNFSKNNDFARLRAILAKFRRNSSITAVQDRFFAKLFATQFGGAI

CenBP1_Start -----
 CenBP3 1015 VAFQKWKNLPEIQNYENVKKGRRLEKLEENLYRGRIKLSYDPLKDEYQEQAMNKKMHCIKQ
 CenBP2 1015 VAFQKWKNLPEIQNFENLKKGRRLEKLEENLYRGRIKLSYDPLKDEYQEQAMNKKLHCIRK
 CenBP1_end 1 -----
 CenBP1_rP1 221 KAFQKWKNLPEPVNTEQLKNARKFERTLDILFRSHLKVSDPLKEDYMDALNIKRMCLRK
 CenBP1_rP2 220 KAFQKWKNLPEPVNTEQLKNARKFERTLDILFRSHLKVSDPLKEDYMDALNIKRMCLRK
 CenBP1_rp3 220 KAFQKWKNLPEPVNTEQLKNARKFERTLDILFRSHLKVSDPLKEDYMDALNIKRMCLRK
 CenBP1_rP4 220 KAFQKWKNLPEPVNTEQLKNARKFERTLDILFRSHLKVSDPLKEDYMDALNIKRMCLRK
 CenBP1_rP5 220 KAFQKWKNLPEPVNTEQLKNARKFERTLDILFRSHLKVSDPLKEDYMDALNIKRMCLRK
 CenBP1_rP6a 220 KAFQKWKNLPEPVNTEQMKNARKFERTLDILFRGRVKAQFEPLKDVYQEGNSKKLYCLRK

CenBP1_Start -----
 CenBP3 1075 LIILGMGSNKRLFLSWRNTNRLKSIETCKQTTFQTLALTLSGNVQVIFKTN---QLQ
 CenBP2 1075 LIILGMGLNKRLFLWRNTNRLKSIETCKQTTFQTLALTLSGNVQVIFKTN---QLQ
 CenBP1_end 1 -----
 CenBP1_rP1 281 LFEKSMSAHKRLFLLWAQQNRQAKQIEVCRLTTALFVGLAQIVTANVQPIMQNPREAQAK
 CenBP1_rP2 280 LFEKSMSAHKRLFLLWAQQNRQAKQIEVCRLTTALFVGLAQIVTANVQPIMQNPREAQAK
 CenBP1_rp3 280 LFEKSMSAHKRLFLLWAQQNRQAKQIEVCRLTTALFVGLAQIVTANVQPIMQNPREAQAK
 CenBP1_rP4 280 LFEKSMSAHKRLFLLWAQQNRQAKQIEVCRLTTALFVGLAQIVTANVQPIMQNPREAQAK
 CenBP1_rP5 280 LFEKSMSAHKRLFLLWAQQNRQAKQIEVCRLTTALFVGLAQIVTANVQPIMQNPREAQAK
 CenBP1_rP6a 279 LMTLAMGQNKRLFLYWRDINRLHKSIECTKYTTNLFQTLAFTIAGHVQSIIFKPNKQ---Q

CenBP1_Start -----
 CenBP3 1132 EKVFEEKLSQYNNLLRWAFIKWNNQAKSDRIASLMDK---ETRKFFLLFALQRNLKHNKI
 CenBP2 1132 EKVFEEKLSKYNNLLRWGFIKWNNQAKSAKTASLMDQ---EKRKFFLLFALQRNLKHNQN
 CenBP1_end 1 -----
 CenBP1_rP1 341 EKALHLIFQGOAENLSRAFFLWRNRAQQERMNQNFEDALTIIEKKKQLTEQLVQFENGKNF
 CenBP1_rP2 340 EKALHLIFQGTENLLRAFFKWRNWSQQDRMNDNLLNQLQSEQRKELVDRLQGFCHGNKL
 CenBP1_rp3 340 EKALHLIFQGTENLLRAFFKWRNWSQQDRMNDNLLNQLQSEQRKELVDRLQGFCHGNKL
 CenBP1_rP4 340 EKALHLIFQGOAENLSRAFFLWRNRAQQERMNQNFEDALTIIEKKKQLTEQLVQFENGKNF
 CenBP1_rP5 340 EKALHLIFQGOAENLSRAFFLWRNRAQQERMNQNFEDALTIIEKKKQLTEQLVQFENGKNF
 CenBP1_rP6a 336 ESVLNKMLLNYNNTLRWAFVHWNNQAKQAKIQSOLDD---EKKKLLLFALHRNLRNTDQ

