

Supporting Figure S1. Map of  $\gamma$ COP deletion breakpoints

$\gamma$ COP locus

```

                                                    1
                                                    |
                                                    ctt tgt agg tgt ttc cag ggg cca cag ctg

31                                                    61                91
|                                                    |                |
atg cct tga cag cta cta aat tct ccg ccc gtc tga cgc aca CGt tcc ttg tcc aat ttt ggg cac cag gcg gat ttt cct cct ggc cgg

121                                                    151                181
|                                                    |                |
cgc tta tcg cct ggc cat aaa ttc atg ctg tag gtg tct cga tct ttt cgg ttt ctt tct ttt ttg gct ttt tag cgt ttt ggc gga ggt

211                                                    241                271
|                                                    |                |
cct cgc ctc gtg gac acg caa tga agc tgt ttc ttc gtg cgc cgg aat ttc ccc gcg gca tgc aaa atg caa tta acg gca ctt gca gtg

301                                                    331                361
|                                                    |                |
cgc cgg aaa ttg aca att caa tat aat ggg ttc ctt gtt ttc gct aat tgg tgg tgc tta tgc acg cat aaa tta agt aaa cac aat acg

391                                                    421                451
|                                                    |                |
aag tcg tat tta att ggt caa aac aaa cta gag ctg aca aaa aag ctg gcg tcc att ttg tta aca gga tca aca ctc gat taa att agg

481                                                    511                541
|                                                    |                |
aaa agt aat cgg tac tta acg gtc acg aga tct atc gat cag aac ttc ccc tcc agc aaa tca taa atg tac taa tag cgt ata tta taa

571                                                    601                631
|                                                    |                |
ata taa acg aag tta tta tct aac taa aaa ttc atc gca ttg atc agc ctt cgc aat ctt cgt cac aat tcc ggc caa tgc cca ttt aaa

661                                                    691                721
|                                                    |                |
aaa cga atc aaa cta atg gta aaa aat tat gaa aat gta aat aaa att taa aac att att ata ttc ata caa ttt ctt agc aat ttc gtt

751                                                    781                811
|                                                    |                |
ata aag tta acg tgg agc aaa ttc aaa gct tag cta ttt ttc cgc cca ttc ata atc gat aat cta tcg ata aat aca atc gaa cca gta

841                                                    871                901
|                                                    |                |
agt gaa tct caa cta gtt cct ttt caa tcc agt gaa gaa aca aga aat ttt aag aac aaa aaa aac tac cag atc tcg gtg tcg agt taa

931                                                    961                991
|                                                    |                |
ttg aaa act gaa agt tat aat gtg cag aat cgg cga ata tat act gcc tac aaa acg cag aaa aaa ggt tgt ctt tta aag ata aga aca

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γCOP8

gcug AguC **AUG** **aug** **aaa** **ua** ac auc ccc **cag** aua cgc..  
M M K \*

γCOP6

gcug AguC **AUG** **aug** **aaa** **uaa** caauaaagugaaauaaagugaaaagug...  
M M K \*

γCOP12

gcug AguC **AUG** **aug** **aaa** **uaa** cacggauaaCAC **AUG**..  
M M K \* M

γCOP5

uga acc aac **ugg** **gca** **ccg** **cug** AguC **AUG** **aug** **aaa** **uaa** cauggcccgcgagggccaccgacugcuuuuu ugcg **AUG**..  
M M K \* M

1021	1051	1081
aca tcg gag cta tcg ata ctt aac tgg agt	ttt cac atc gat aac aga tga acc aac tgg	gca ccg ctg agt gac gtg taa gcg cag cca
1111	1141	1171
gaa aac cat ttc aat tgt ttt acc cac aat	tta acc gaa agt tgc aa <u>gAcA</u> <b>ATG</b> ggt tgc	ttc cgc cgc gag aaa gat gat gag gag gac
		4
1201	1231	1261
<b>ggt</b> aag tag caa gct agc acc tgg agc caa	gtt gtc cgc cga cca gcg aag cca atc gaa	gac aac cca gtt gct tga agg tgc tcc gct
14		
1291	1321	1351
ggc aca gac aca cac tca cac acc cac taa	ccc gac aaa gtc gag aaa aat cga ggt ttc	cct aaa ttg act ga <u>gAAC</u> <b>ATG</b> aac tat ttt
		M N Y F
1381	1411	1441
tcc ctt acc tcg cac aaa aaa cat cgc ggc	cat ccg tca gca gga ccg agc aat gcg tac	cag aac ctg gaa aaa acc tcg gtg ctt cag
S L T S H K K H R G	H P S A G P S N A Y Q	N L E K T S V L Q
5	15	21/25
1471	1501	1531
gag acg cgc acc ttc aat gag acg ccg gtg	aac cca agg aag tgc atc cac atc ctg acc	aaa atc ctg tac ctg att aat cag ggt gag
E T R T F N E T P V	N P R K C I H I L T	K I L Y L I N Q G E
31/35	41/45	51/55

ccgcugAguCgugauga<sup>aa</sup>uaaca ug gcc cgc gag gcc acc gac ugc uuu uuu ugcg **AUG** - γCOP5

1561	1591	1621
cag ctt gtg gcc cgc gag gcc acc gac tgc	ttt ttt <u>Gcg</u> <b>ATG</b> acg aag ctc ttc caa tct	aag gac gtg gtg ctg cgt cgt atg gta tac
Q L V A R E A T D C	F F A M T K L F Q S	K D V V L R R M V Y
61/65	71/75	81/85

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1651                               1681                               1711
|                               |                               |
ctg ggc atc aag gag ctg agc tcc att gcc gag gac gtc atc atc gtg act agc tcg cta acg aag gat atg acc ggc aag gaa gac ctg
L  G  I  K  E  L  S  S  I  A  E  D  V  I  I  V  T  S  S  L  T  K  D  M  T  G  K  E  D  L
|                               |                               |
91/95                               101/105                               111/115

                                ccgcugagucaugagaaaauaa c acg Gau aaC_AcC AUG -  $\gamma$ COP12
                                |
1741                               1771                               1801
|                               |                               |
tac agg gcc gcc gca atc cgg gcc ttg tgc agc atc acg gat aaC_AcC ATG ttg cag gcc gtg gag cgc tac atg aag cag tgc att gtt
Y  R  A  A  A  I  R  A  L  C  S  I  T  D  N  T  M  L  Q  A  V  E  R  Y  M  K  Q  C  I  V
|                               |                               |
121/125                               131/135                               141/145

1831                               1861                               1891
|                               |                               |
gac aaa aac gcg gca gtt tct tgt gct gca ttg gtc agt tct ttg aga ttg gcc aac act gcc ggc gac gtg gtc aag agg tgg gca aac
D  K  N  A  A  V  S  C  A  A  L  V  S  S  L  R  L  A  N  T  A  G  D  V  V  K  R  W  A  N
|                               |                               |
151/155                               161/165                               171/175

                                 $\gamma$ COP10
                                |
1921                               1951                               1981
|                               |                               |
gag gcc cag gag gct ttg aac agc gac aac att atg gta cag tac cac gcg ttG Ggt ctg ctc tac cat atc cgc aag tcg gat cgg ctg
E  A  Q  E  A  L  N  S  D  N  I  M  V  Q  Y  H  A  L  G  L  L  Y  H  I  R  K  S  D  R  L
|                               |                               |
181/185                               191/195                               201/210

2011                               2041                               2071
|                               |                               |
get gtc tcc aag ttg gtc aac aag ctg acc aga gga tct cta aag agt ccc tat gcc gtt tgc atg ctg gt a agt gaa gtc tga acc c
A  V  S  K  L  V  N  K  L  T  R  G  S  L  K  S  P  Y  A  V  C  M  L
|                               |                               |
221/225                               231/235                               241/245

ccgcugAguCaugaugaauaa caauaaagugaauaaaaagugaaaaaguga a aag uga cauc uga cua auu ucg uuu uac auc ccc cag aua cgc  $\gamma$ COP6
                                |                               |                               |
                                ccgcugAguCAUGaugaauaa ac auc ccc cag aua cgc  $\gamma$ COP8