CenBP1_Start -----
 CenBP3 1188 GQIRDILRNFNDRNRINLIKKIQLKFLHTFAGQVETSFLKWKQLPDSNLKQASRFEQK
 CenBP2 1188 GQIRDILRKFNDGRSRQNLIKKIQLKILHTFAGQVETSFLKWKQLPDSNLKQASIFEQK
 CenBP1_end 1 -----
 CenBP1_rP1 401 ALYRQILAKFSLAHKKEKLVLQINARIL
 CenBP1_rP2 400 NLYRILAKFSLAHKKEKLVLQINARIL
 CenBP1_rp3 400 NLYRILAKFSLAHKKEKLVLQINARIL
 CenBP1_rP4 400 ALYRQILAKFSLAHKKEKLVLQINARIL
 CenBP1_rP5 400 ALYRQILAKFSLAHKKEKLVLQINARIL
 CenBP1_rP6a 392 CKLRDILRKFSEKROKQALIKKIQLQL

CenBP1_Start -----
 CenBP3 1248 LNSFKIQILRKSSFYQLQNIYQDGQAKQKFAINKLMFNCMSVEKKVFLQWNKVSELOKTE
 CenBP2 1248 LNSFKIQILRKSSFYQLQNIYQDGQAKQKFAINKLIFNCMSAEKKAFLQWNKVSELOKTE
 CenBP1_end 1 -----
 CenBP1_rP1 -----
 CenBP1_rP2 -----
 CenBP1_rp3 -----
 CenBP1_rP4 -----
 CenBP1_rP5 -----
 CenBP1_rP6a -----

CenBP1_Start -----
 CenBP3 1308 RASKVMGFFGSINKIQQNHYFFFEDQIKELKKQEELVRLLEKWEEMFKDSYQKWKQTQ
 CenBP2 1308 QRASKVFSFFGSINKIQQNHYFFFEDQIKELKKQEELVRLLEKWEEDMFKDSYQKWKQTQ
 CenBP1_end 1 -----
 CenBP1_rP1 -----
 CenBP1_rP2 -----
 CenBP1_rp3 -----
 CenBP1_rP4 -----
 CenBP1_rP5 -----
 CenBP1_rP6a -----

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CenBP1_Start -----
CenBP3      1368 AKLDLLASQNRQKQKFSIIEILKDYIQNKKNYNLRLILRKFSNSNKSQKAVNKFLLGISH
CenBP2      1368 AKLDLLASQNRQKQKFSIIEILKDYIQNKKNYNLRLILRKFSNSNQRQKAVNKFLLGISH
CenBP1_end   1 -----
CenBP1_rP1  -----
CenBP1_rP2  -----
CenBP1_rp3  -----
CenBP1_rP4  -----
CenBP1_rP5  -----
CenBP1_rP6a -----

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CenBP1_Start -----
CenBP3      1428 SSIGQLHNSFQMWRRRLPEPQKTKO--GYIFEKKIFSLFRKQLLOS--FDGLQDIYFQALNK
CenBP2      1428 SSIGQLHNSFQMWRRRLPEPQKTKO--GYIFEKKLFLFRROLLOS--FDGLQDIYFQALNK
CenBP1_end   1 --VGOIEVSFOKWKALPETKALDOMKASIFEKSLNRFKIHMRKSAYNQLYNIYLDGQAK
CenBP1_rP1  -----
CenBP1_rP2  -----
CenBP1_rp3  -----
CenBP1_rP4  -----
CenBP1_rP5  -----
CenBP1_rP6a -----

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CenBP1_Start -----
CenBP3      1485 KRRVLLLVRTTKSQQQQAVQRWRDAINQMNQOELQNVQENRKLAIQLFYQHKNQNLNVA
CenBP2      1485 KRRVLLLVRTTKSQQQQSVQRWRDAINQMNQOELQNVQENRKLAIQLFYQHKNQNLNVA
CenBP1_end   59 QRYAANKM YNCMSAOKKAFKWKYKVEFSKAAEAFDTSKKKLAIQLFYQHKNQNLNVA
CenBP1_rP1  -----
CenBP1_rP2  -----
CenBP1_rp3  -----
CenBP1_rP4  -----
CenBP1_rP5  -----
CenBP1_rP6a -----

```