                                |
2099                               2129                               2159
|                               |                               |
aaa ctt ttc tta ATG aa ATG gat ATG cac tta ttc cct tta aag tga catc tga cta att tcg ttt tac atc ccc cag ata cgc att gcc
*                               |                               |
                                I  R  I  A

2189                               2219                               2249
|                               |                               |
tgt aag ctg atc gag gag gag gac att ccc tct gag gag ctt tcc gat tca ccc ttg ttt acg ttc atc gag tcc tgt ctg cgc cac aag
C  K  L  I  E  E  E  D  I  P  S  E  E  L  S  D  S  P  L  F  T  F  I  E  S  C  L  R  H  K
|                               |                               |
248/252                               258/262                               268/272

2279                               2309                               2339
|                               |                               |
agC_GAg ATG gtc atc tac gag gcg gcc cac gcc att gtc aac ctc aag aac acc aat ccg cga atg cta tcg ccg gcg ttc tcc atc ctc
S  E  M  V  I  Y  E  A  A  H  A  I  V  N  L  K  N  T  N  P  R  M  L  S  P  A  F  S  I  L
|                               |                               |
278/282                               288/292                               298/302

M-  $\gamma$ COP6/ $\gamma$ COP8

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E	G	F	T	T	R	A	V	I	P	C	P	K	L	P	Y	N	D	L	Q	T	T	F	V	I	V	E	F	P	P
3629										3659										3689									
gac gcc gcc aat tcc ata ggt aag ttt ata aat aac ata aat ttt gta tta aaa tca tac aac ttt ttt caa aac gaa cta ttt cct catt																													
D A A N S I A																													
3720										3750										3780									
tcag cc acc ttt ggt gcc act tta cga ttt gtg gtc aag gac tgc gac ccc aac acc ggc gag ccg gag tca gag gag ggc tat gac gac																													
T F G A T L R F V V K D C D P N T G E P E S E E G Y D D																													
3810										3840										3870									
gag tac atg cta gag gat ttg gag ctg acg gtt gcc gat cag ata cag aaa acc aga aag aac aat ttc caa gtg tcc tgg gat gcg gct																													
E Y M L E D L E L T V A D Q I Q K T R K N N F Q V S W D A A																													
3900										3930										3960									
gac agc gaa g gtgcc aca gaa aga taa ata ggg tct att caa tga tta gta ata ctc tat att tgag aa tgg cta caa gcc gag gat acc																													
D S E E W L Q A E D T																													
3991										4021										4051									
ttt gtg ctg tcg gca gtg acc acc ttg cag gat gcc gtc aac act ata gtc aag atc ctg ggc ttg ggc gct gca aac ctc tct gag aat																													
F V L S A V T T L Q D A V N T I V K I L G L G A A N L S E N																													
4081										4111										4141									
gtg ccc gag ggt acg cac ctg cat acg ttg ctc tgt tca g gt agg cat cct tcg ctt tta gtt ctg aga tca gta gta cag ttt ttc cc																													
V P E G T H L H T L L C S G																													
4170										4209										4239									
cct tta c ag ga acc ttc aga ggc gcc gcc gag att ctt gtg cgg gcc aag ctg gcg ctt tca gaa ggc gtc acg ctc aat ctg acg gtg																													
T F R G G A E I L V R A K L A L S E G V T L N L T V																													
4269										4299										4329									
cgc agc acg gac cag gac gtg gcg gag ctg ata acg gcg gcc att gga taa gac agc gag cca tgc agg aac ctc ctt tgg ttc ctg cgt																													
R S T D Q D V A E L I T A A I G *																													
4359										4389										4419									
gct gtg aac gta atc tga act ccc tac gaa act acg aaa cag aaa gtt acg cct aat caa aat ata att tgta cc tt taa gcga ctg tct																													
4449										4479										4509									
ctg taa taa tct tag agc cct gtc cac aat ccg gca tgt gca aca ttg agt att gct act ggc cat ttc cga aaa gtt tgt gtg gcg atg																													
4539										4569										4599									
cag cct tcg gtg tgc atc gca tat gtt tat tat ccc cat tta gcc tgt gca ttt agc tta agt atg gaa aca aaa tat taa aaa tac atg																													
4629										4647										4689									
tat atg caa tgc aac ccga cc tga agg cgt tta ttt gcc agg tgc ttt taa agt agg aca ttg aaa tga ttt taa tga ttg caa gct cgt																													