```

CenBP1_Start -----
CenBP3      1545 FIEWRDTIRLHTNKQENKTQDERLKKEAILLFQNYAYVRLRVYFTQWKIRAVKRNMIQI
CenBP2      1545 FIEWRDTIRLHTNKQENKTQKEERLKKEAILLFQNYAYVRLRVYFTQWKIRAVKRNMIQI
CenBP1_end   119 FVEWRLSSHTTNKQETAQEREVRLKREAILLFQNFQIRLRITYQRWNIIRAVKKNMISV
CenBP1_rP1  -----
CenBP1_rP2  -----
CenBP1_rp3  -----
CenBP1_rP4  -----
CenBP1_rP5  -----
CenBP1_rP6a -----

```

```

CenBP1_Start -----
CenBP3      1605 CQAIQRMQLNRFQAEKAMKKYVMDIWKGPSKNKWFKRVADIIAKNSKISKQIAYWRMRD
CenBP2      1605 CQAIQRMQLNRFQAEKAIKKYVMDVWKGPSKNKWFKRVADIIAKNSRISKQVAYWRMRD
CenBP1_end   179 FNAIQKLLFINMKQDRELIKALDIWRGPKLQNOWFORVAEMIANKTRITPQIAFWMRD
CenBP1_rP1  -----
CenBP1_rP2  -----
CenBP1_rp3  -----
CenBP1_rP4  -----
CenBP1_rP5  -----
CenBP1_rP6a -----

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```

CenBP1_Start -----
CenBP3      1665  N-LNQKAVGLSTQQIIKCKKLFNNLFKAFDRIKQRAFTLLEHYGKGI PDDTSFQPSQTSF
CenBP2      1665  NSLNQKAVGLSTQQIIKCKKLFNNLCKAFDRIKQRAFTHLEHYGKGI PDDTSFQPSHSSF
CenBP1_end   239  NATTQKAVSLNLTQI VCKCKL LNNLLKAYDRVRQRAFTNIEHFGRGITDASSFQPSHSSF
CenBP1_rP1  -----
CenBP1_rP2  -----
CenBP1_rp3  -----
CenBP1_rP4  -----
CenBP1_rP5  -----
CenBP1_rP6a -----

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```

CenBP1_Start -----
CenBP3      1724  LQQTPIK KIKD IFFKSDFDSTIQKNGQKALNAISR VVKVYFKQRFIELMI-----ELG
CenBP2      1725  LQQTPIK ---DAFFKSDFDSIIQKNGQKALNAISR VFKGFLKQRFIEFMI-----ELD
CenBP1_end   299  LQQT PVR ---DSQAKSOME SII LKNSQQVALSTLQRVFRRHLKIRFTELVL IASQCQKLG
CenBP1_rP1  -----
CenBP1_rP2  -----
CenBP1_rp3  -----
CenBP1_rP4  -----
CenBP1_rP5  -----
CenBP1_rP6a -----

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```

CenBP1_Start -----
CenBP3      1778  DQKLRKVST-----HKKKGAEKLF AILEQNLK LKKQVICYQISQVINIKNIQVNEQGV
CenBP2      1776  DQKQKSWST-----POKKGAEKLF AILEQNLK LKQVICYQISQVLQLELIQVNEQGV
CenBP1_end   356  EQMLKSSIQPTQYKFIHKKMATEK LIGVLE RNLQ LKELVFFNSTIANQ-----SDPDL
CenBP1_rP1  -----
CenBP1_rP2  -----
CenBP1_rp3  -----
CenBP1_rP4  -----
CenBP1_rP5  -----
CenBP1_rP6a -----

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```

CenBP1_Start -----
CenBP3      1831  LNQINEI INYQQSTQSSSRLESSQLKEQQLKLN EKERMLEGWQEKLR CVAINRLIKALER
CenBP2      1829  LNQINEI INYQQSTQSSSRLELSQIKEQQT KLNEQERMILDQEKLR CMATHRLFKALEK
CenBP1_end   408  LKRMNETIE-ENSR LRDQATNDETINSKDQQL SEQORLIQDLNTR LDRMRGORMIKSLEE
CenBP1_rP1  -----
CenBP1_rP2  -----
CenBP1_rp3  -----
CenBP1_rP4  -----
CenBP1_rP5  -----
CenBP1_rP6a -----

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CenBP1_Start -----
CenBP3      1891  CEDHFVEDAFVAISEYQLK
CenBP2      1889  CEDHFVEDAF LGISEYQLK
CenBP1_end   467  YQDHLVEDGFFAIEEYKKE
CenBP1_rP1  -----
CenBP1_rP2  -----
CenBP1_rp3  -----
CenBP1_rP4  -----
CenBP1_rP5  -----
CenBP1_rP6a -----

```